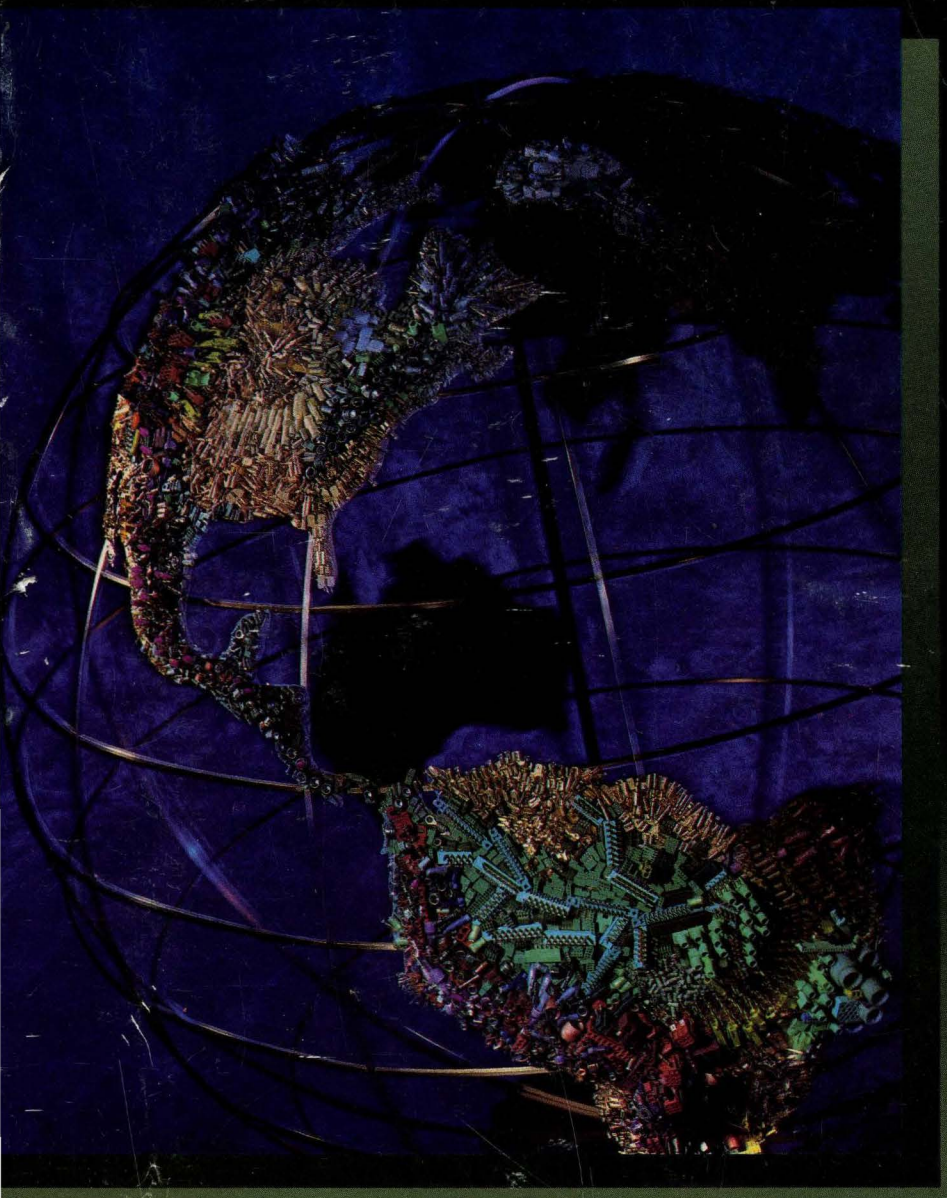
Catalog 82750
Revised 7-95

AMP

Interconnection Systems Selection Guide



- Terminals and Splices
- Pin and Socket Connectors
- Printed Circuit Board Connectors
- Coaxial and Flat Coaxial Cable Connectors
- Ribbon and Flat Cable Connectors
- Blade-Type Connectors
- Fiber-Optic Products
- Switches and Programming Systems
- IC Sockets
- Value-Added Cable Assemblies
- Tooling

How to access

AMP FAX Service

For Instant Product Information

AMP FAX Service is an automated **24-hour-a-day, 7-days-a-week service** that sends you AMP product information by fax in minutes. To use the service for information you desire, you must know the part number or document number. **If you do not know the number, contact a Product Information Specialist for assistance by choosing the Product Information option (Press 2) prior to accessing AMP FAX Service.**

Call the AMP Product Information Center at **1-800-522-6752**; you will be given several options. Press 1 on your touch tone phone when you hear the prompt. **This connects you to AMP FAX Service**, and additional instructions will guide you in selecting the documents listed below:

press 1 for Product Documentation

AMP FAX Service allows selection of several types of product documentation. Press the appropriate keypad number as follows:

press 1 for ***Catalog Pages*** Enter an AMP part number followed by the # sign. Note that a dash in a part number is represented by the * key on your phone (e.g. 205204*1#). AMP FAX Service will send the appropriate catalog pages for the entered part number.

press 2 for ***Product Drawings*** Enter an AMP part number followed by the # sign. Use the * key to represent a dash (e.g. 205204*1#).

press 3 for ***Application Specifications*** Enter an AMP part number or specification number, followed by the # sign. When entering the part number, AMP FAX Service will cross-reference the part number to the appropriate specification(s). When entering the Application Specification number, it must begin with "114" (e.g. 114*2022#).

press 4 for ***Product Specifications*** Enter an AMP part number or specification number, followed by the # sign. When entering the part number, AMP FAX Service will cross-reference the part number to the appropriate specification(s). When entering the Product Specification number, it must begin with "108" (e.g. 108*1232#).

press 5 for ***Instruction Sheets*** Enter an AMP part number or an instruction sheet number, followed by the # sign. When entering the part number, AMP FAX Service will cross-reference the part number to the appropriate Instruction Sheet. When entering the Instruction Sheet number, it must begin with either "408" (e.g. 408*9309#) or "411" (e.g. 411*5007#).

press 6 for Distributor Listing

You will receive a list of AMP distributors serving your area. Enter the first two digits of your zip code followed by the # sign.

press 7 for help in using the ***AMP FAX*** Service.

After making your selections, you will be asked to enter your fax, phone, and extension numbers. You also may enter your name if you desire. Your name, phone number, and extension will be printed on the cover sheet of your fax package. These items are very important, as they will be used to direct the fax to you when it arrives. Your fax package should arrive within minutes.

Remember

Use the * key to represent a dash in document or part numbers.

If you don't know the part or document numbers, contact a Product Information Center Specialist for assistance by dialing 1-800-522-6752 and choosing the Product Information option prior to accessing AMP FAX Service.

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Interconnection Systems Selection Guide

We believe you will find this guide a useful and comprehensive reference. It is designed to facilitate the identification of specific AMP systems and products.

Once you have selected a specific AMP product by Part Number and determine you need additional information you may call the AMP Product Information Center and speak with one of our trained Product Information Specialists or select the AMP FAX Service option to receive a variety of product documentation. Details on "How to Access AMP FAX Service" are shown on the facing inside front cover.

The AMP Interconnection Systems Selection Guide is divided into twelve product sections. Each section is titled according to its product category. The sections carry their section designation along with a product sub-grouping title on the edge of the page throughout the guide. The various product lines within a section are identified with a heading at the top of the page and introduced by a brief general description and/or "Product Fact" description.

For your convenience, we have included a "Pictorial" Product Index on pages 12-55 and an Alphabetical Index, and a Numerical Index at the end of the guide (following Section 12). The alphabetical index will aid in the identification and location of AMP systems and products by name. The numerical index lists all cataloged parts by base (series) numbers only. Complete part numbers with prefixes and/or suffixes are shown on the page(s) indicated. You will find this numerical index extremely helpful when the AMP Part Number is already known.

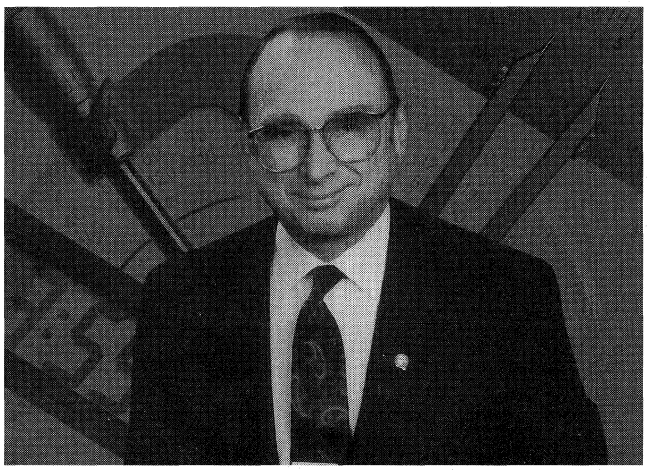
AMP is pleased to present you with this Guide. We trust it will prove to be a valuable reference to our extensive and diversified offering.

Metric Dimensions
A large percentage of the products contained in this publication will have both customary U.S. dimensions and metric dimensions. "Hard metric" products are identified by a METRIC symbol.

We recommend that you consider this volume as a Guide ONLY (specifications subject to change). For the latest specifications contact the AMP Product Information Center... 1-800-522-6752.

Table of Contents

Product Index .....
Terminals and Splices 1
Pin and Socket Connectors 2
Printed Circuit Board Connectors 3
Coaxial and Flat Coaxial Cable Connectors 4
Ribbon and Flat Cable Connectors 5
Blade-Type Connectors 6
Fiber Optic Products 7
Miscellaneous Connectors 8
Switches and Programming Systems 9
Miscellaneous Products 10
IC Sockets 11
Tooling 12
Appendixes 13
Indexes 14



Every supplier makes promises—promises of quality, delivery, and service. Throughout AMP, we have improved our ability to perform on those promises and provide the services to help you develop and manufacture your products faster. The following describes some of our new and improved systems and services. I invite you to review our performance results and measure them against your needs.

As you read, I believe you will see how we are delivering the best value in the interconnection industry today. You also will see that we are continuing to advance our performance, so we will be the world's supplier of choice for tomorrow's interconnections.

William J. Hudson
President and CEO

AMP

Shorten your development cycle

In the heat of a design cycle, there are times you may need help: specifications faxed late at night or over a lunch hour...samples located and sent overnight for a morning design meeting... accurate testing of a critical element of a design... rearranging production schedules... pulling out all the stops to arrange delivery in Singapore in two weeks. If you need a development partner who knows how to get you what you need, AMP can help every step of the way: by providing information almost instantaneously, by giving you design help and support, and by making our research, extensive interconnections expertise and our testing and prototyping capabilities accessible to you.

And when the design is complete, we have the resources to ramp up to production quickly...and simultaneously at several different sites around the globe. You'll have AMP quality...and our ability to deliver on schedule. With the service and support you need...from design and prototyping to product completion and follow-through. That's the benefit of working with AMP.

Information when you need it

For those critical moments of the design process, when you just have to know whether a specific part will work for your application, AMP has invested heavily to provide information at a moment's notice.

In the United States, our toll-free Product Information Center answers 30,000 calls a month, providing fast answers (average response time: 3.5 seconds), and answering 93% of calls without further assistance. When our trained specialists have to do more research, they'll get back to you within two hours. That's a promise. Call 1-800-522-6752. In Europe, our sales representatives provide much of this information directly.

And, when you are ready to begin your design, AMP provides CD-ROMs for selected product families. They contain 3D IGES models of connector bodies, 2D IGES models of footprints and/or panel cutouts. There are customer drawings, product specifications, application notes and instruction sheets in TIF format. Each disk also contains a searchable index that identifies which part numbers have been included on which CD.

For information on how to register to receive these free CDs, see our home page on the Internet (www.amp.com), send an e-mail message to eads @ amp.com or order publication number 82829 by calling 1-800-522-6752.

AMP

Choosing the right design help can cut months from your product development cycle

How often do you come to a critical juncture in your design and wonder if anyone has faced the same problem? The right decisions at those critical moments will save time and technical headaches. AMP wants to help.

Design help is one of the important services we offer, adding value throughout the product's life. By working with AMP, you have access to vast resources in electronic design. In 1994, AMP spent 12% of total revenues on research, development and engineering—a total of $456 million. We have a strong tradition of RD&E spending, totaling $3 billion in the past decade. And that investment in design leadership is a distinct benefit to all our customers.

In 1994, AMP ranked 50th worldwide in patents received, and a recent study ranked us 25th in the world in "technological strength," based on the number of patents we have received, and their relative importance. And each year, new products—those developed within the past five years—continue to average between 15% and 20% of sales. We're not content to let that record stand—our near-term goal is to raise that figure to 25%.

In addition, we invested $456 million last year to broaden our manufacturing capabilities. And we intend to invest more than $50 million to create a new, more powerful network of our CAD/CAM/CAE workstations worldwide. This new generation of CAD equipment—the third in 15 years—will further reduce the time and cost required to move from design to full manufacturability anywhere in the world.

The right technical solution can cut months off your approval process

From Underwriters Laboratories to IEC; from FCC to FDDI, you have to cope with an imposing array of national and international standards.

The last thing you need in getting to market is difficulty in getting your designs certified by an important approval body. We can help. As standards bodies proliferate and develop new specifications to simplify design and manufacturing processes, AMP leads the market in developing products that consistently meet standards. Our people are involved in more than 450 industry associations and standard-setting bodies, actively participating in the development of interconnect systems that cross regional boundaries.

Because we help write them, we know the rules. And we can help make sure your design doesn't

get hung up on details.

Perhaps more importantly, standards can help speed your trip to market. One car manufacturer standardized on our recently-approved ISO connector instead of its own, eliminating five months of design and qualifications for its new dashboard electronics system. Those are real savings in time...and profits.

We also can save you time by verifying your design's performance before the prototype with our proprietary electronic modeling and simulation capabilities. Our computer-aided analysis includes performance prediction, thermal management, power distribution, and EMC/EMI considerations. If meeting standards on EMI emissions is a problem, our full line of filter and shielding products offers you control. And for those last minute changes to pass FCC, CE or VCCI specifications, our drop-in footprint filtered connectors are just one more way to keep your design moving—without time-consuming design iterations.

Accurate, detailed testing now can save time later

When it's finally time to take your design to a prototype, you need a supplier who can deliver samples or accurate representations of the relevant system components.

That way, you achieve the real objective of your prototype effort: an accurate representation of your product, as it can be expected to perform right off the assembly line. AMP will put a full range of capabilities at your disposal for development, production and testing of your prototype. In addition, we can evaluate the production challenges and find ways to shorten the time required to go from prototype to full production.

And while we are the world's leading supplier of connectors to the computer industry, we are now much more than a connector company. We are a contract manufacturer assembling backplanes, boards and connector-intensive assemblies. We provide design simulation and analysis. And we are involved in optical devices, cables and assemblies and many other types of systems.

From finished design to first article

Imagine working on a complex design for months...getting it approved, tested, costed and fully evaluated. Then waving a magic wand and seeing it roll off the assembly line, exactly as you want it. That's a designer's dream.

While we can't promise that dream will ever be fully realized, we're doing our best to make it a reality. Our manufacturing experts review designs every step of the way, and their suggestions are reflected in our recommendation to you. When it's time to go to manufacturing, our people know your design, and know how to do our part. And when it comes to manufacturing electronic

interconnections, no one in the world compares to AMP. As a world leader in interconnection devices, AMP has a global capability, with over 31,000 employees in 180 facilities, and manufacturing plants in 36 countries—including new plants in Argentina, China, Singapore, South Korea and India. And, since 1990, we have launched new companies in the Czech Republic, China, India, Hungary, Poland, Turkey, Thailand and the Philippines.

Not only do we make our products, we also are an industry leader in providing the means to apply them. In the U.S. our Hotline (1-800-722-1111) answers questions about AMP application machines or machine-applied products. In Europe, field engineers address these concerns.

In addition to maintaining our own application equipment and tooling, we also can evaluate the utilization of your application equipment, analyze cost alternatives, link that equipment to your factory automation system, and recommend a parts inventory to maintain your equipment.

Save time by doing it right the first time

Using quality components can lower warranty costs over a product's lifetime—reducing failures, claims and all kinds of product problems. And producing more satisfied customers.

By using a qualified supplier, you can implement a ship-to-stock program and further your ISO 9000 certification and quality programs. AMP has invested heavily in being second to none in quality and customer satisfaction.

AMP products are of uniformly high quality and performance, everywhere in the world—India, Brazil, Hungary, China or the United States. Virtually all our manufacturing locations have now achieved ISO 9000 certification for their quality management processes and most should earn the more rigorous MRP-II-A rating soon.

We have been named best or outstanding supplier by companies as diverse as Abbott Laboratories, AT&T, Ford, GE, IBM, Northern Telecom, Raytheon, Siemens and Unisys. Our Integrated Circuit Connector Products Division received a site visit in the manufacturing category of the Malcolm Baldrige competition, a U.S. national quality award. Our Williamstown/Tower City, Pennsylvania, facilities attained a top 15 listing in Industry Week's "Best U.S. Manufacturing Plants" competition.

We welcome quality audits and a rigorous review of our qualifications as a supplier; we virtually always qualify, and almost always emerge as a preferred supplier.

And we have programs established throughout the world to handle problems that arise. In the U.S., our Product Quality Action Hotline promises fast action. Reach our product quality experts any weekday from 8 a.m. to 5 p.m. (Eastern Standard Time) by calling 1-800-526-0721. And, in Europe, the Middle East, Africa and Asia/Pacific, you can contact sales representatives directly.

AMP

What we do in our facilities saves you time in yours

When our products hit your dock, they're still working to save you time. They're designed for easy handling, tracking and storing. And they arrive when you need them.

Our computerized, just-in-time systems have helped us fill 95% of our U.S. orders on time in 1993, despite a volume of 150,000 orders a month. And we're still working to improve that record.

We can save you more time by providing ship-to-stock products that are certified as having been inspected to your standards, and ready to go directly onto your production floor.

And we've developed an interenterprise EDI system at the purchasing level to smooth and speed your orders and follow-ups. Customers save about $10 per EDI transaction and $20 per EDI purchase, when compared to traditional paper orders.

Save time by building a long-term relationship

When you order from AMP, you begin a relationship that we hope to nourish for your entire career.

While some companies measure success by the volume of sales or the number of products sold, we grow by building relationships. The best way for us to make sure that happens is by making sure you are completely satisfied with our handling of your project from beginning to end. And we are completely committed to that end; in independent surveys, AMP has ranked No. 1 in customer satisfaction for the past three years.

We have a worldwide network of 1,200 distributor locations in place to help you get to market first. And we have a new Global Account Management program to ensure customer satisfaction on a global basis. Our efforts to serve a truly global customer base have paid off. In 1994, 42% of our business was in the U.S., 31% in Europe and 21% in the Asia/Pacific region.

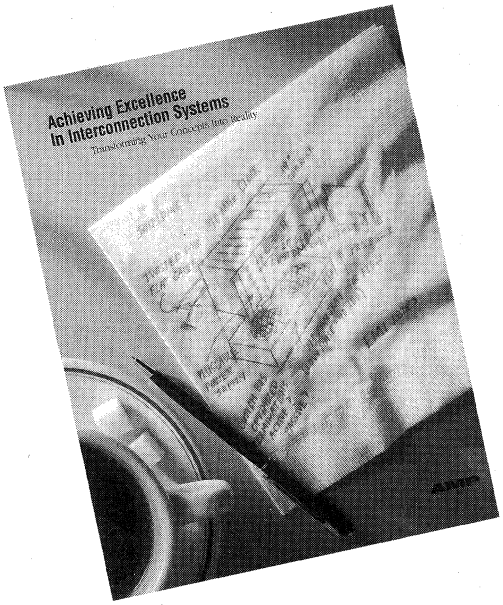
And throughout the world, we're concerned about the environment. We've developed zero-discharge plating lines, and extensive programs for recycling plastic, metal and paper scrap.

We have done all of this in our effort to serve your needs better, to support you in the tough and challenging job of advancing the state-of-the art in electronics.

We offer you the information, design help, technical assistance, production help and support you need to complete your product design efforts...and get that new product on the market as quickly as possible. We believe that benefits you and your company.

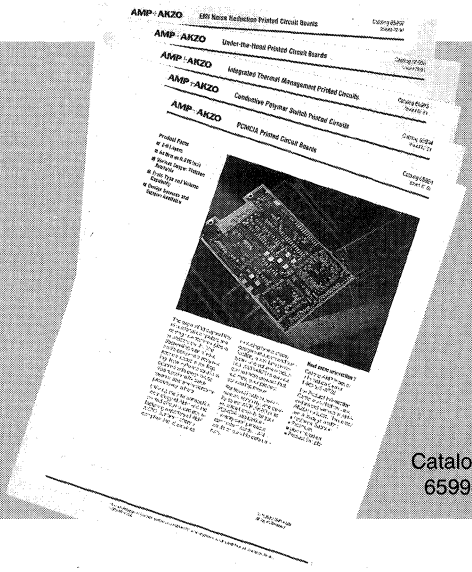
In addition to the tens of thousands of interconnection devices shown in this guide, AMP can supply solutions to your packaging, cable assembly, cabling, sensor, networking, and special connector needs.

Catalog 65574



PACKAGING SYSTEMS

AMP Packaging Systems, specializes in electronic packaging matched to your system requirements. From connectors to backplane assemblies, AMP Packaging Systems offers a total systems approach and can deliver custom, standard, or customized standard card cages and enclosure systems. Consideration is given to your total system, from driver through receiver including logic family, noise budgets, impedance requirements and other special constraints. AMP Packaging Systems builds world-class products through their commitment to excellence.



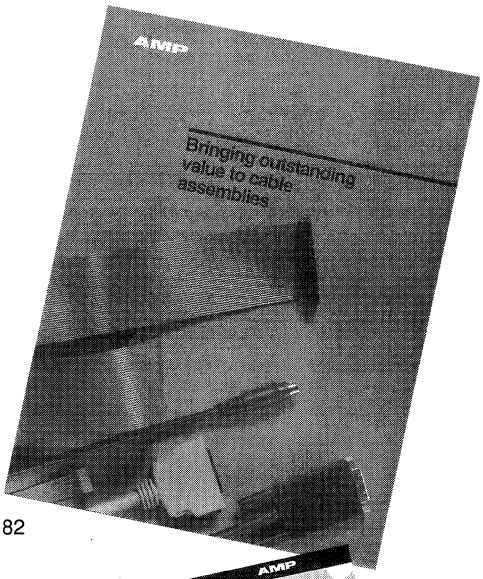
Catalog 65924 and
65994 thru 65997

AMP+AKZO

Utilizing the interconnection technology of AMP and the printed circuit board manufacturing expertise at AMP-AKZO, we offer a complete line of services including board layout, design simulation and verification, quick-turn prototypes and volume production. For the ultimate in performance, reliability and quality select AMP-AKZO for all your printed circuit board needs.

VALUE-ADDED CABLE ASSEMBLIES

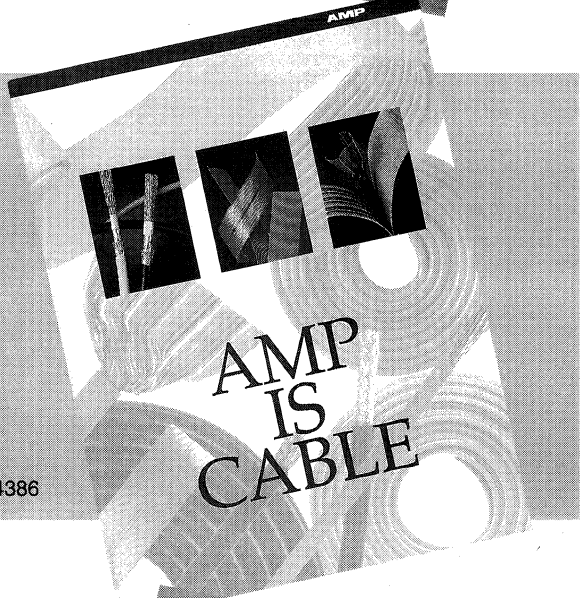
AMP High Performance Cable Assemblies are custom engineered to meet your high-speed signal transmission challenges. AMP cable assemblies are designed to match the strict electrical specifications of each system, and address characteristics that include impedance, emissions, crosstalk, attenuation, and ground bussing. A dedicated group of specialists provides you with the support, performance, reliability and value that you need and expect. Consult with AMP early in your design process for recommendations on the most efficient packaging options that comply with your performance requirements.



Catalog 124182

PRECISION CABLE

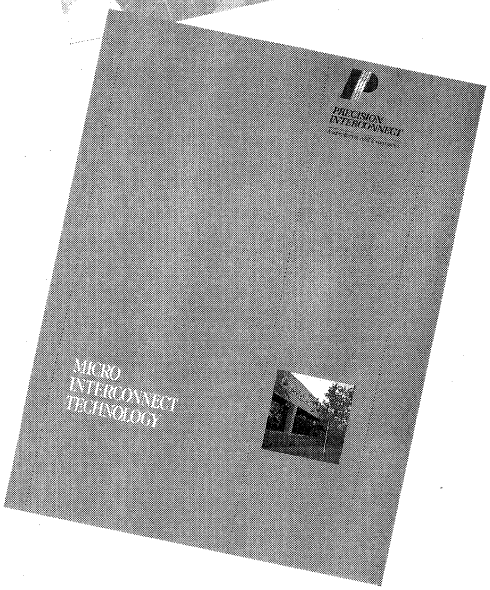
Our unique perspective on cable as part of total system architecture and knowledge of parameters required for high quality termination is integral to every cable we design. AMP precision cables are a product of advanced AMP technology. They fill your needs for high performance, high quality cables that make connector application easy, efficient and cost effective.



Catalog 124386

MICRO INTERCONNECT TECHNOLOGY

As electronic equipment gets smaller and more precise, packaging problems grow. To solve these problems, Precision Interconnect Corporation, an AMP Company, is pioneering the world's most advanced microminiature interconnection technology. For ultrasound diagnostic equipment, we are continually developing and testing new materials, configurations and manufacturing techniques to improve ruggedness, flexibility and reliability. For high performance computers, we offer matched time delay twisted pair or coaxial cables with over 93% velocity of propagation. Our goal is to provide the world's smallest, most reliable interconnection systems in the world and help advance the technology of medical and computer electronics.



Specifications subject to change.

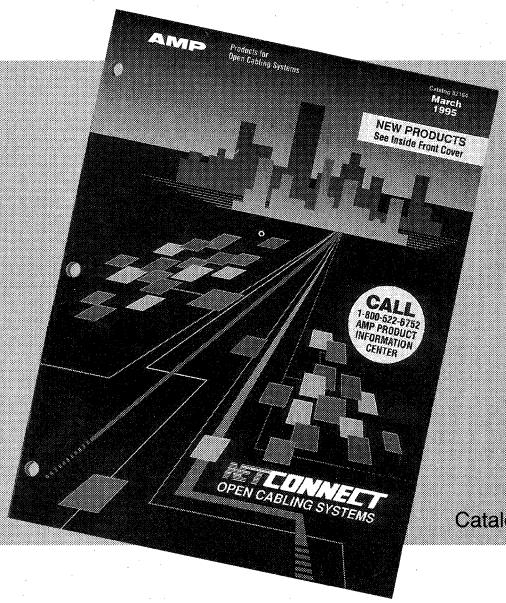
1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

PIEZO FILM SENSORS

AMP is the leader in piezo film transducers. In addition to helping customers select and apply our standard sensor products, we can work with you to design, engineer, prototype and fabricate custom products that meet the special requirements of specific applications.

Catalog 65863
and 65711



NETCONNECT OPEN CABLING SYSTEMS

AMP has become established as the preferred worldwide source for Open Systems Interconnection Products to major OEMs, systems Integrators, and for end user applications. This catalog includes complete vendor-independent solutions for your networking needs. If you have specific interconnect needs, contact AMP for further information.

Catalog 82164

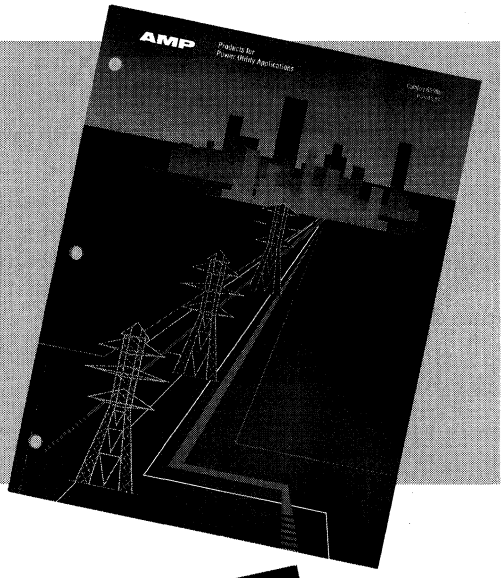
MULTIMEDIA AND ADVANCED NETWORKING TECHNOLOGIES

Connectware's technology focus addresses not only today's traditional LANs, but also the convergence of LANs and WANs through Asynchronous Transfer Mode (ATM) workstation interfaces and network switches. Connectware is also focused on communication integration through software and hardware offerings for the traditional desktop (ISA, PCI) as well as portables (PC Cards). The company provides imaging/video solutions and is also a quality supplier of custom software applications development and computer peripherals. For more information call 1-800-357-0852.

POWER UTILITY CONNECTOR PRODUCTS

A vast array of AMP connector products let you make quick work of new installation and repair jobs, from the power generating plant to the end customer. And, if you have special requirements, we are ready to work with you to develop appropriate solutions. You supply the vision, and we will apply the technology.

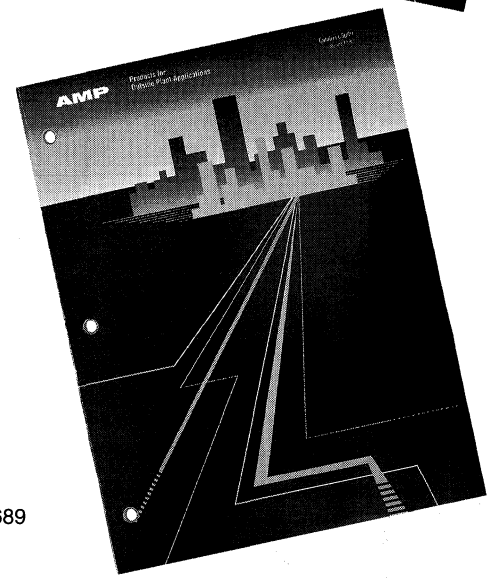
Catalog 65986



OUTSIDE PLANT PRODUCTS

No matter what the application, AMP has more ways to get more done. Our line of outside plant products, for wide area network application, lets you make quick work of any new installation or repair job, from the central office to the subscriber, over copper or fiber. Our responsiveness to the demanding world of telecommunication, doubled with highly trained field technicians, makes the job easier. It's that simple.

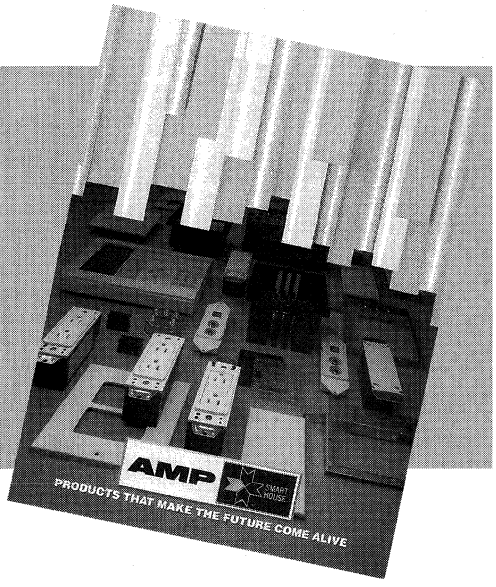
Catalog 65689

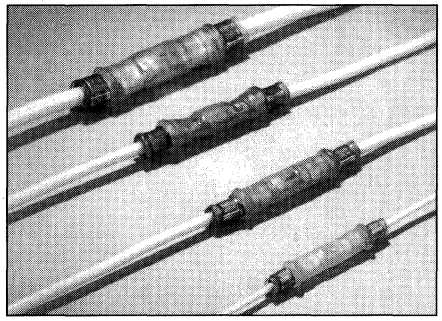


AMP/SMART HOUSE

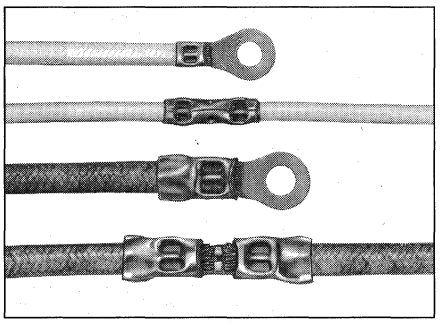
As a charter member of the SMART HOUSE Consortium, AMP helped define the infrastructure needs of this new Home Management System. Our wire, cables, outlets, distribution interface units, connectors, switches, control panels and tooling product help make the SMART HOUSE system a reality.

Catalog 65499

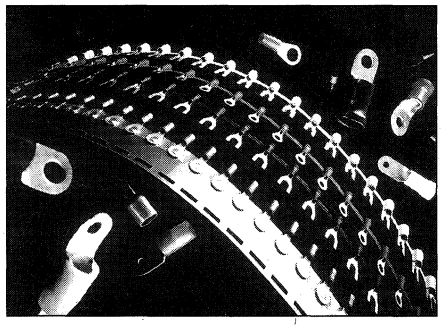




1001 CERTI-SEAL Splices

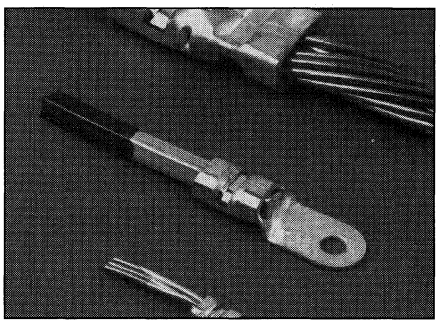


1002 STRATO-THERM High Temperature Terminals and Splices

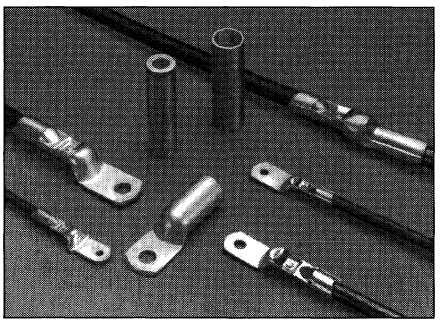


1009 Standard Terminals and Splices

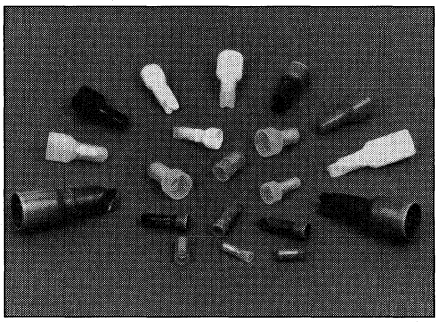
PIDG (Pre-Insulated Diamond Grip) Terminals and Splices
PIDG Insulation Restriction Terminals
PLASTI-GRIP Terminals and Splices
AMPLI-BOND Terminals
TERMINYL Terminals
Radiation Resistant Terminals
DIAMOND GRIP Terminals
SOLISTRAND Terminals and Splices
Budget Terminals and Splices



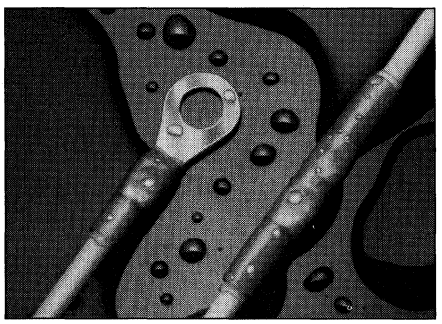
1038 COPALUM Terminals and Splices



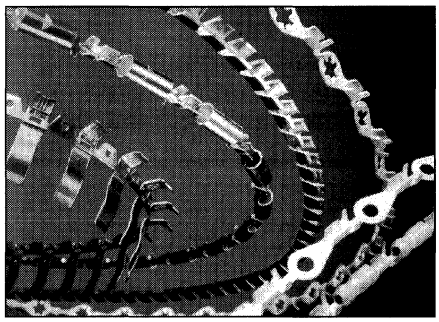
1042 COPALUM Sealed Terminals and Splices



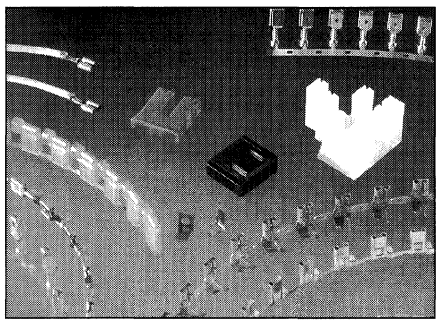
1044 Closed End Splices



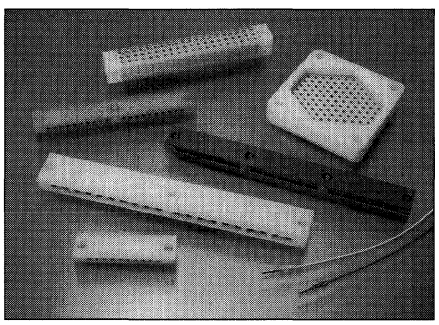
1046 Pre-Insulated Sealed Terminals and Splices



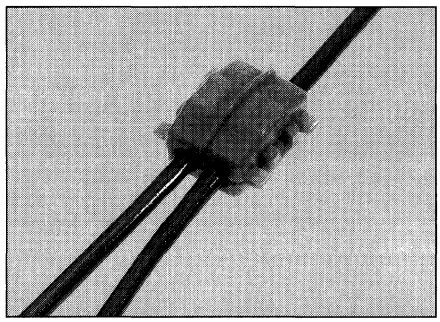
1048 Machine Applied Terminations, Open Barrel



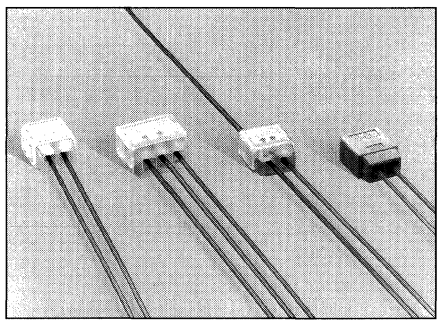
1078 FASTON Terminals (Insulated and Uninsulated)
1117 Ultra-Fast Fully Insulated FASTON Receptacles and Tab
1120 Ultra-Fast Plus Fully Insulated FASTON Receptacles and Tab
1122 Ultra-Pod Fully Insulated FASTON Receptacles and Tabs
1124 PIDG FASTON Receptacles



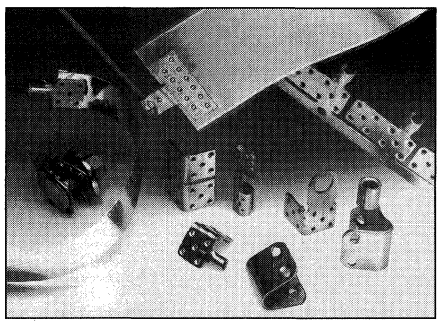
1126 Taper Pins, Receptacles, Blocks and Assemblies



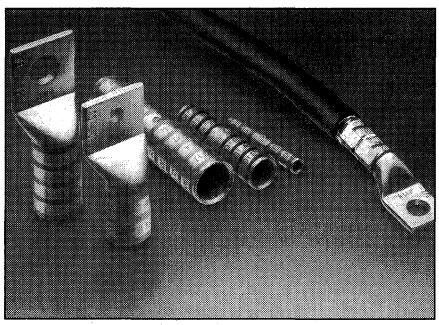
1140 ELECTRO-TAP Connectors



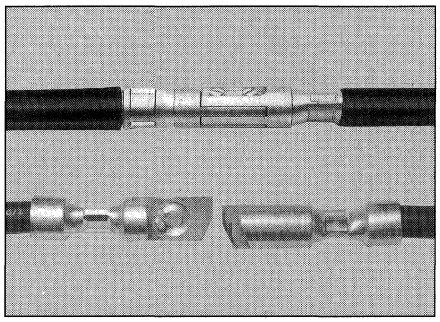
1141 Tel-Splice Connectors



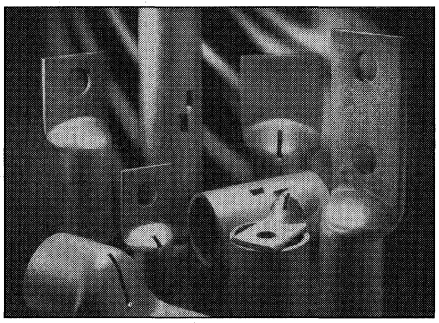
1142 TERMI-FOIL Terminals and Splices



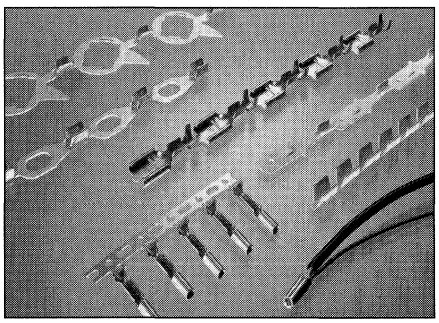
1145 AMPOWER II Uninsulated Terminals and Splices



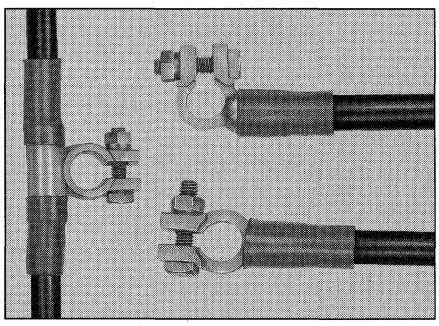
1146 AMPOWER Quick Disconnect and Bolt Type Disconnect Terminals



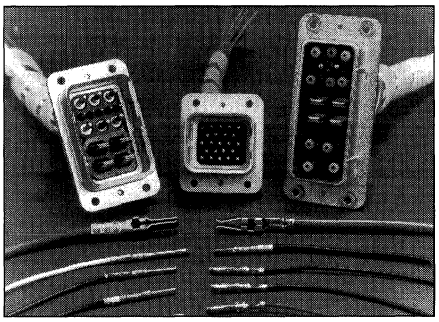
1147 AMPOWER Uninsulated Terminals and Splices



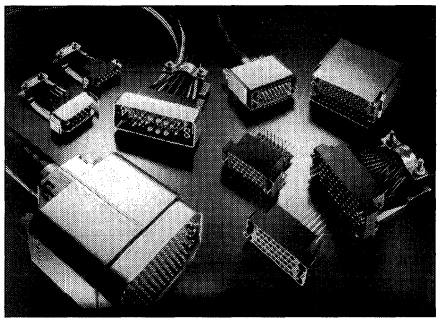
1152 Magnet Wire Terminals (AMPLIVAR and MAG-MATE)



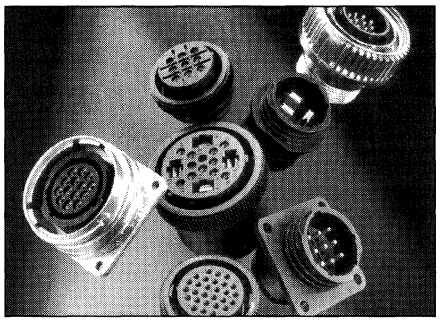
1178 CABLE MAKER Battery Terminals



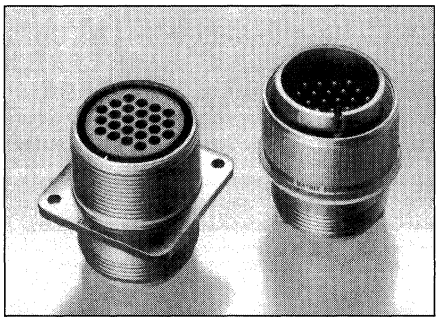
2001 "G" Series Modular Connectors



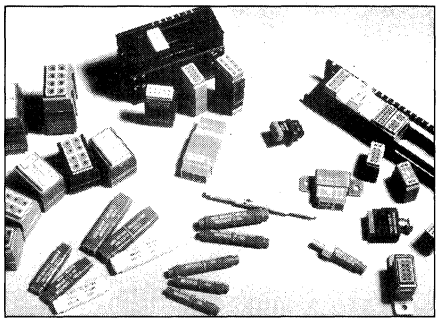
2011 M Series Pin and Socket Connectors
- 2012 Signal Contacts
- 2015 Power Contacts
- 2016 RF Contacts
- 2018 Standard Housings Application
- 2034 Posted Connectors
- 2036 Special Application Connectors
- 2046 Hardware



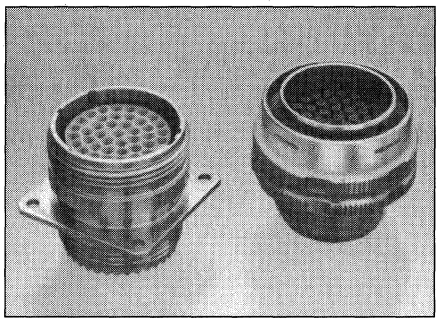
2048 CPC (Circular Plastic) and Metal-Shell CPC Connectors
- 2049 CPC Connectors Series 1
- 2053 CPC Connectors Series 2
- 2057 CPC Connectors Series 3
- 2058 CPC Connectors Series 4
- 2059 CPC Connector Accessories
- 2063 Special CPC Connectors
- 2064 Metal-Shell CPC Connectors Series 1
- 2065 Metal-Shell CPC Connectors Series 2
- 2066 Metal-Shell CPC Connectors Series 3



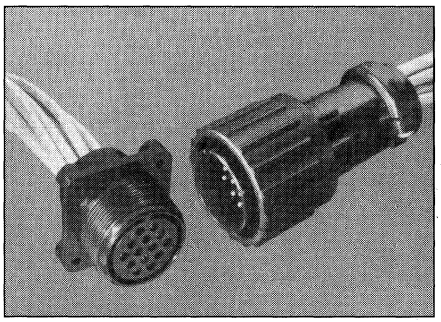
2068 Military Specified Circular Connectors
- 2069 MIL-C-5015
- 2084 MIL-C-26482 Series I
- 2090 MIL-C-26482 Series II
- 2099 MIL-C-83723 Series I
- 2107 MIL-C-83723 Series II
- 2122 MIL-C-83723 Series III
- 2133 MIL-C-38999 Series I, II & III
- 2137 MIL-C-38999 Series I
- 2142 MIL-C-38999 Series II
- 2147 MIL-C-38999 Series III



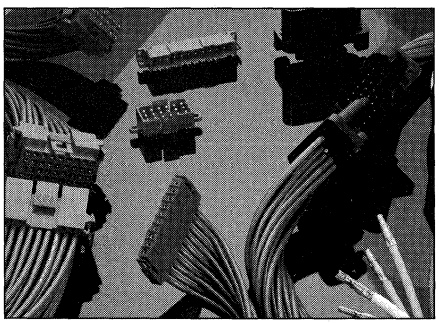
2151 Terminal Junction System (MIL-T-81714 and Commercial)
- 2153 Feedback and Feedthru Terminal Junction Modules
- 2159 Wire Splices
- 2160 Electronic Module Blocks and Splices
- 2163 MIL-T-81714 Electronic Splices
- 2164 Commercial Terminal Junction Modules



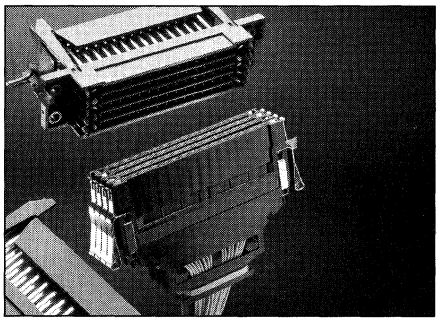
2167 MATRIX Engine/Firewall Cylindrical Connectors
- 2167 MTE Series
- 2173 MIL-C-83723 Series III
- 2180 MIL-C-38999 Series III
- 2187 MIL-C-5015



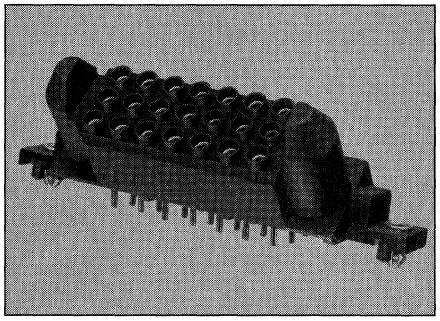
2198 MIL-C-5015 Style Circular Plastic Connectors (CPC)



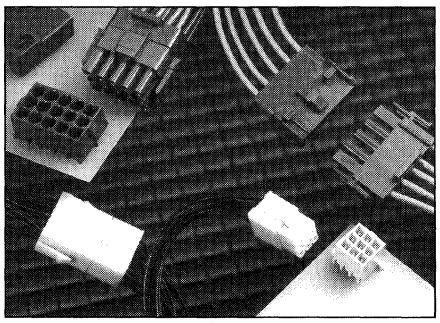
2199 Metrimate Pin and Socket Connectors
- 2200 Contacts
- 2202 Square Grid Connectors
- 2204 In-Line Connectors
- 2207 Rectangular Connectors
- 2208 Standard Drawer Connectors



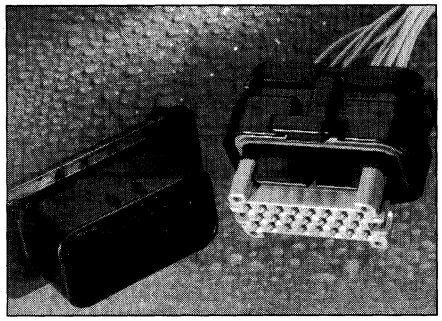
2210 Wire Integration Unit (WIU) Connectors



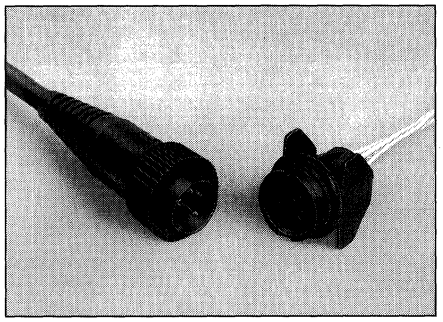
2211 Metrimate 43° Mount Printed Circuit Board Plug Header



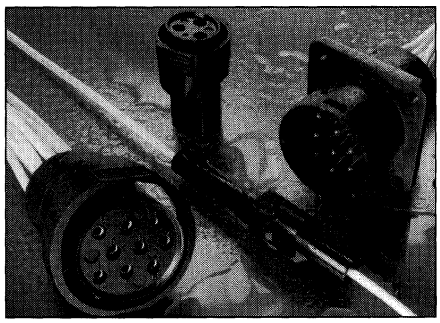
2212 Soft Shell Pin and Socket Connectors
2213 Universal MATE-N-LOK II Connectors
2217 Universal MATE-N-LOK Connectors
2226 Commercial MATE-N-LOK Connectors
2234 .140 MATE-N-LOK Connectors, Large Insulation, .240 Centerline
2237 .093 [2.36] Soft-Shell Commercial Pin and Socket Connectors
2242 Mini-Universal MATE-N-LOK Connectors
2248 (MR) Miniature Rectangular Connectors
2255 .062 [1.57] Soft-Shell Commercial Pin and Socket Connectors
2258 (CMPC) Circular Multi-Pin Connectors



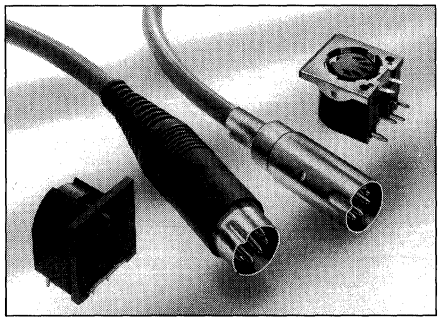
2262 AMPSEAL Automotive Plug Connector and Header Assembly (Wire-to-Board)



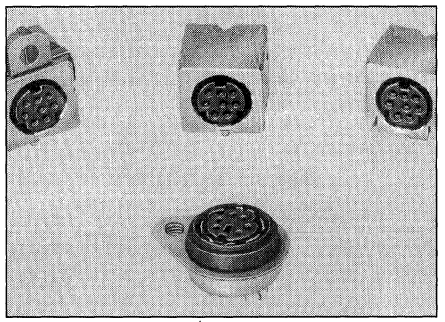
2263 Audio/Instrument Connectors (DIN Type)



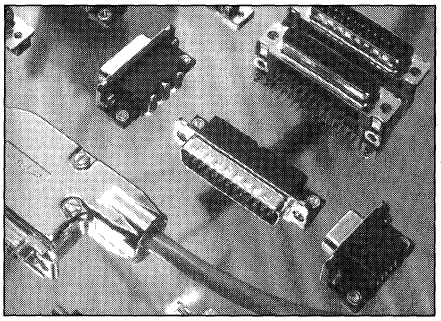
2264 Econoseal Sealed Pin and Socket Connectors



2267 Shielded Circular DIN Connectors



2268 Shielded Miniature Circular DIN Connectors



2271 Subminiature D Connectors (AMPLIMITE)

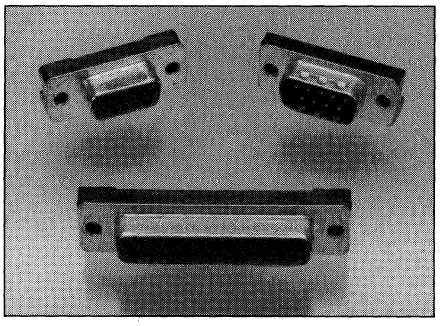
CABLE CONNECTORS
- 2271 HDP-22 Crimp Snap-In Contact Connectors
- 2273 HDE-20 IDC Connectors for Discrete Wire and Jacketed Cable
- 2276 HDP-20 Crimp Snap-In Contact Connectors
- 2281 HD-20 Solder Cup Connectors
- 2283 Accessories
- 2290 Hardware
- 2298 Cassette Connectors
- 2301 HDJ-20 Jacketed Cable Connectors

BOARD MOUNT CONNECTORS
- 2302 Right-Angle Posted Connectors (AMPLIMITE)
- 2312 Right-Angle, Metal-Shell Connectors (AMPLIMITE)
- 2314 Stacked PCB Connectors
- 2320 HDJ-20 Front Metal-Shell Right-Angle Posted Connectors
- 2321 Straight Posted Connectors

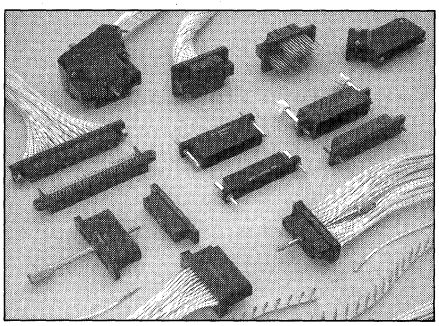
COAX MIX CONNECTORS
- 2328 Coax Mix 13C3 or 3C3 Connectors

HD-20 SURFACE-MOUNT CONNECTORS
- 2331 HD-20 Front Metal-Shell, Right Angle, Surface Mount Connectors

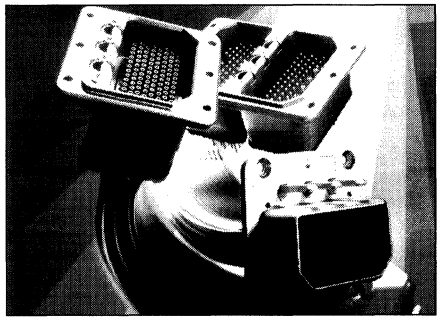
AMPLIMITE .050 SERIES CONNECTORS, SERIES III
- 2334 Receptacle Headers
- 2338 SBus Connectors, Series III
- 2340 Cable Connectors, Series III
- 2347 Shielded AMPLIMITE .050 Series Slimline Connectors
- 2349 Shielded AMPLIMITE .050 Series Connectors, Series II
- 2353 Shielded AMPLIMITE .050 Series Connectors, Series I
- 2358 SCSI Terminators



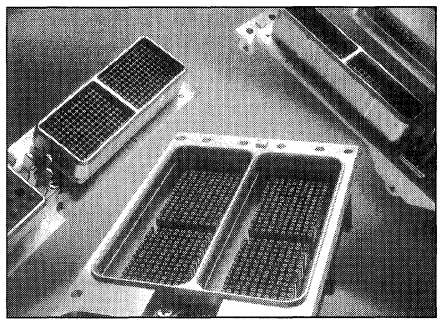
2363 AMPLIMITE Ultraslim .197 [5.00] Connector



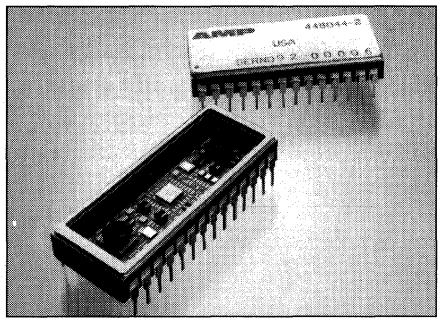
2364 High Density Rectangular Connectors



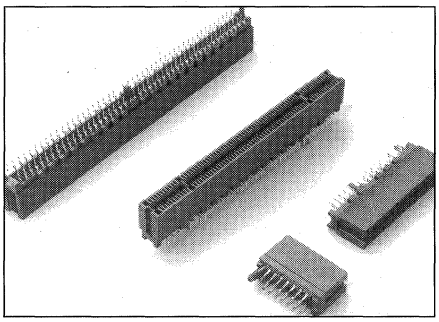
2370 ARINC 404 Rack and Panel Connectors



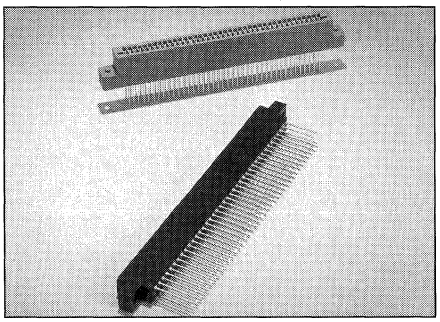
2382 ARINC 600 Connectors
Traffic Alert Collision Avoidance System (TCAS)



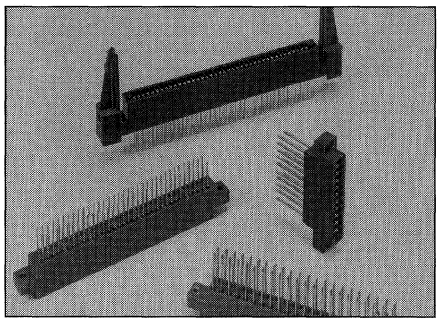
2392 Serial Interface Module (SIM)



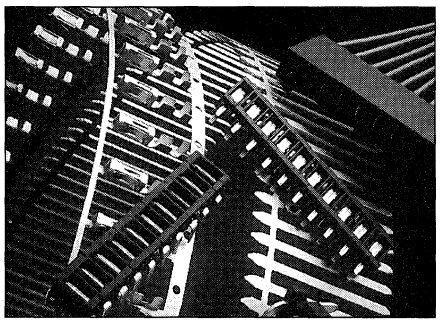
3001 One Piece Printed Circuit Board Connectors
- 3001 Standard Edge .050 Series Connectors
- 3006 Standard Edge II Connectors
- 3013 Twin Leaf Mother Board Connectors
- 3017 Low Profile Edge Connectors
- 3021 TELEDENSITY Connectors
- 3022 AMP PACE Connectors
- 3027 Rotary Cam ZIF Connectors
- 3031 Linear ZIF Connectors
- 3037 Crimp Snap Twin Leaf Connectors
- 3043 AMP-LEAF Connectors
- 3049 DUO-TYNE Flag Connectors
- 3052 High Current Connectors
- 3055 Printed Circuit Board Connector Hood Assemblies
- 3057 Standard Edge .050 [1.27] Series PCI (Peripheral Component Interconnect Connectors)
- 3058 High-Speed Standard Edge Connectors
- 3060 AMP Multiple-Tap Printed Circuit Edge Connectors
- 3062 AMP I/O Connector Series Multiple-Tap Connectors



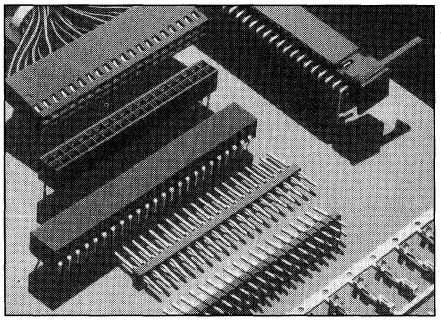
3066 Wrap-Type Printed Circuit Connectors



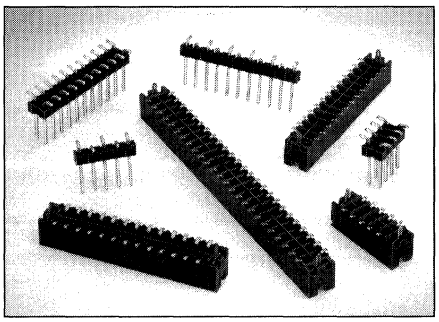
3070 TERMI-TWIST Printed Circuit Connectors



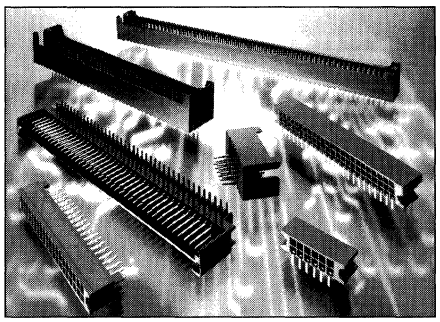
3074 .031 x .062 [0.79 x 1.57] Interconnection System (AMPMODU)



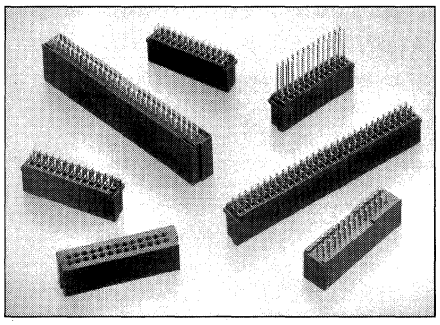
3083 .025 [0.64] Square Interconnection System (AMPMODU)
- 3084 Receptacle Assemblies, Horizontal Mount
- 3086 Receptacle Assemblies, Vertical Mount
- 3089 Mod. IV Wire-Applied Contacts and Housings
- 3095 Locking Clip Contacts and Housings
- 3098 Breakaway and Retention Headers—Unshrouded
- 3107 Standard Headers—Unshrouded
- 3110 Standard Profile Headers—Shrouded
- 3116 ACTION PIN Headers—Unshrouded and Shrouded



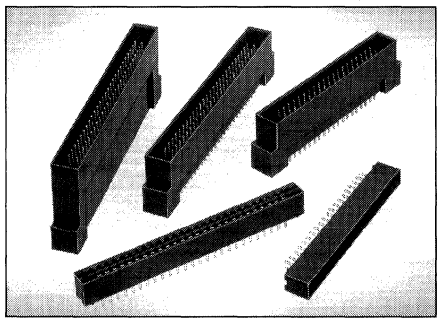
3119 AMPMODU Surface-Mount Receptacle Assemblies and Unshrouded Breakaway Headers .100 [2.54] Centers



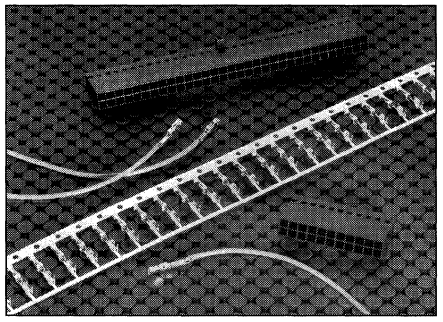
3122 AMPMODU Two-Piece Printed Circuit Board Connectors



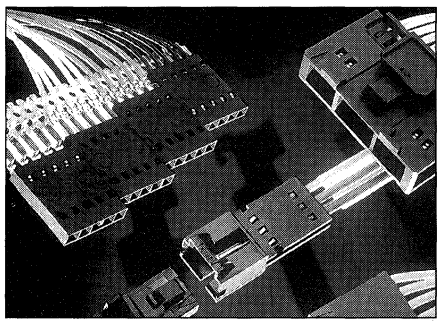
3127 AMP ACTION PIN Stacking Connectors



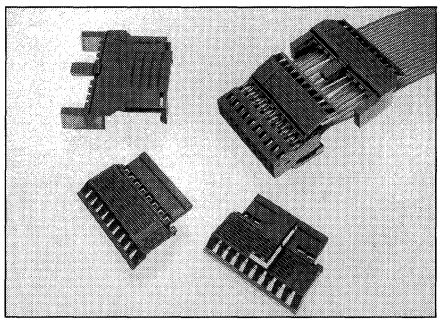
3130 AMPMODU Stacking Connectors .025 x .025 [0.64 x 0.64] Posts



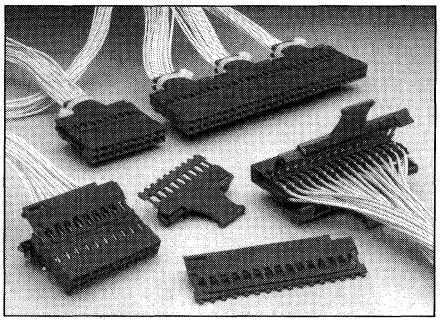
3132 AMP Short Point, Crimp Snap-In Wire-Applied Contacts and Housings



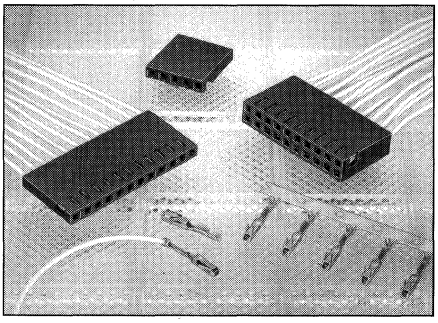
3134 MTE Interconnection System (AMPMODU)



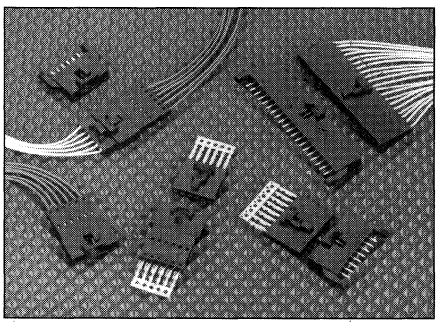
3147 MT and Shielded MT Interconnection System (AMPMODU)



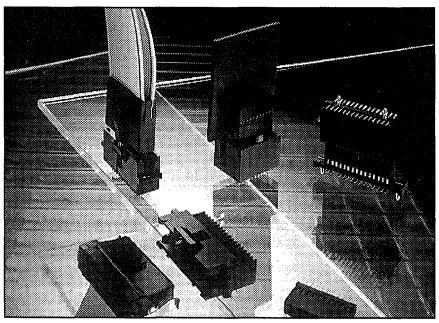
3152 AMPMODU Level V IDC Connectors



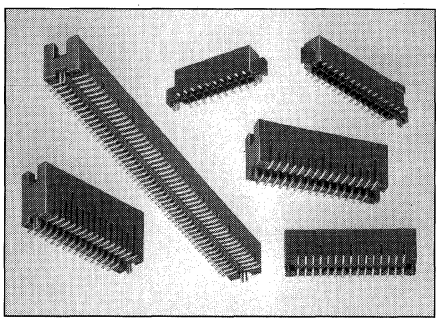
3155 AMP Standard Tandem Spring and Mini-Tandem Spring Receptacle Contacts



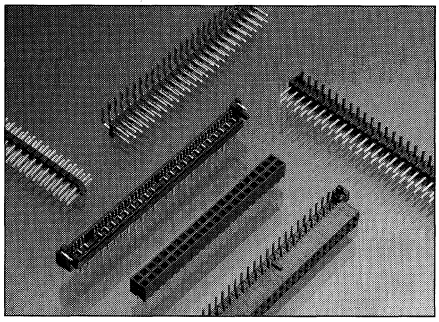
3158 AMP Single-Row Linear (ASL) Connectors (Wire-to-Board, Wire-to-Wire)



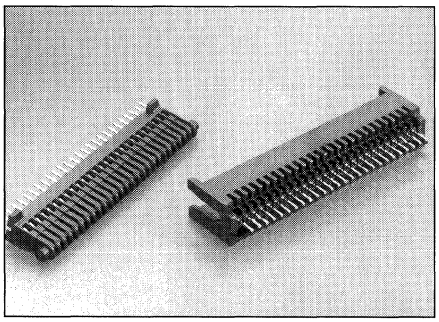
3160 AMPMODU System 50 Connectors



3167 AMPMODU 50/50 Grid Connector System

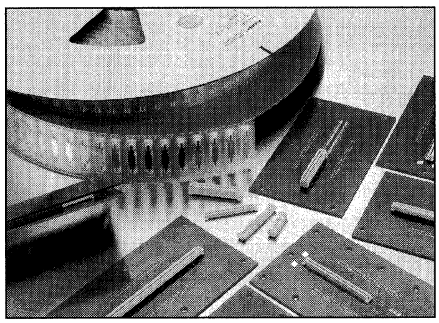


3172 AMPMODU 2 mm Connectors (Board-to-Board)

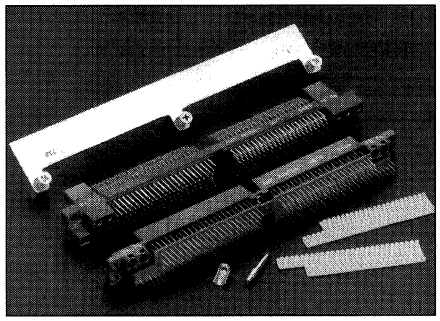


3180 AMP ROCKER MATE Connectors (Board-to-Board) 2 mm [.079] Centerline

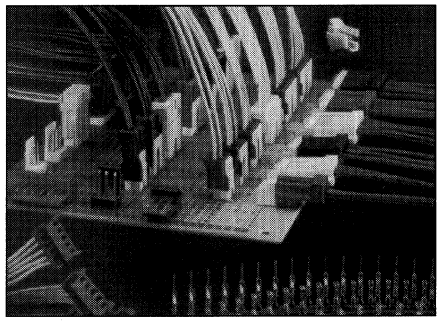
3181 AMPMODU Metristak 1.0 mm Connector System



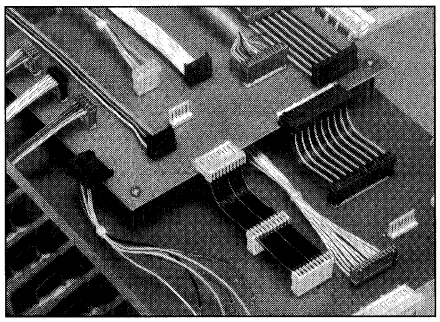
3182 AMP FH (Free Height) 0.8 mm Surface-Mount Connectors (Board-to-Board)



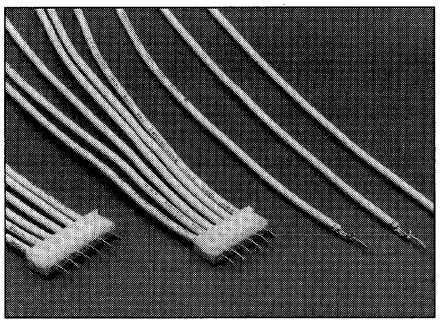
3185 AMP-HDI 6- and 8-Row LRM (Line Replaceable Module) Connectors



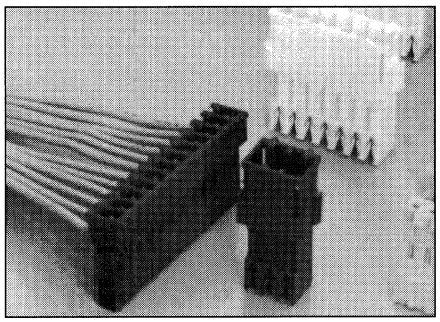
3186 AMP Economy Interconnection (EI) Series Connectors



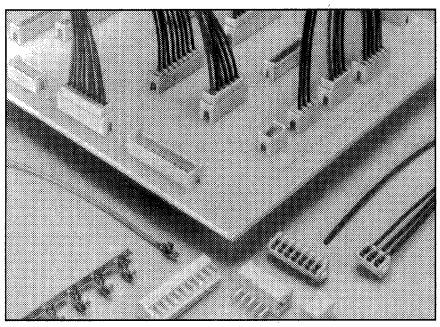
3192 AMP Mass Termination EI Series Connectors (MTEI)



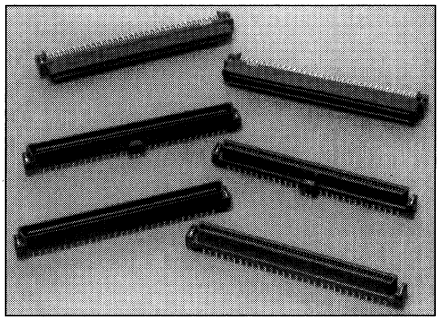
3195 Low Profile Mini AMP-IN Connectors



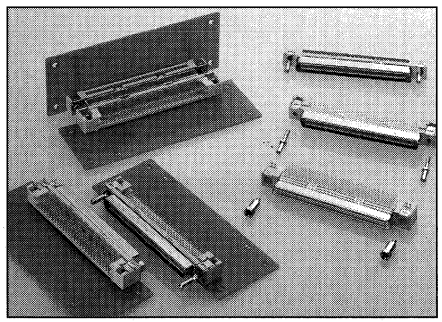
3197 AMP MT-6/MT-7 Connector System



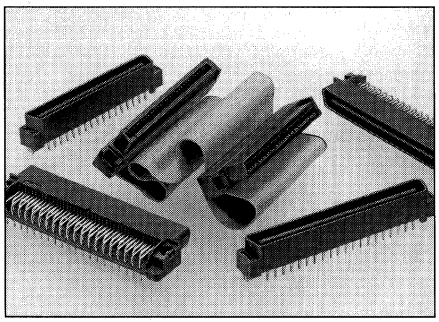
3201 AMP ULTREX Interconnection System



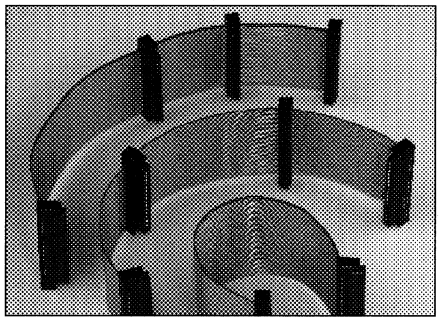
3210 CHAMP .050 Connectors
3211 Board-to-Board Applications CHAMP .050 Series I
3212 Board-to-Board Applications CHAMP HD Connectors
3213 Board-to-Board Applications CHAMP .050 FH (Free Height) Connectors
3214 Board-to-Board Applications CHAMP .050 Series II
3217 Wire-to-Board Applications CHAMP .050 Series III
3219 Box-to-Box Applications CHAMP .050 Docking Connectors



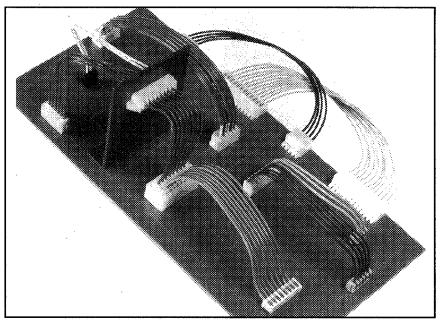
3220 CHAMP .050 Series, Low Profile Docking Connectors



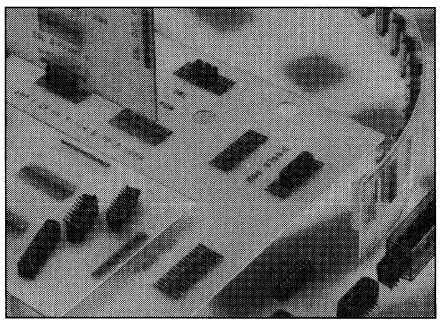
3221 CHAMP .050 Series I Connectors for Video Electronics Standard Association (VESA) Applications



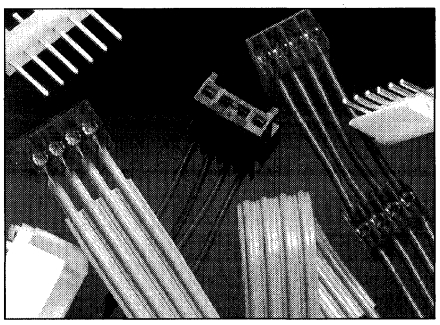
3222 CHAMP .050 Ribbon Cable Assemblies for VESA Applications



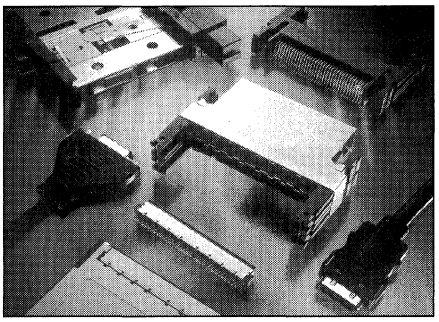
3224 AMP CT (Common Termination) Connector System 2.0 mm [.079] Centerline



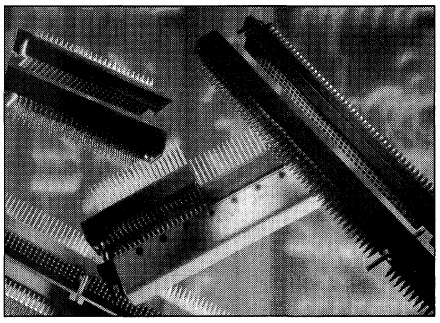
3231 AMP 1.25 mm [.049] / 0.8 [.031] FP Board-to-Board Connectors



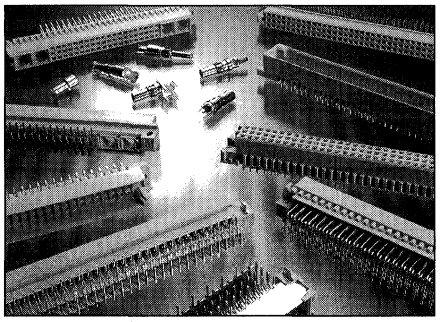
3236 MTA-100 IDC Connectors and Headers
- 3236 .100 [2.54] Centerline
- 3243 .100 [2.54] Centerline CST-100 Crimp Contacts and Housings
- 3244 .156 [3.96] Centerline
- 3254 MTA IDC Quad Connectors
- 3258 .156 [.396] Centerline SL-156 Crimp Contacts and Housings



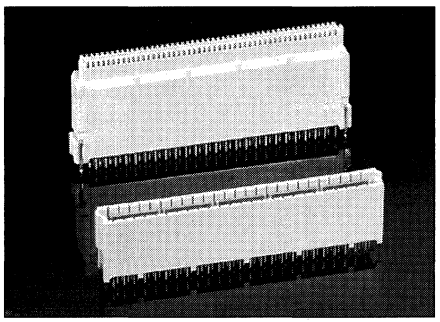
3261 PC Card Connectors
- 3264 Receptacle Selection Guide
- 3265 Pin Header Selection Guide
- 3281 Frame Kits



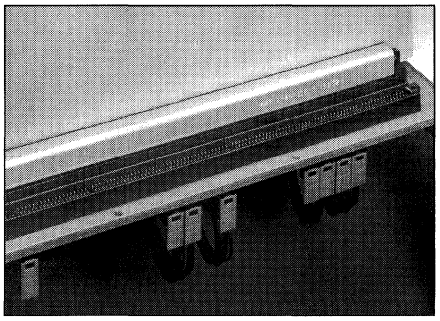
3290 Two-Piece High-Density Printed Circuit Board Connectors
- 3291 AMP-HDI Hybrid Connectors
- 3293 AMP-HDI Connectors
- 3306 Vertical Receptacles with ACTION PIN and Solder Post Contacts
- 3308 TBC (Twin Beam Contact) Connectors
- 3311 TBC Plus (Twin Beam Contact) Connectors



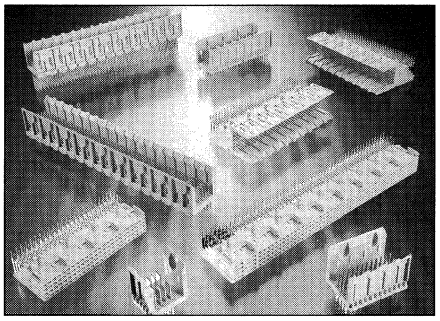
3319 EUROCARD Connectors per DIN 41612 and IEC 603-2
- 3320 Enhanced Eurocard Connectors
- 3321 MFBL (Make First/Break Last) Connector System
- 3322 Type B Assemblies
- 3323 Type C Assemblies
- 3331 Four-Row Assemblies
- 3332 Five-Row Assemblies
- 3332 Type D Assemblies
- 3333 Type F Assemblies
- 3336 Type G Assemblies
- 3336 Type M Assemblies
- 3340 Type Q Assemblies
- 3341 Type R Assemblies
- 3344 Accessories
- 3351 Application tooling



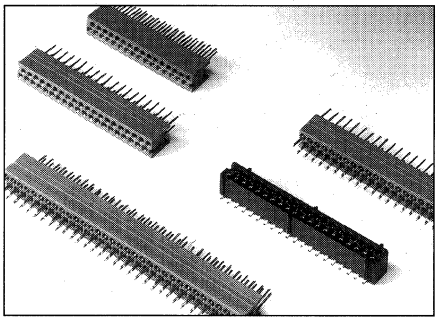
3352 Micro-Strip Interconnection System



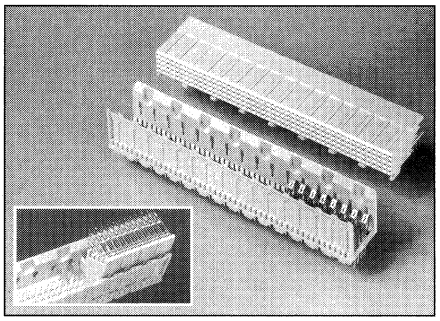
3355 Z-PACK Stripline 100 Interconnection System
3361 Z-PACK Stripline 100 High Performance Cable Assemblies



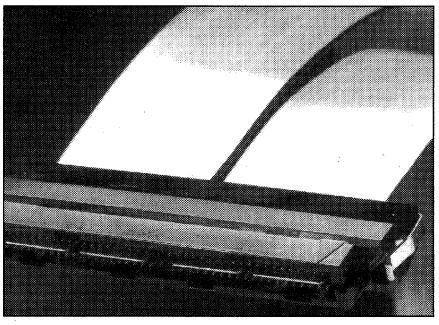
3363 Z-PACK 2 mm FB (Futurebus+) Connectors



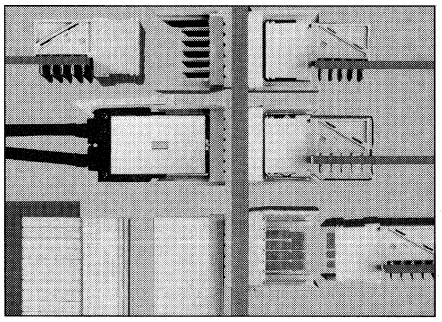
3396 Chevron-Shaped Contact Connectors



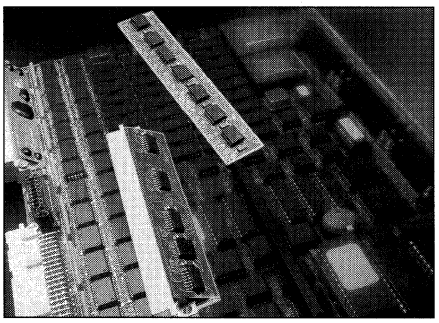
3368 Z-PACK 2 mm FB (Futurebus+)
Shunted Pin Header



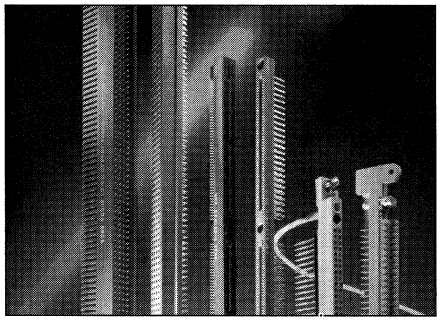
3397 AMP Micro-Strip Cable Assemblies



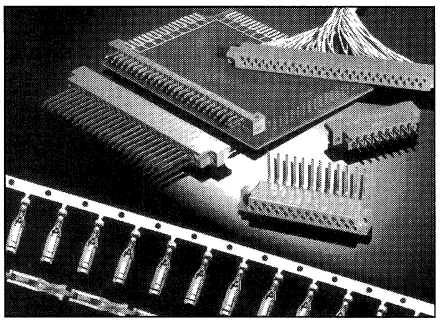
3369 Z-PACK 2 mm HM Interconnection System



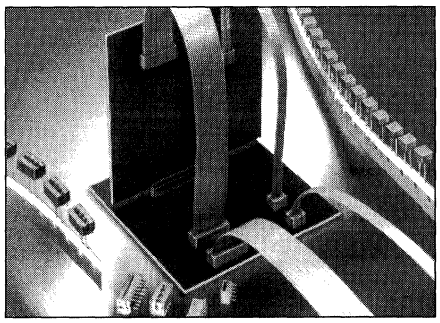
3398 ACTIVE + DIN Connectors



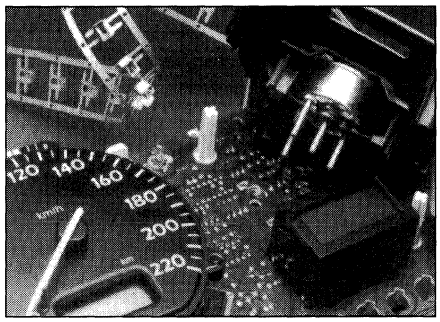
3373 Box Contact Connectors
3377 .100 [2.54] Centerline Connectors
3389 .075 [1.91] Centerline Connectors
3392 .050 [1.27] Centerline Connectors



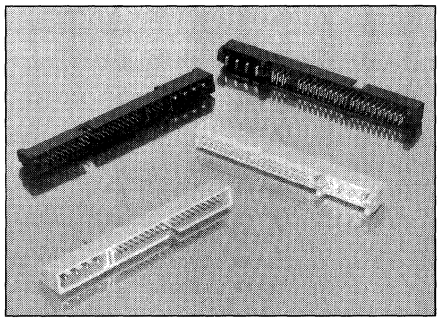
3399 AMP-BLADE Two-Piece Printed Circuit Edge Connectors



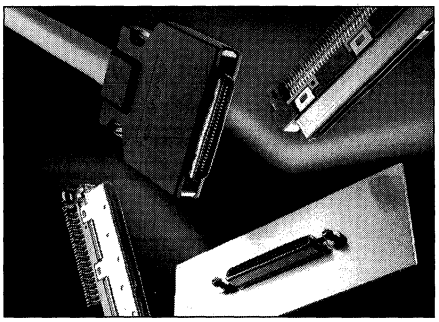
3405 AMP Super Trap Connectors 1.25 mm [.049] Centerline



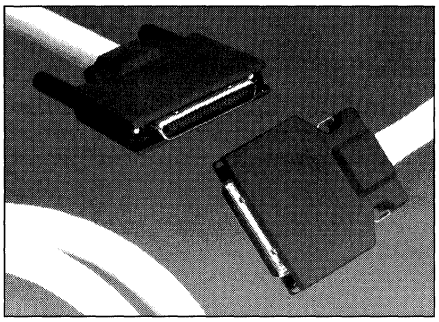
3406 Printed Circuit Board (PCB) Pin Receptacles
3407 Printed Circuit Board (PCB) Receptacles
3408 AMP-BARREL Terminals
3410 Printed Circuit Board Disconnects
3412 AMP EDGE Single Lead Printed Circuit Terminals
3413 Miniature AMP-IN Terminals
3414 Test Probe Receptacles
3415 Power Tap



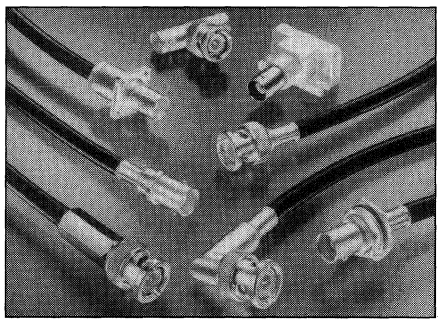
3416 2-in-1 Combination Disk Drive Connectors



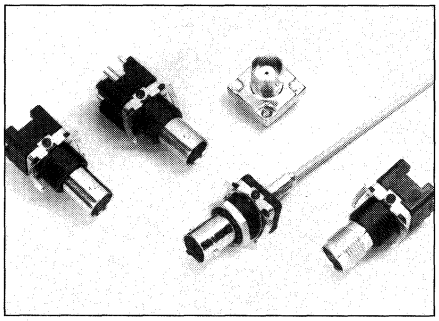
3417 CHAMP 0.8 mm High Density Interconnection System



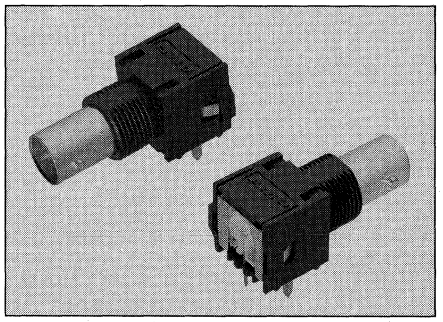
3418 CHAMP 0.8 mm [.031] Cable Assemblies



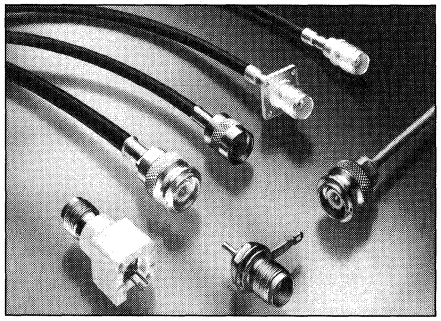
4002 BNC Connectors, 50 ohm
4020 BNC Connectors, 75 ohm



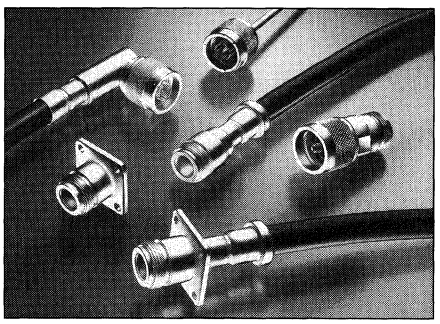
4026 Decoupled Connectors, BNC and TNC Jacks



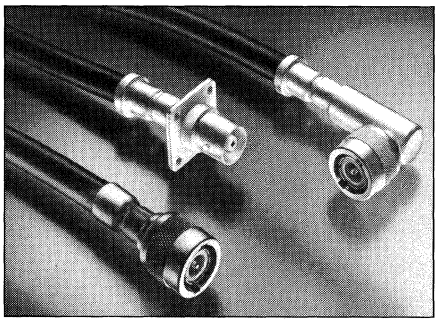
4029 Self-Terminating BNC Pc Board Connectors



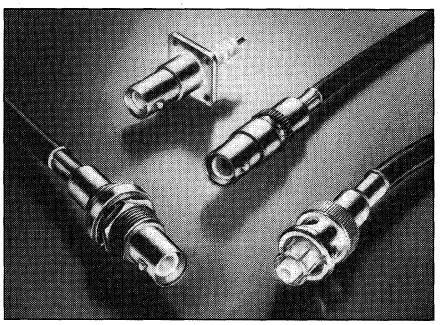
4030 TNC Connectors, 50 ohm
4036 TNC Connectors, 75 ohm



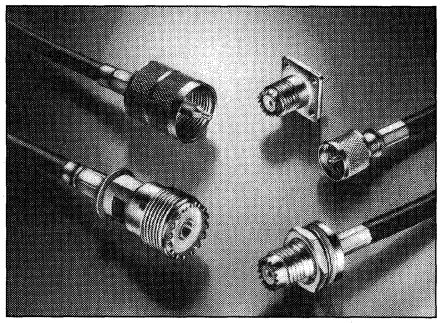
4037 N Connectors



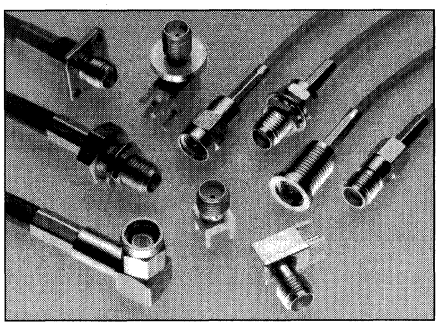
4043 C Connectors



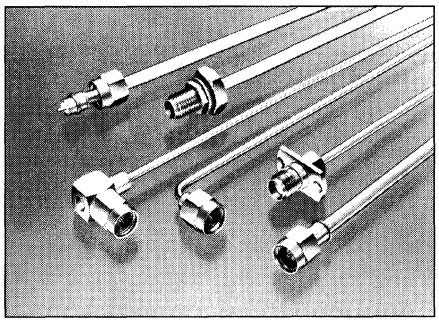
4045 SHV Connectors



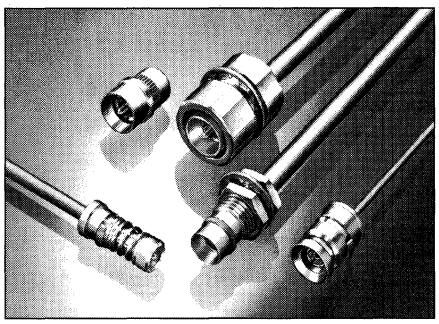
4047 Miniature and Standard UHF Connectors



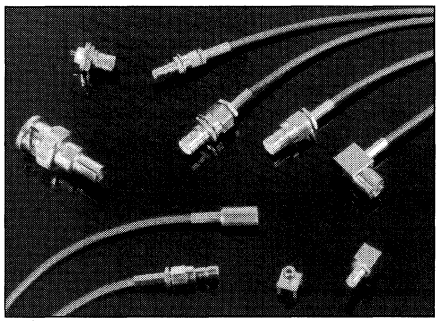
4051 Hex Crimp and Printed Circuit Board SMA Connectors



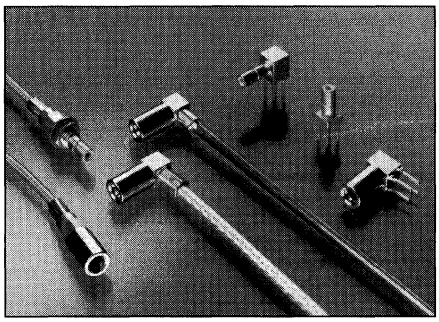
4055 SMA Connectors for Semi-Rigid Flexible Cable



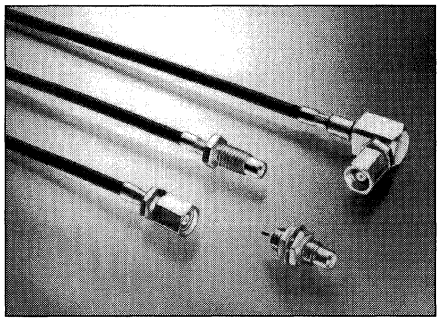
4066 Blind Mate Connectors for Semi-Rigid Cable



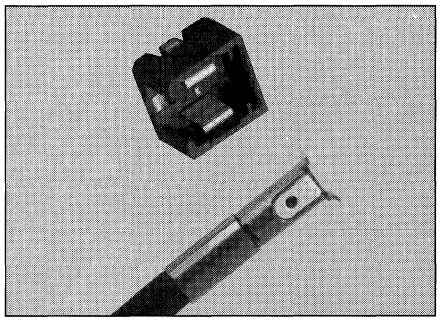
4069 SMB Connectors



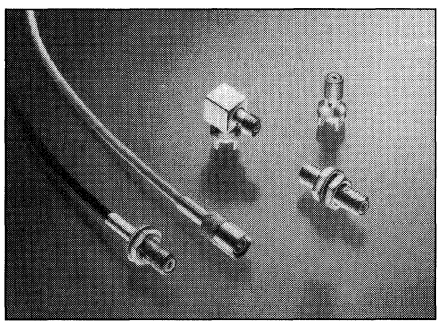
4076 SSMB Cable and Printed Circuit Board Connectors



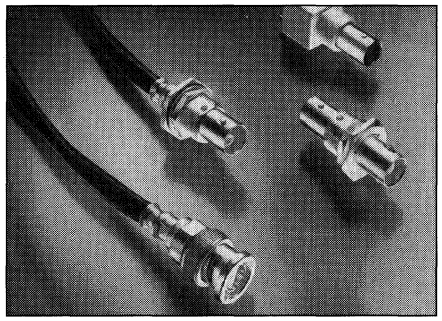
4079 SMC Connectors



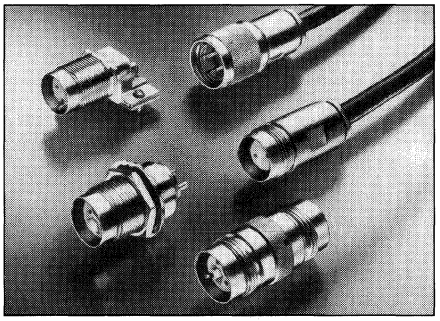
4082 Micro-Miniature Connectors, Cable Plugs and Pc Board Receptacle



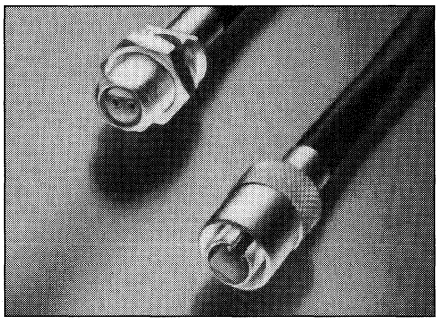
4083 Miniature Threaded Connectors



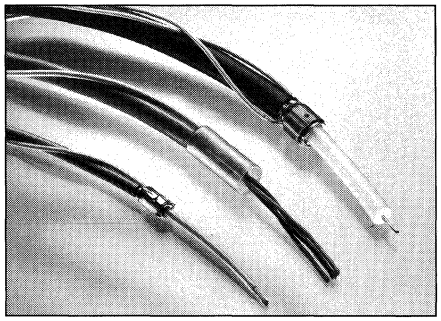
4085 Twin BNC Connectors



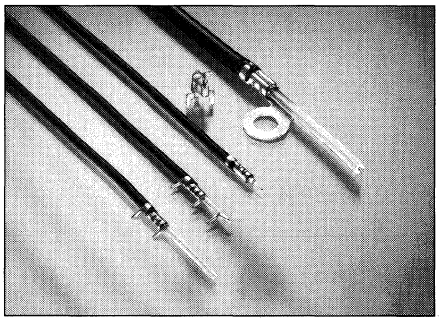
4087 Twin-Ax Connectors



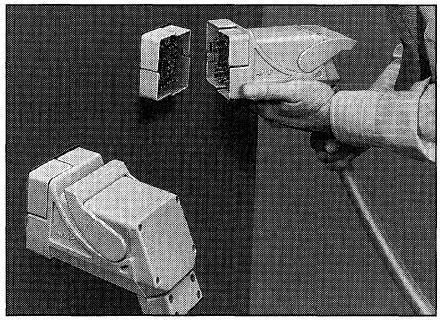
4089 Twin Threaded Connectors



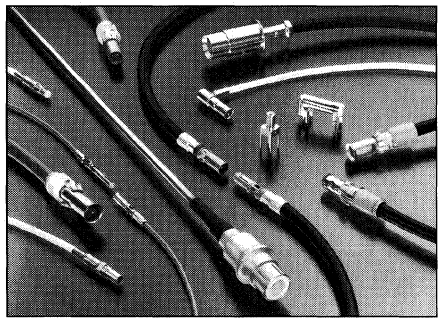
4091 Shielded Wire Ferrules (TERMASHIELD)



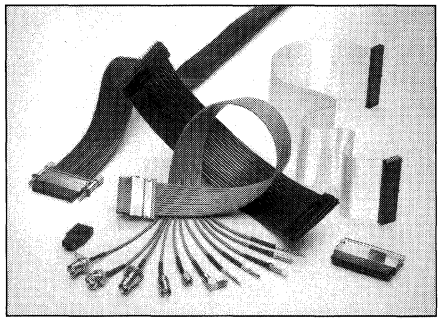
4093 Braid-Pic Contacts and Terminals



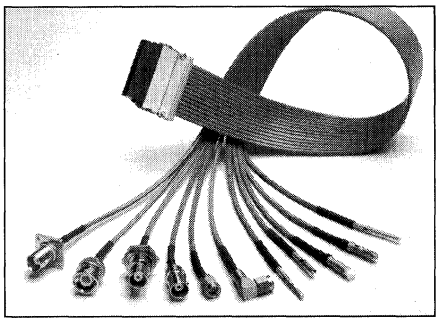
4096 COAXICON Latching Connector



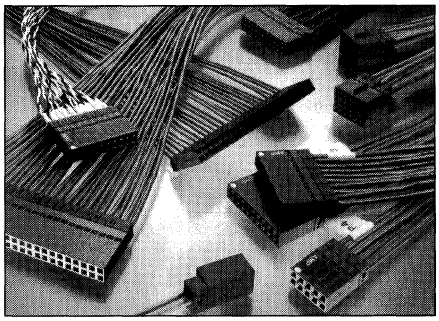
4098 Multiple Coaxial Contacts (COAXICON)



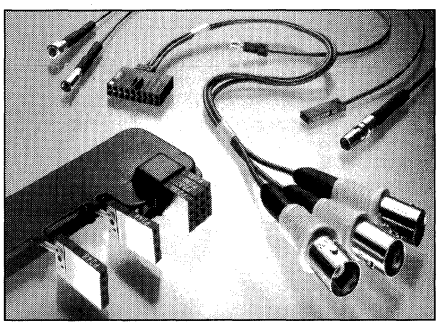
4110 Multiple Transmission Cable Assemblies, Cables and Connectors



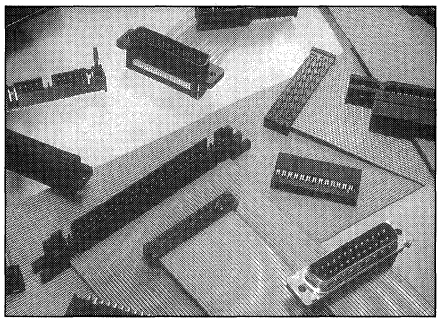
4112 Discrete COAXICON RF Connectors and Contacts for use with Custom Cable Assemblies



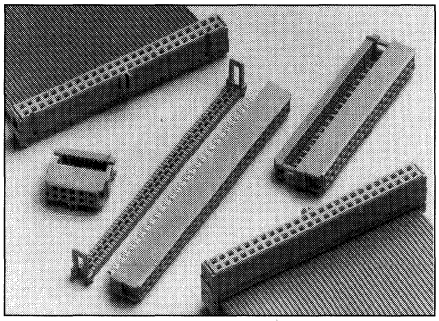
4113 Point-to-Point Cable Assemblies



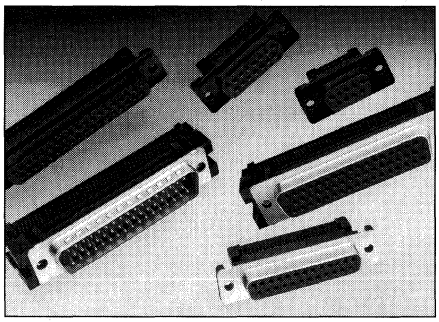
4115 Hybrid Cable Assemblies



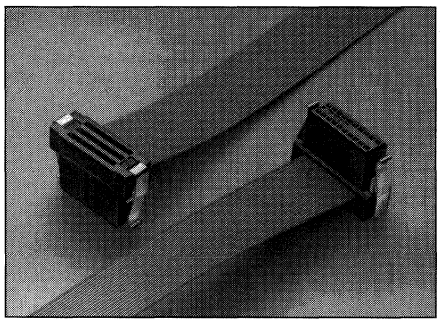
5001 AMP-LATCH Ribbon Cable Connector System



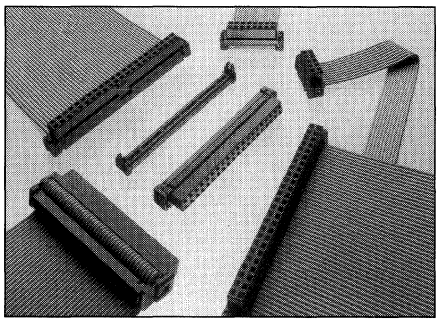
5002 AMP-LATCH Uni-Beam Connectors
5004 AMP-LATCH Novo Receptacles



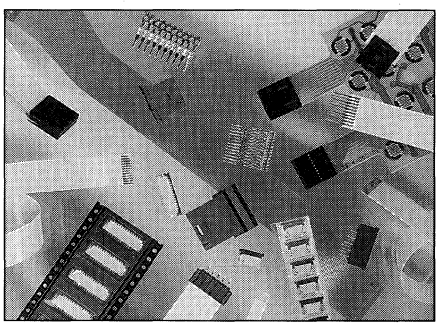
5018 Subminiature D HDF-20 IDC Mass Termination Connectors for Flat Ribbon Cable



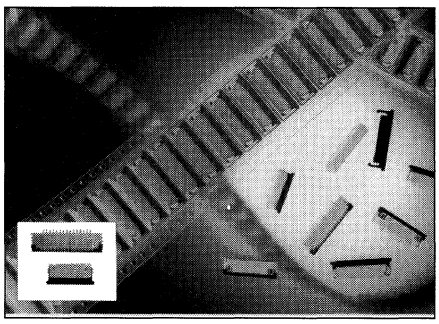
5023 AMP-LATCH System 50 (Cable-to-Board) Receptacle Connectors



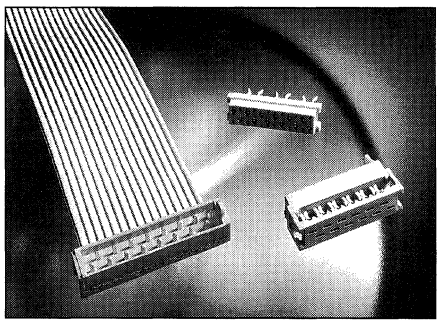
5024 AMP-LATCH 2.0 mm [.079] Ribbon Cable Receptacle Connectors



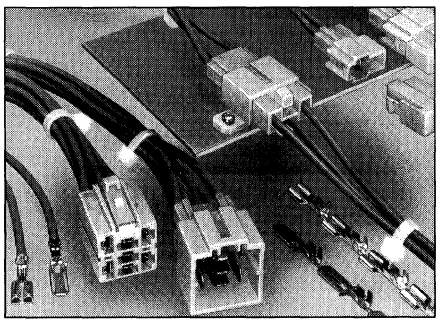
Flexible Film Products
5025 For .050 [1.27] Centerline Flexible Flat Conductor (FFC) Cable
5031 For .100 [2.54] Centerline Flexible Flat Conductor (FFC) Cable
5039 Trio-Mate Connectors for Flexible Flat Conductor (FFC) Cable, FEC or Membrane Switch Circuitry



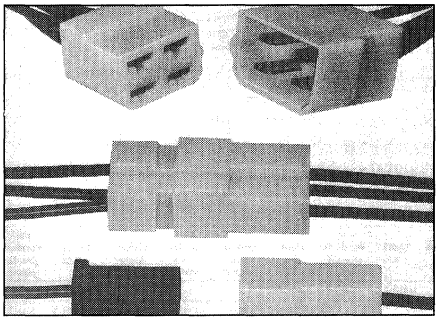
5044 Flexible Printed Circuit (FPC) Connectors



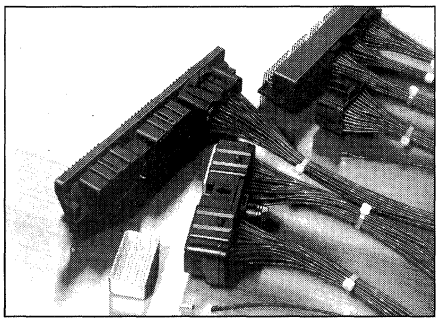
5047 AMP Micro-MaTch Miniature Connector System



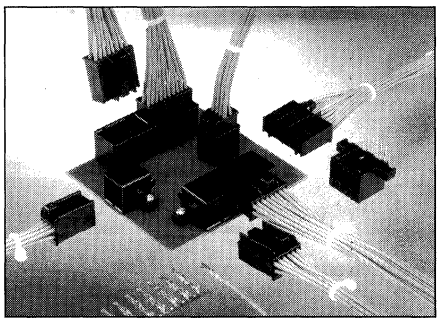
6001 AMP 250 Series Housing Lance Connectors



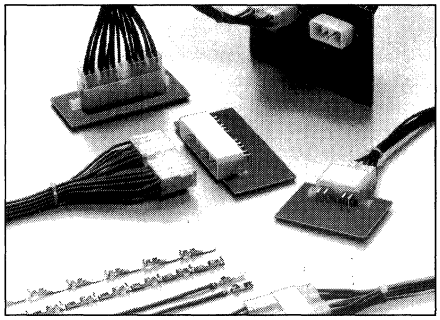
6004 AMP FASTIN-FASTON Connectors
6018 Positive Lock Receptacles



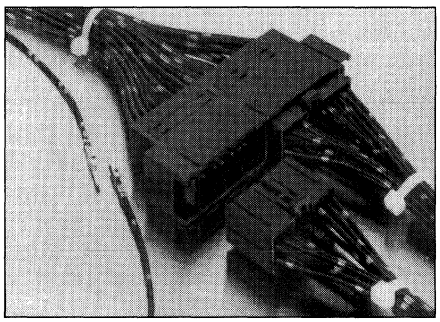
6021 AMP 040 Series Pairmate Connectors



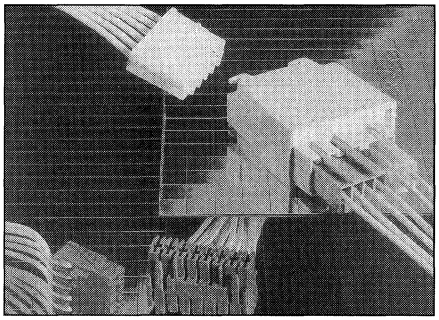
6023 AMP Dual-Line Interlock (DLI) Connectors



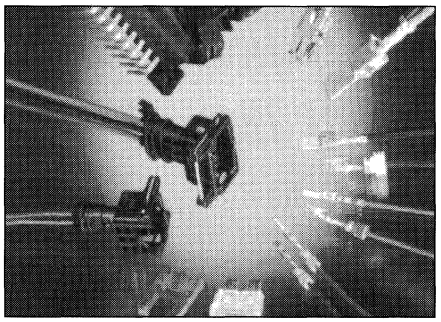
6025 AMP Multiple Interlock Connectors (MIC)



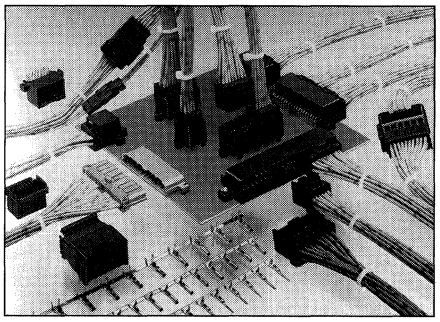
6029 AMP SCCS (Steering Column Combination Switch) Connectors



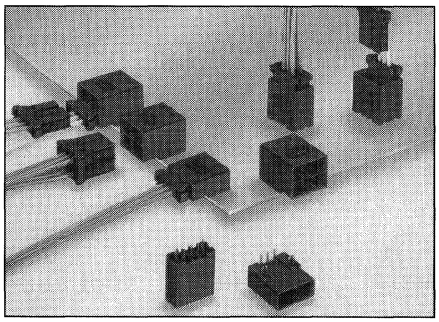
6031 AMP Standard-Timer and AMP Multifitting Connectors in In-Line Mating Technology



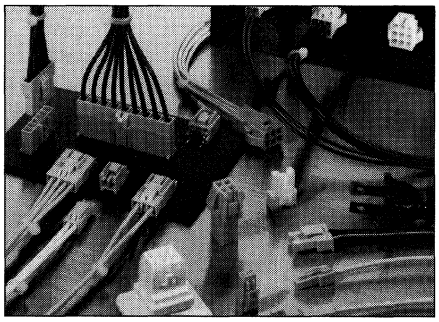
6038 AMP Timer Connectors
- 6039 Micro-Timer Contacts
- 6040 Junior-Timer Contacts
- 6042 Junior-Power-Timer Contacts
- 6046 Standard-Timer Contacts
- 6048 Standard-Power-Timer Contacts
- 6051 Maxi-Power-Timer Contacts
- 6053 Timer Housings
- 6059 Male Connectors
- 6071 Junior-Power-Timer Housings
- 6074 Junior-Timer and Junior-Power-Timer Housings
- 6077 Additional Housings for Timer Contacts



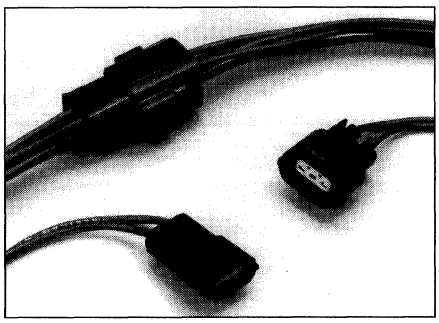
6078 MULTILOCK Connectors
- 6078 040 Series (Standard)
- 6081 040 Series (Mark II)
- 6083 070 Series
- 6088 040/070 Series Hybrid I/O



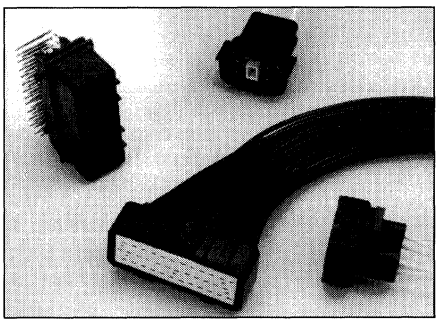
6091 AMP Dynamic D-3000 Series Connectors



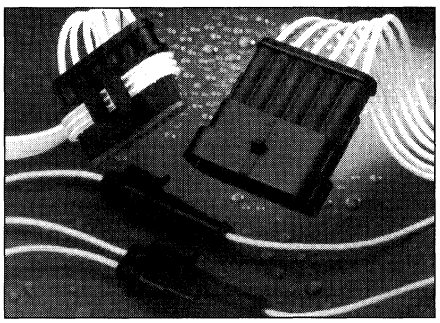
6096 AMP Universal Power (UP) Connectors



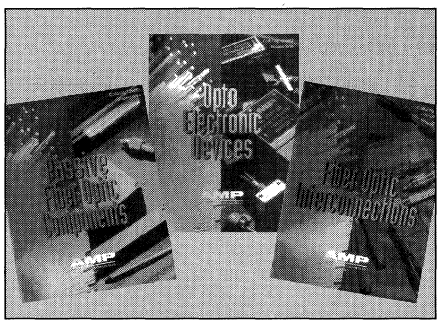
6100 Econoseal J Series [Mark II(+)] Connectors



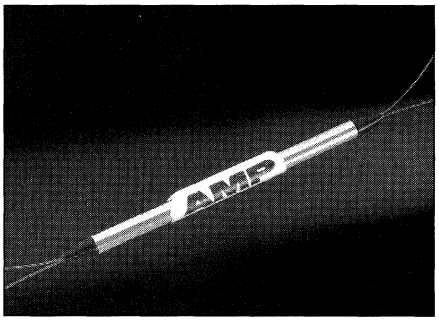
6102 Econoseal III Connectors



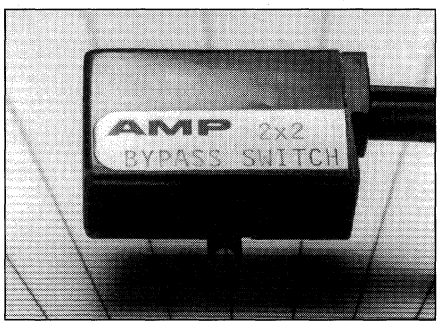
6104 SUPERSEAL 1.5 Series Connectors



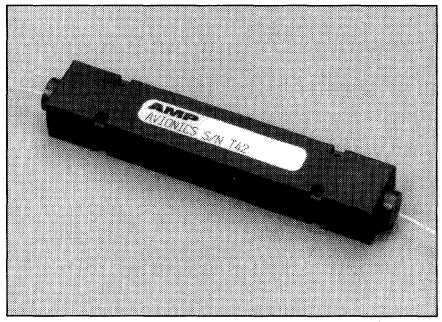
7001 Fiber Optic Products



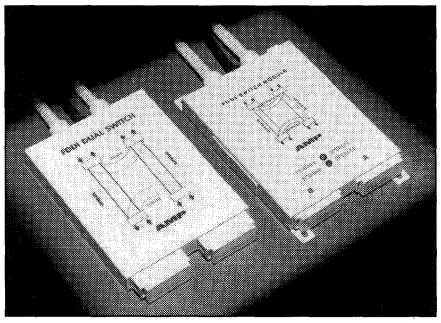
7013 Wideband Couplers/Splitters



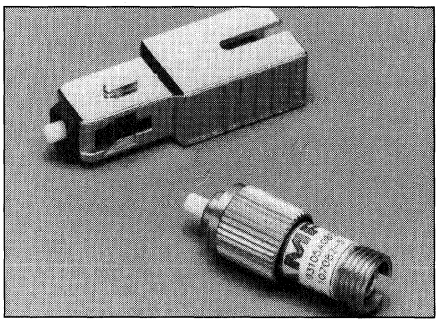
7002 Switches



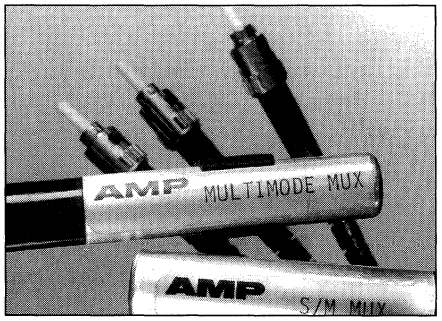
7018 Ruggedized Multimode Couplers



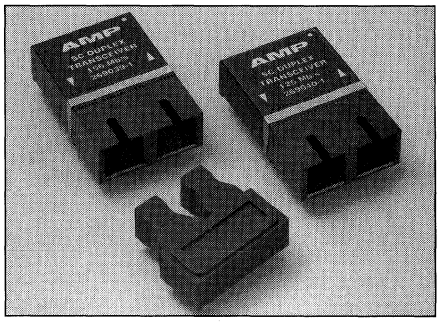
7006 FDDI Dual Bypass Switch Module Assemblies



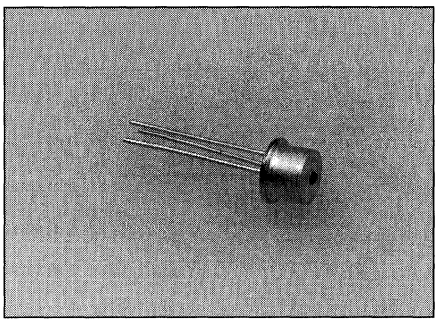
7019 Attenuators



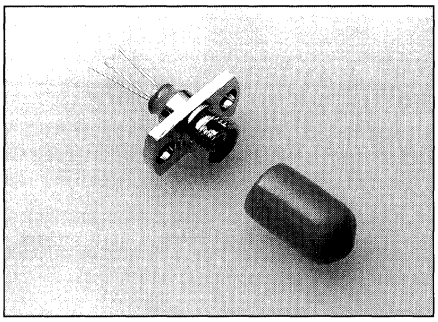
7009 Wavelength Division Multiplexers



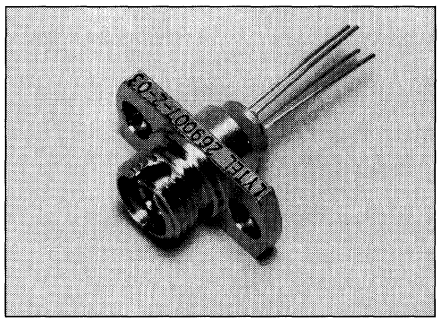
7022 Transceivers



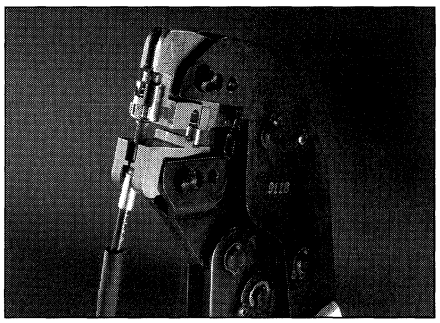
7035 1.3 µm LED



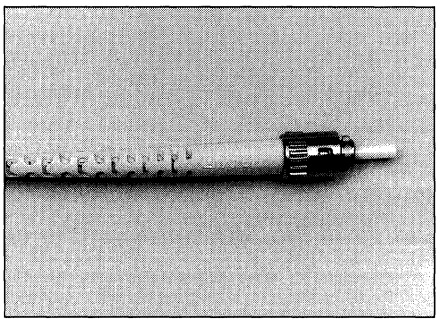
7045 InGaAs Photodetectors



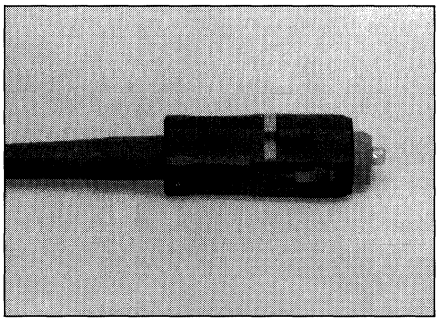
7055 OC-1 PIN/Preamp Modules



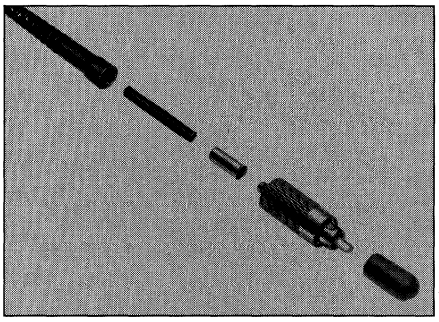
7063 AMP LightCrimp XTC Epoxyless ST-Style Connectors and Kits



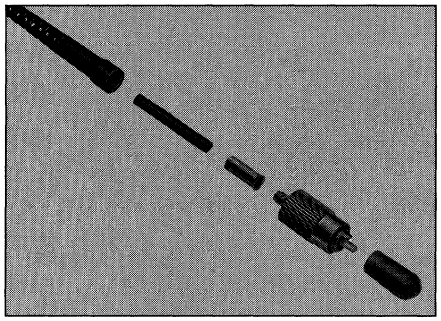
7064 ST-Style Connectors



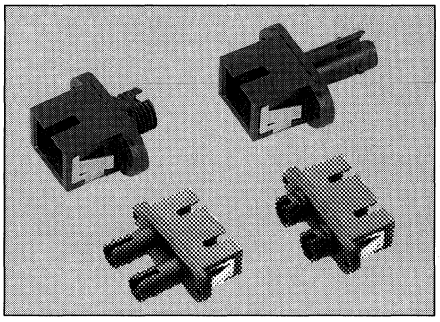
7066 AMP SC Connectors



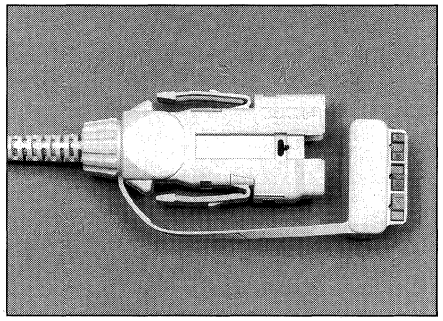
7068 FC Type Connectors



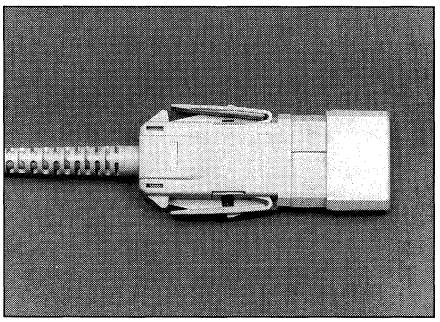
7069 D4 Connectors



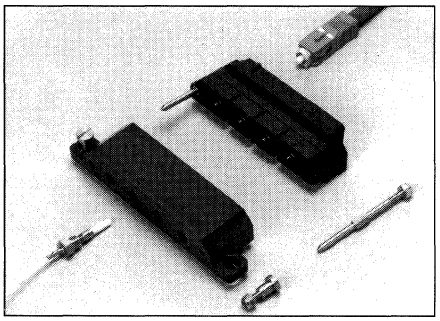
7070 Hybrid Adapters



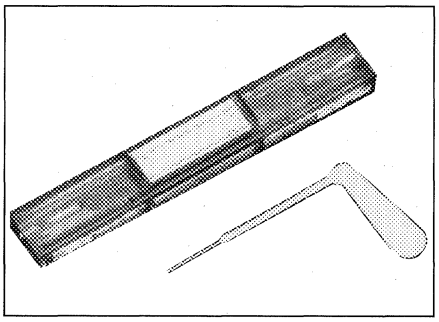
7071 FSD Plug and FSD-MC Plug



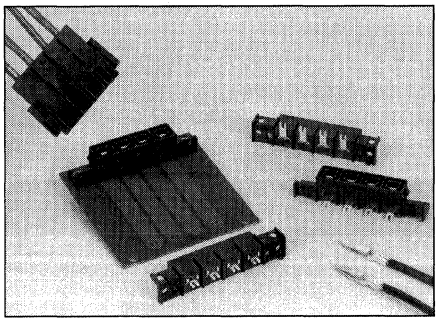
7074 RSD Connectors



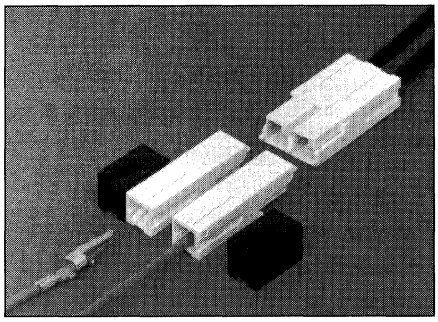
7075 LightPlane Connector System



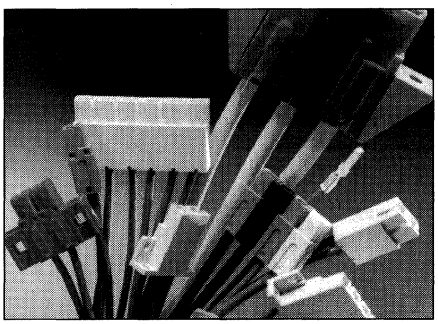
7076 CORELINK Splice



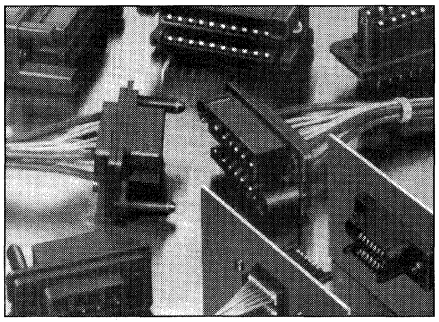
8001 AMPINNERGY Wire-to-Board Connectors



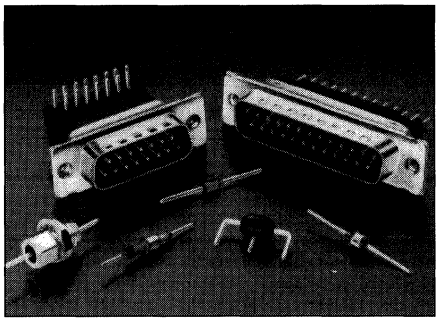
8003 AMPINNERGY Wire-to-Wire Connectors



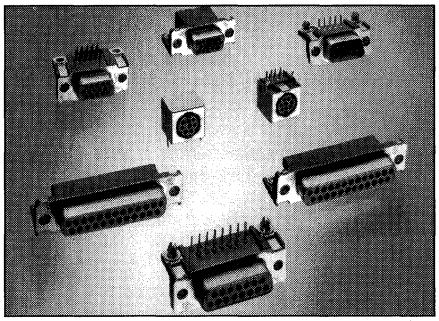
8005 AMP Power Lock Connectors



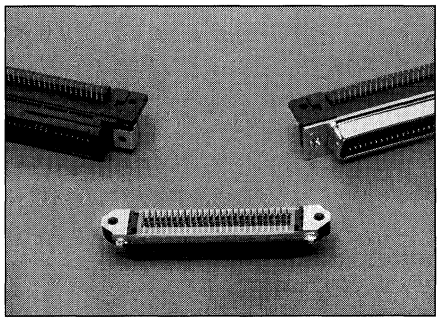
8008 AMP Drawer Connectors
8013 AMP Drawer Connectors Special Versions



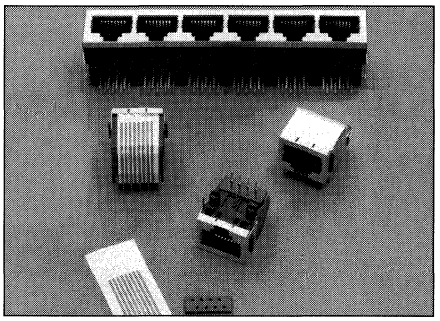
8015 Quiet Line High Performance Filter Products
8018 Filtered AMPLIMITE Subminiature D Connectors
8024 AMP-LATCH Feed-thru Pin Header Assemblies with Distributed Element Filters and Latch and Eject Levers
8025 Quiet Line Standard Loose-Piece Filters
8026 Quiet Line Premium Loose-Piece Filters
8028 High Frequency PCB Filters



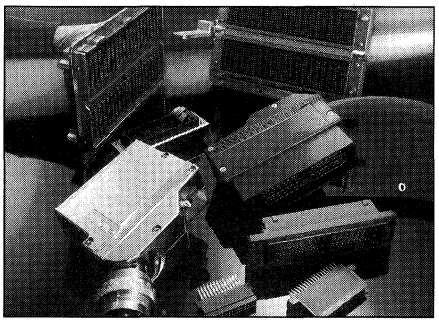
8029 Quiet Line Filtered PCB Connectors



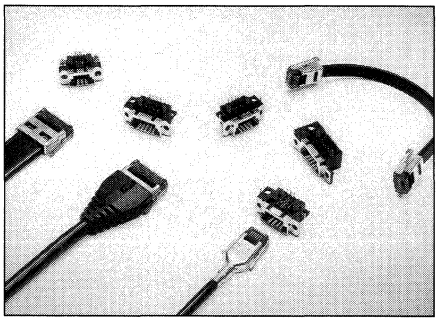
8032 Quiet Line Filtered CHAMP Connectors



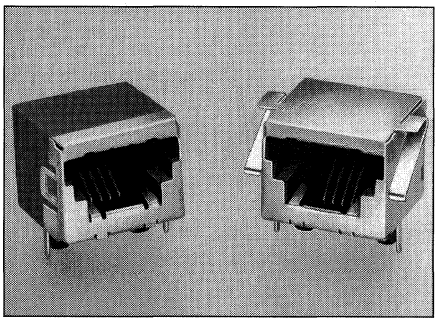
8033 Quiet Line Filtered Modular Jack Connectors



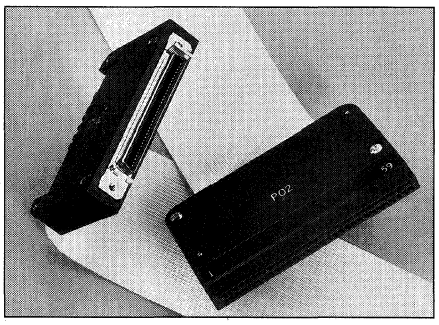
8034 CR ZIF (Cammed Rectangular, Zero Insertion Force) Connector System



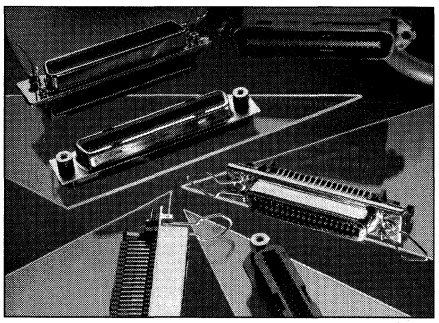
8043 SDL (Shielded Data Link) Connectors



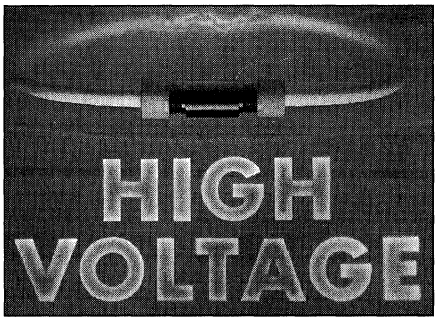
8051 SDL (Shielded Data Link) Connectors for ACCESS.bus Applications



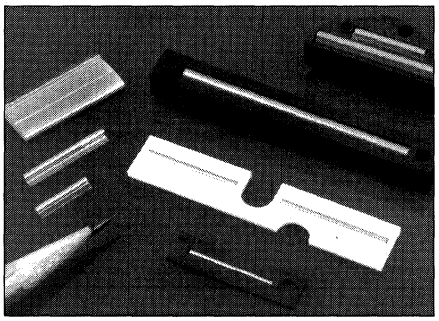
8052 Paddlecard Cable Assemblies



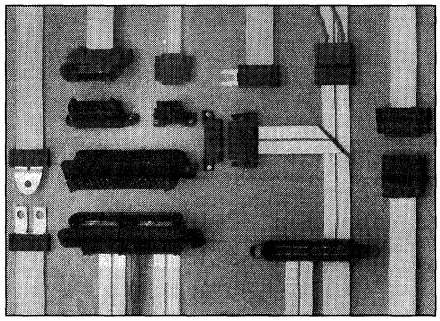
8054 Miniature Ribbon Connector System (CHAMP)
- 8055 CHAMP IDC Connectors
- 8057 Large Insulation Wire Connectors
- 8058 Cable-to-Cable Hardware
- 8061 Cable-to-Panel Hardware
- 8062 Shielded Cable Connectors
- 8065 CHAMP Latch Low Profile Connectors
- 8069 Shielded CHAMP Latch Connectors
- 8071 CHAMP PC Board Connectors
- 8077 ACTION PIN Connectors
- 8079 Shielded PC Board Connectors
- 8082 Special Application Connectors



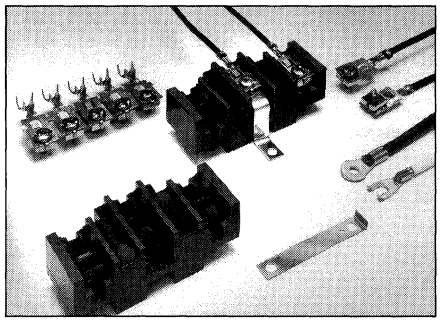
8096 LGH High Voltage Lead Assemblies, Connectors and Receptacles
- 8097 LGH ½I Lead Assemblies and Receptacles
- 8097 LGH ½LI Lead Assemblies and Receptacles
- 8098 LGH 1I Lead Assemblies and Receptacles
- 8100 LGH 1LI Lead Assemblies and Receptacles
- 8101 LGH 2I Lead Assemblies and Receptacles
- 8101 LGH 3I Lead Assemblies and Receptacles
- 8102 LGH 4I Lead Assemblies and Receptacles
- 8103 Commercial Single Line Connectors
- 8104 Two-Position Connectors, 10 KVDC
- 8105 Multi-Pin Circular Commercial Connectors, 27 KVDC
- 8106 13-Pin Circular Connectors, 5 KVDC
- 8107 Metal-Shell Circular Connectors, Military-Type
- 8109 6-Pin, Subminiature Rectangular Connectors
- 8110 Micro-Miniature Connectors
- 8111 Custom-Designed Multi-Pin Connectors
- 8112 Connectors for Special Applications
- 8114 CRT Lead Assemblies
- 8115 CRT-Base Connectors
- 8116 Rack and Panel Connectors
- 8117 Heavy Duty (VRL) RFI-Shielded Lead Assemblies and Receptacles



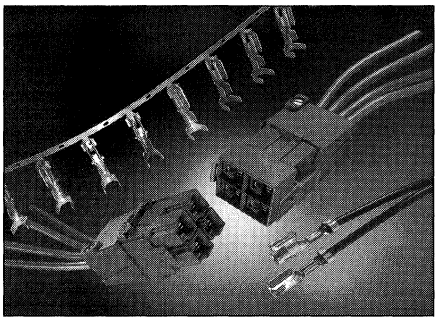
8118 AMPLIFLEX Connectors



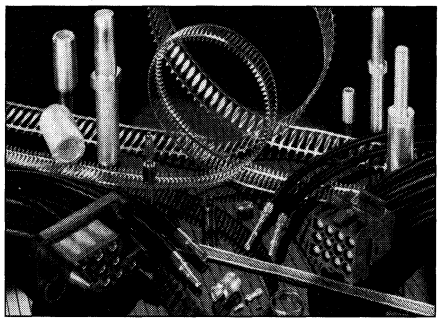
8122 AMPOWER Wave Crimp System



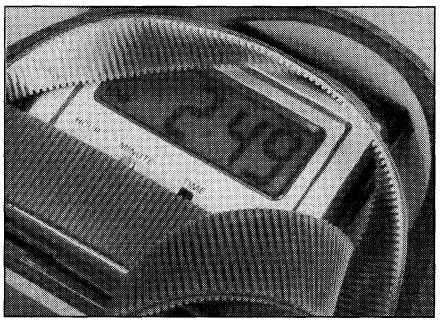
8129 Appliance Connectors
8129 Power Block and Power Rings Connector System
8131 Surface Burner Connector System
8133 Timer and Water Valve Coil Connectors
8135 Fluorescent Tube Sockets



8136 High Current Commercial Connectors

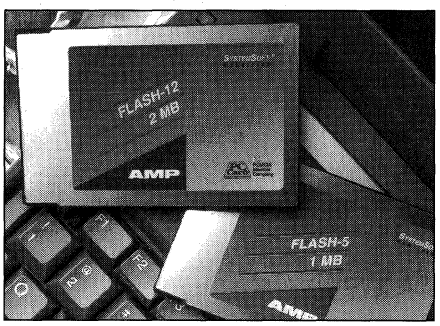


8137 High Current Pin and Socket Contacts



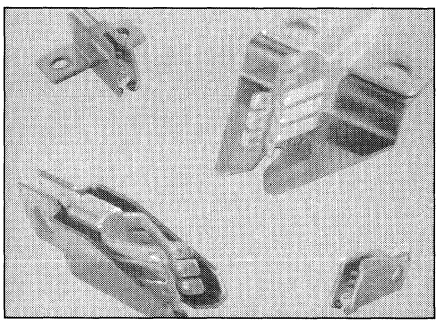
8143 Conductive Carbon Fiber Connectors

8145 PCMCIA Cards—Fax/Modem 14.4 and Fax/Modem/Voice 14.4

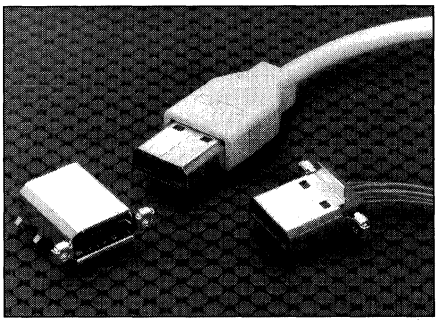


8146 PCMCIA Cards—Flash Memory Cards

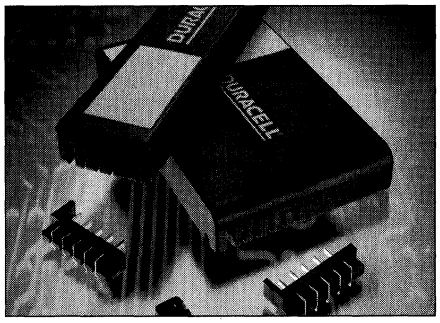
8147 PCMCIA Cards—Business Audio Card



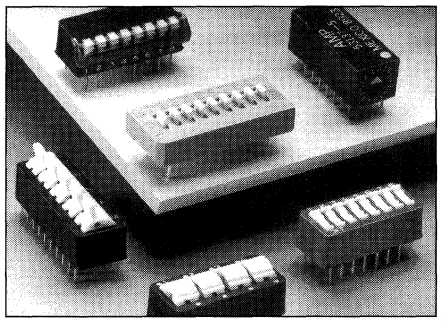
8148 Pluggable Bus Bar Connector



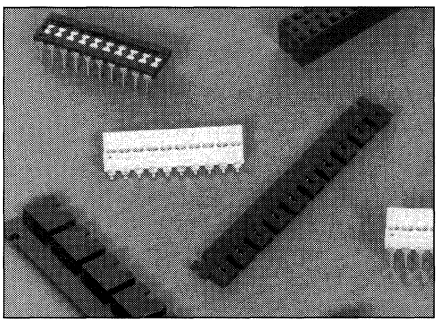
8149 Power Mix Connectors



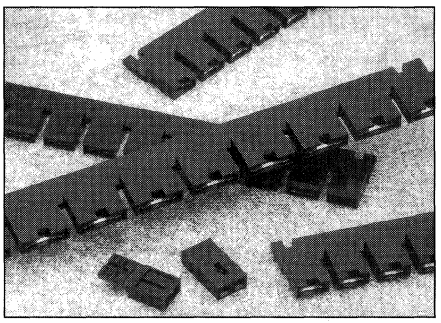
8151 Advanced Battery Interconnection System for Standard-Sized Rechargeable Batteries (7.2 Volts)



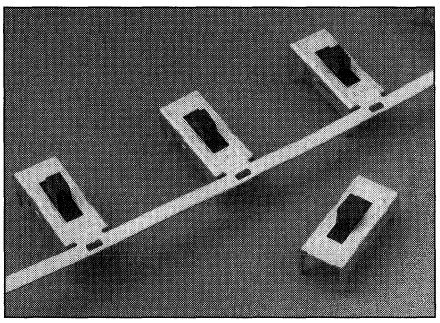
9001 Dual In-Line Package (DIP) Switches



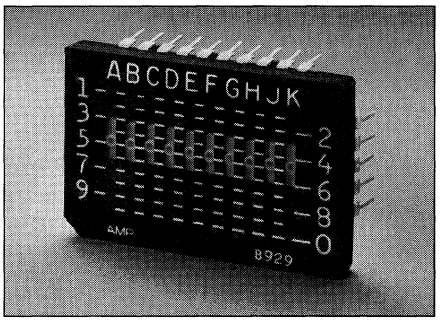
9006 Shunts



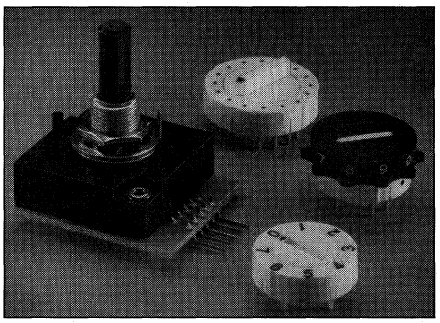
9008 Post Shunts



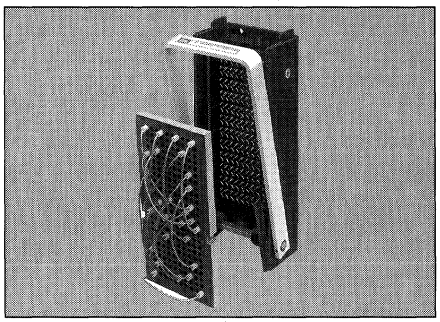
9012 Slide Switches for Printed Circuit Boards



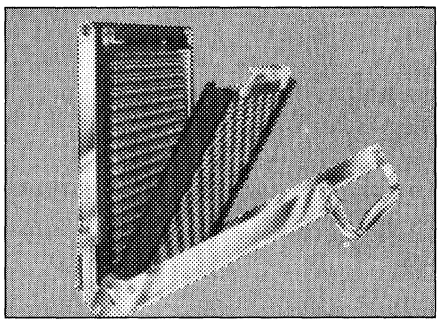
9014 Mini-Matrix Slide Switch



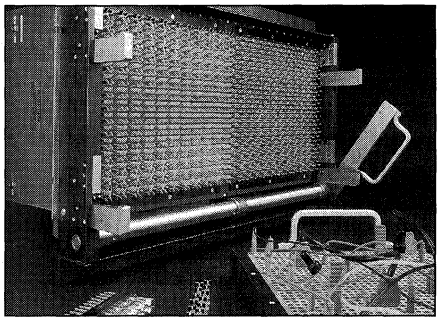
9015 Rotary Switches for Printed Circuit Boards



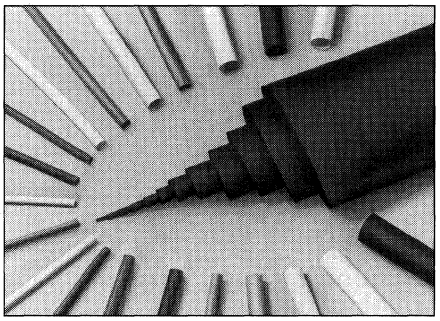
9020 Standard Patchcord Programming Systems
9021 Rear Bay Assemblies
9021 Front Board Assemblies



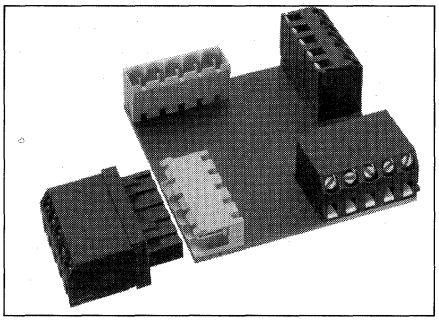
9022 AMP Universal Patchcord Programming Products
- 9023 Panel Mount Systems
- 9023 Fixed Panels
- **9024 Patchcords**
- **9033 LANCELOK Terminals**
- **9034 Taper Pins**
- **9036 AMPMODU Board Mount Receptacles**
- **9038 TERMI-POINT Tools and Clips**



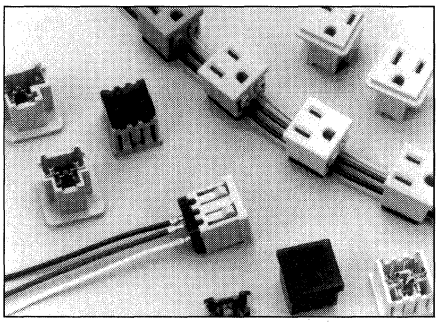
9039 AMP Modular Interface Connector Device
- 9040 Rear Bay Assemblies
- 9042 Front Board Assemblies
- 9043 Patchcords



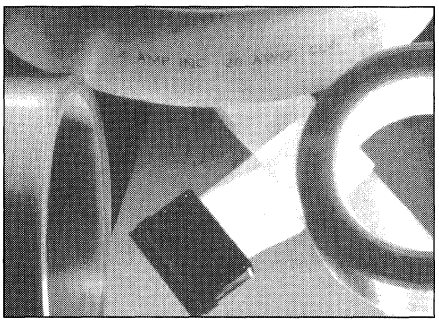
10001 Heat Shrinkable Products



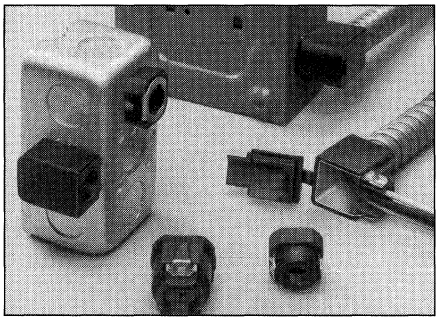
10011 TERMI-BLOK Stacking Connectors



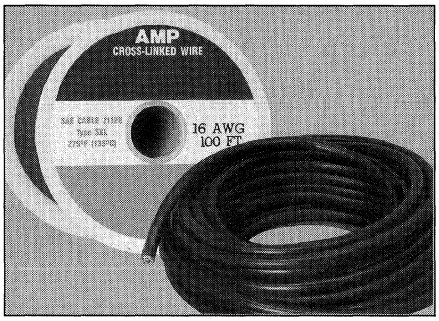
10008 Convenience Outlets (15A or 20A, 125 VAC)



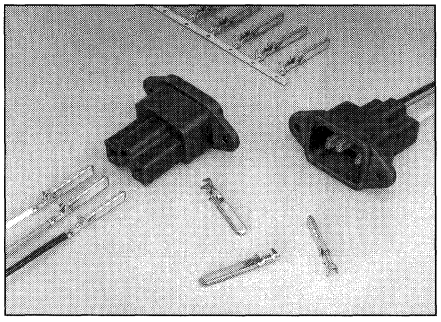
10016 High Speed Digital Transmission Cables



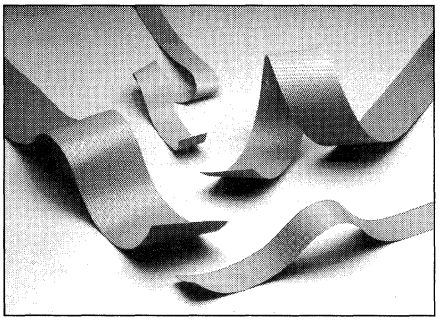
10009 Flexible Conduit Connectors



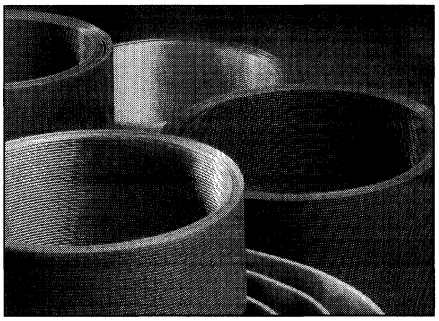
10018 Primary Wire and Cable



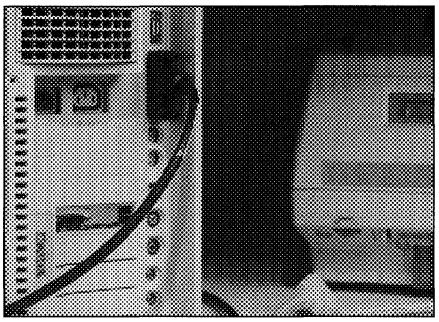
10010 Power Cord Receptacle



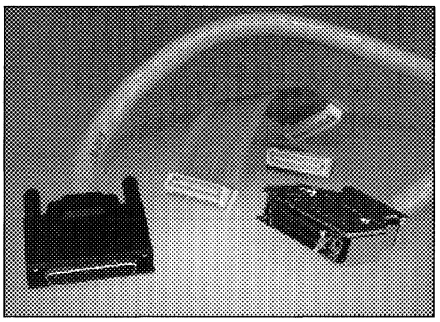
10020 Planar Ribbon Cable



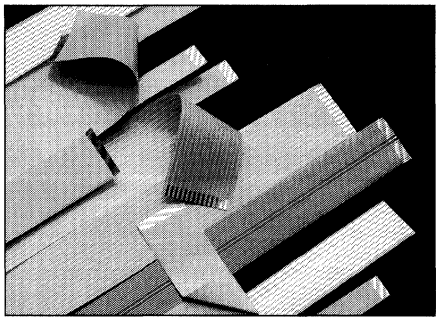
10027 High Performance, Insulation Displacement Ribbon Cable with Fluropolymer Insulation



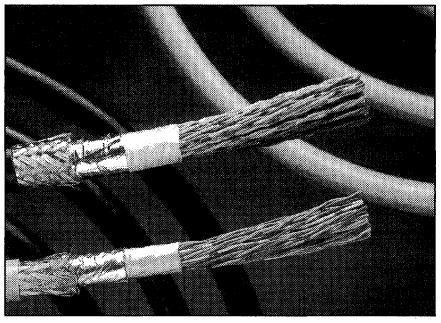
10031 IEEE 1284 Cable Assemblies



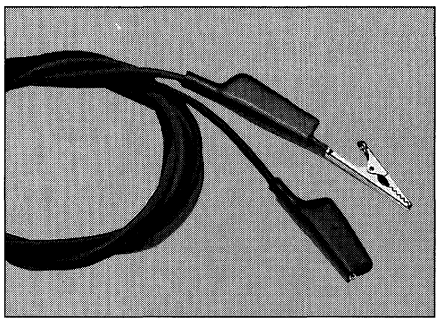
10034 High Performance Cable Assemblies for the QuickRing System



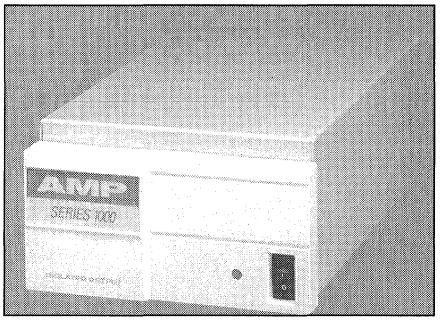
10036 Flexible Flat Conductor Cable Jumpers



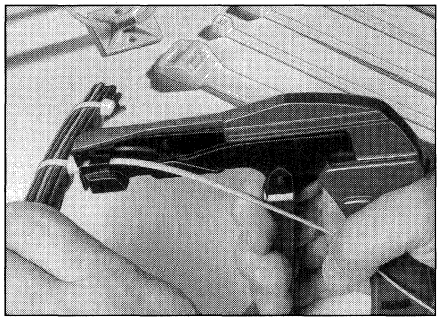
10038 High Performance Multipair SCSI Cable



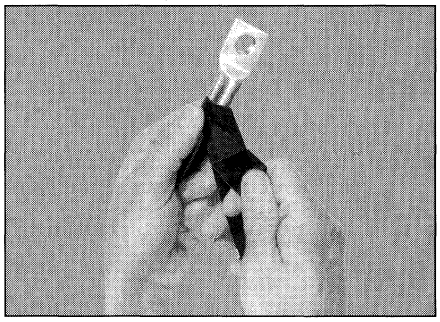
10041 Crimp Type Alligator Clip and Test Leads



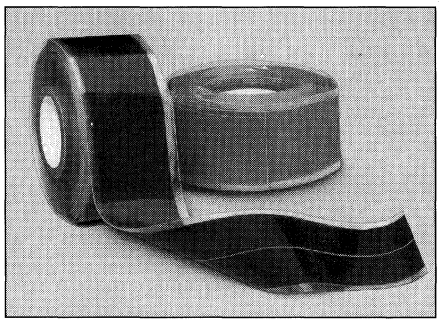
10042 AMP ISO Isolating Transformer/Power Conditioner



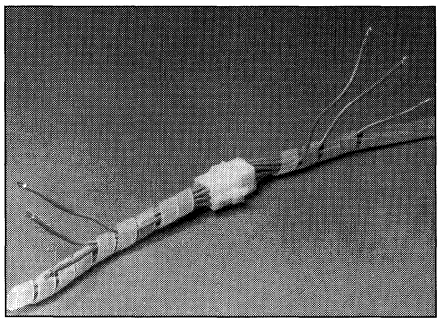
10043 AMP-TY Nylon Cable Ties and Accessories



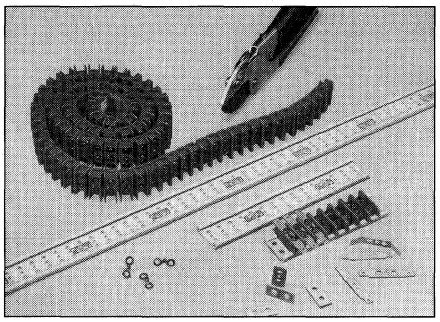
10049 Fusion Tape



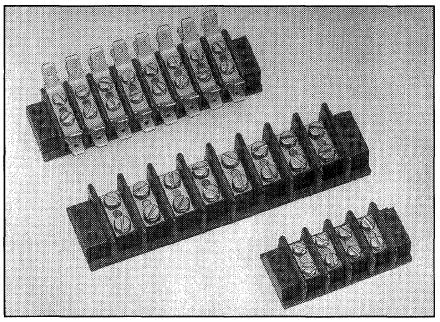
10050 Silicone Fusion Tape



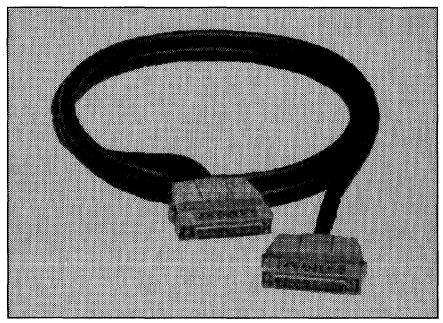
10051 SPIRAP Plastic Cable Wrap



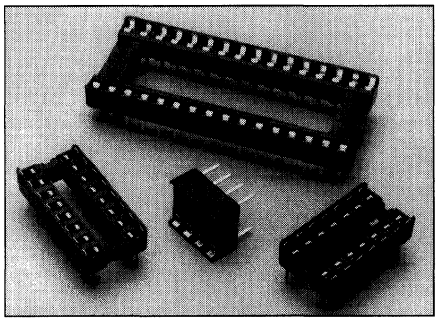
10052 FLEXI-BLOCK Terminal Block System



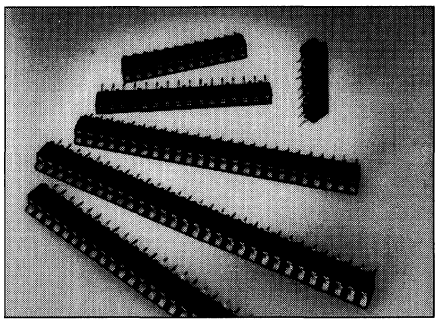
10053 Terminal Blocks



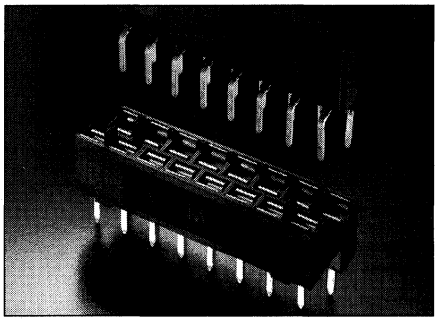
10054 Value Added Systems
AMPLIMITE .050 Series Cable Assemblies Series III



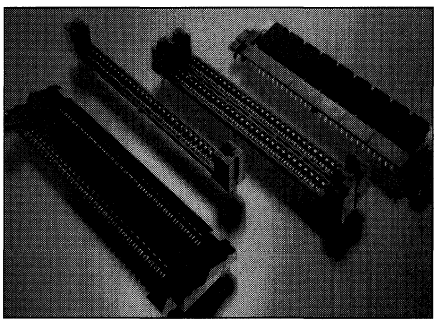
11001 DIP Sockets
All products listed on pages 11001, 11002 and 11003 are certified to ISO 9001



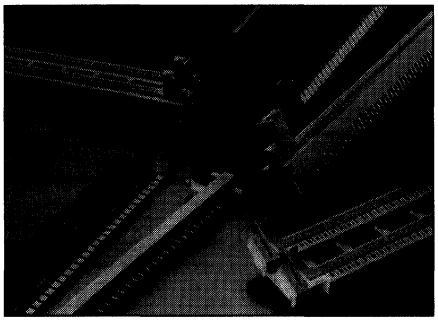
11004 SIP Sockets (DIPLOMATE)



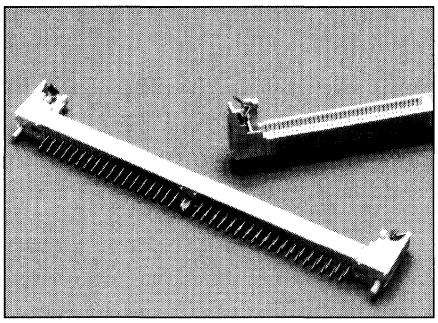
11005 ZIP Sockets (DIPLOMATE)



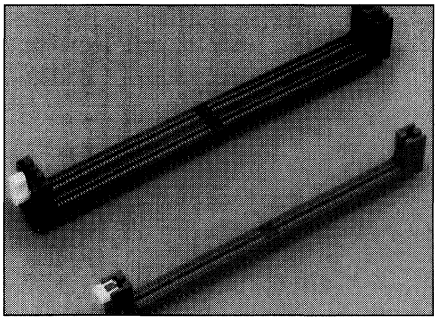
11006 SIMM Sockets (DIPLOMATE)



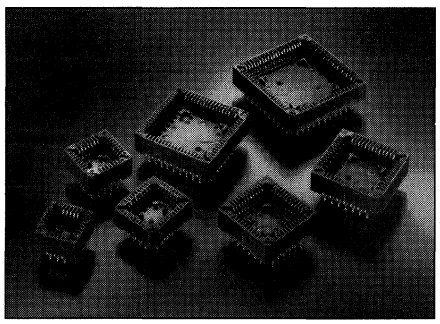
11007 SIMM Sockets (MICRO-EDGE)



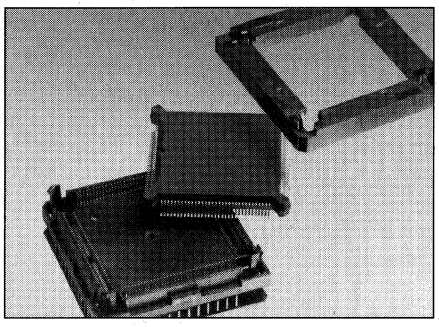
11012 SIMM Sockets (SIMM II)



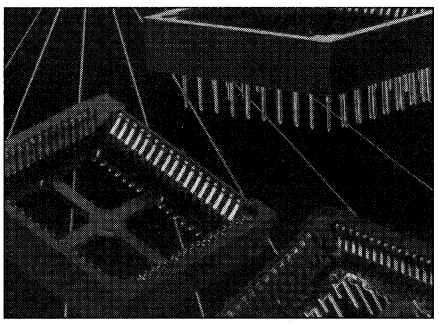
11015 SIMM Sockets (DIMM)



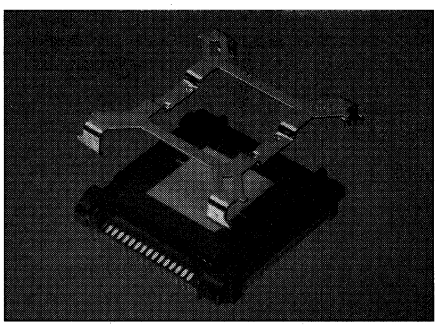
11017 PLCC Sockets



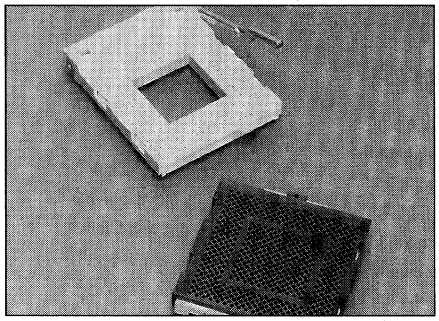
11021 PQFP Sockets (MICRO-PITCH)



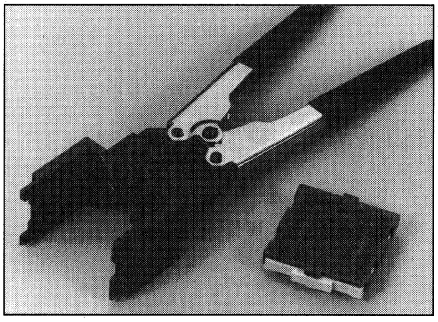
11026 JEDEC Sockets



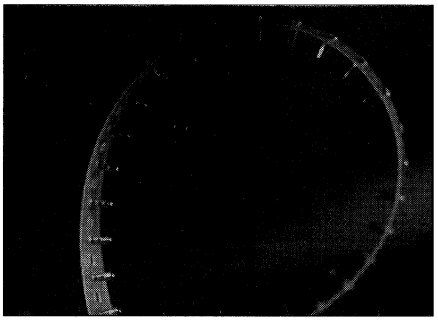
11026 LCCC Sockets



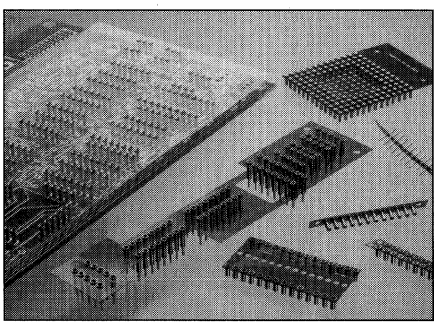
11029 PGA Sockets



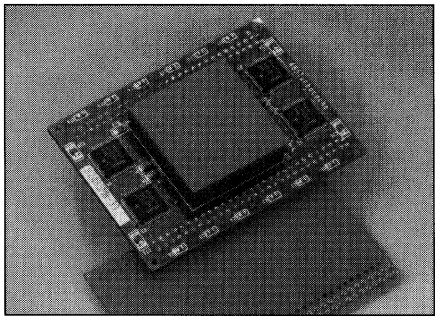
11039 PGA Sockets - Tool Actuated ZIF (TAZ)



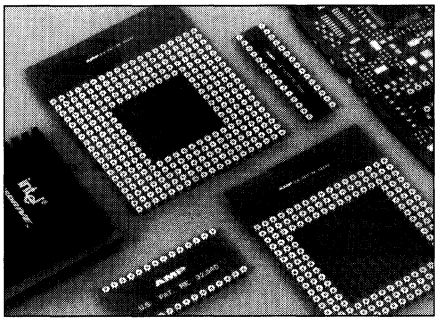
11045 Miniature Spring Sockets



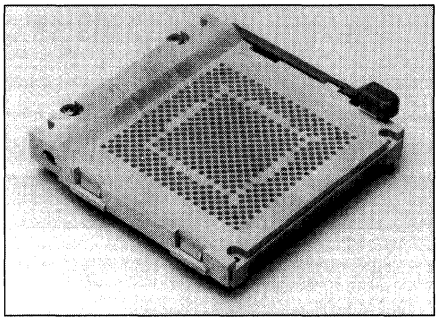
11048 Film Carrier Sockets and Pins



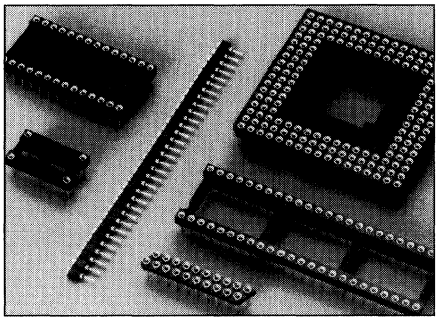
11054 Custom Sheets of Sockets



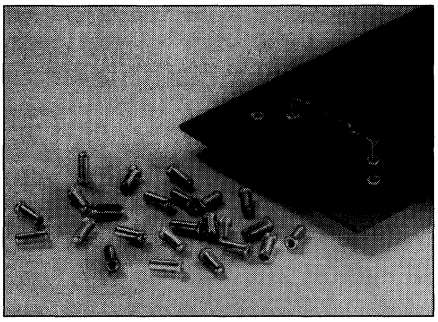
11056 Film Carrier IC Sockets



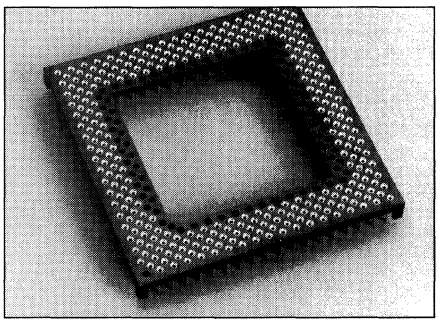
11065 PGA Burn-In (HAZ) Sockets



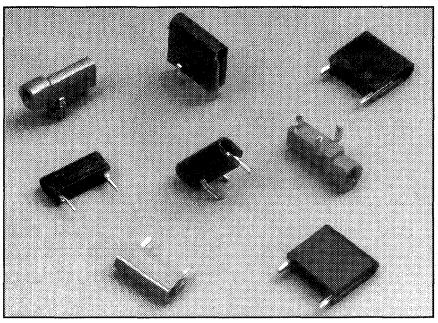
11057 Screw Machine IC Sockets



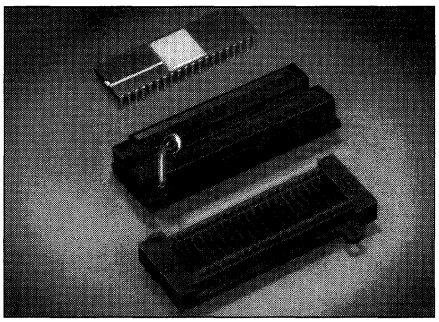
11070 Test Sockets



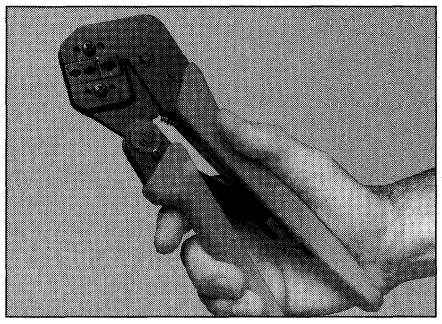
11062 Cold-Formed PGA Sockets



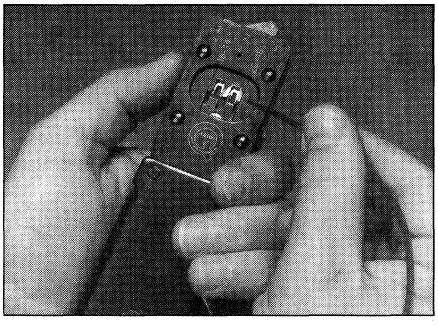
11071 Test Probe Receptacles



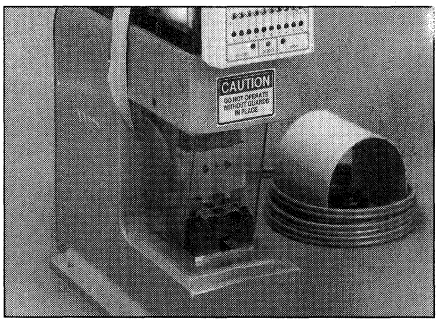
11064 DIP Test/Burn-In Sockets



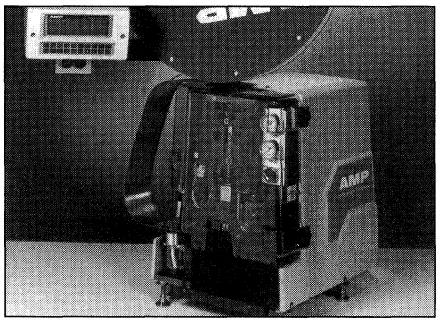
12001 PRO-CRIMPER II Hand Tool
12002 Connector/Terminal-to-Tool Reference
12004 Hand Tool Kits and Accessories



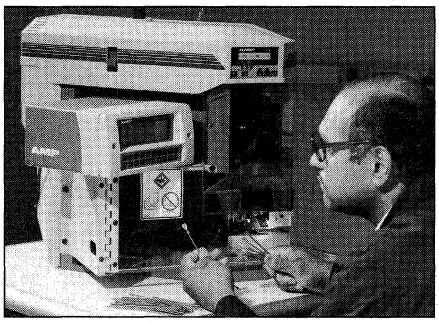
12005 CERTI-CRIMP Hand Tools
12006 Connector/Terminal-to-Tool Reference
12008 Tooling Options



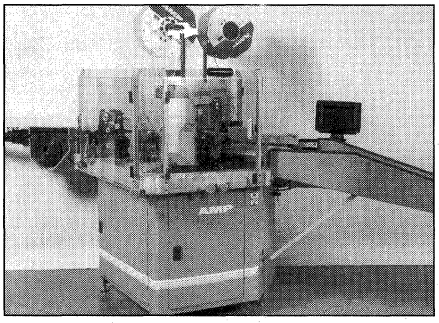
12009 Modular Plug Dual Terminator



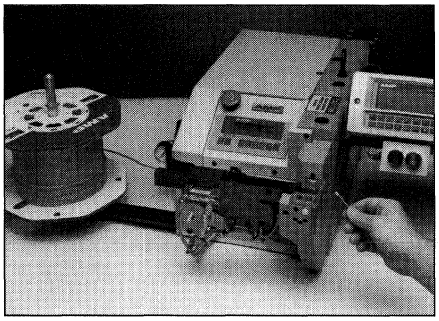
12011 AMP-O-MATIC Side-Feed Stripper-Crimper, Model II Machine



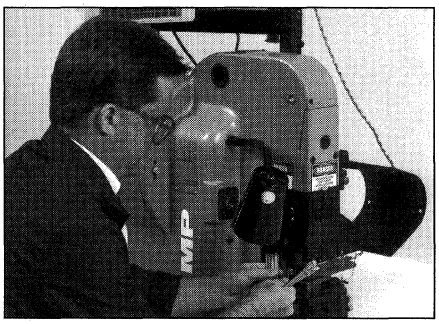
12013 AMP-O-LECTRIC Model "G" Termination Machine



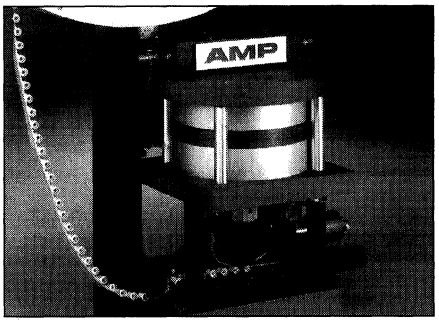
12015 AMPOMATOR CLS IIIG Lead Making Machine



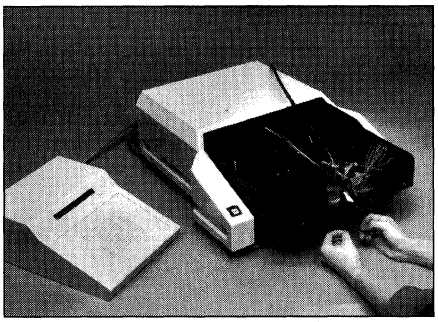
12019 AMPLIVAR Product Terminators (APT)



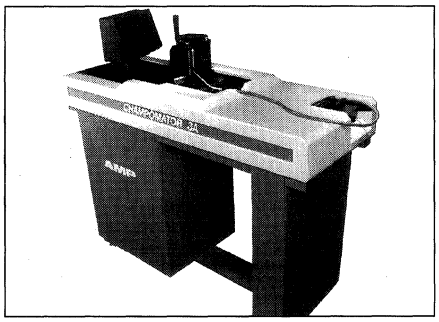
12021 Applicators for Wire Termination
12023 Applicator Selection Guide



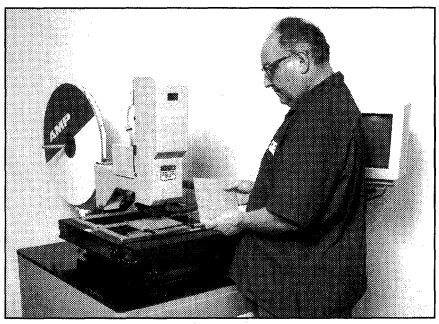
12024 AUTO-PRO Terminating Machine



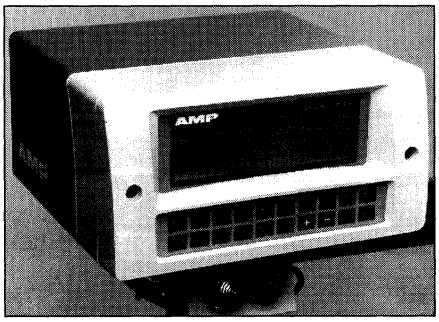
12025 CHAMPOMATOR 2.5 Terminating Machine



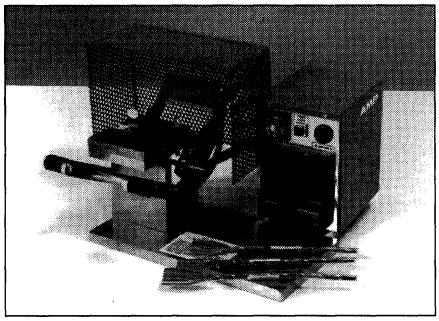
12026 CHAMPOMATOR 3A Terminating Machine



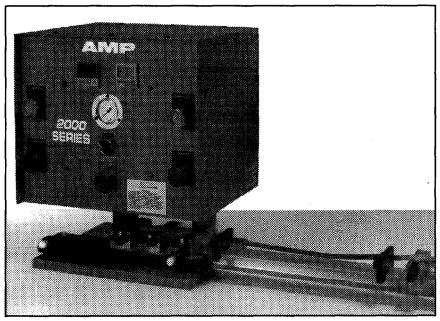
12027 Comp-U-Sertor II Insertion Machine



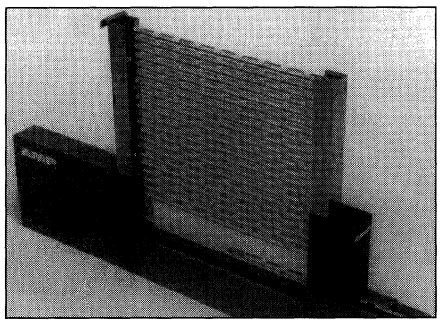
12028 Crimp Quality Monitor (CQM)



12029 100 Series Laminator



12030 2000 Series Laminator/Terminator



12031 High Volume Tube Feeder for Robotic Applications
12032 High Volume Gang of Tubes (GOT) Feeder for Robotic Applications

AMP, A-MP, ACTION PIN, ACTIVE +, AMP-BARREL, AMP-BLADE, AMP DURAGOLD, AMP-EADS, AMP FAX SERVICE, AMP-FINE-Y-R, AMP-FIT, AMP-HDI, AMP-IN, AMP-LATCH, AMP-LEAF, AMP-LOK, AMP-O-LECTRIC, AMP-O-MATIC, AMP-TAB, AMP-TAPEMATIC, AMP-TAPETRONIC, AMP-TWIST, AMP-TY, AMP-ULTREX, AMP-UNYT, AMP ACT, AMP ASC, AMP DURABAK, AMP EDGE, AMP FAX, AMP M-TACT, AMP PACE, AMP PANEL-PAK, AMP STACK, AMP SUPERSEAL, AMP WEATHERBLOK, AMPACT, AMPARRAYNET, AMPBASE-T, AMPFLAT, AMPIGES, AMPILLUME, AMPINDEX, AMPINNERGY, AMPIP, AMPIX, AMPLASTIC, AMPLI-BOND, AMPLIFILM, AMPLIFLEX, AMPLIMATE, AMPLIMITE, AMPLISEAL, AMPLIVAR, AMPLIVERSAL, AMPMODU, AMPOMATOR, AMPORTAPOWER, AMPOWER, AMPSEAL, AMPSTAR, AMPSULATION, AMPTIFF, AMPTRAC, AMPVAN, AMPVIEW, AUTO-PRO, BANTAM ROTA-CRIMP, BOMB-TAIL, C-LOK, CABLE MAKER, CELLERITY, CERTI-CRIMP, CERTI-LOK, CERTI-SEAL, CH-AMP, CHAMP, CHAMP-LOK, CHAMP SYSTEM 5, CHAMPOMATIC, CHAMPOMATOR, CIRCUITIP, COAXICLAMP, COAXICON, CODE 10, COMMAND-TRAC, COMMAND-TRAC/OV, CONNECTWARE, CONNECTWARE AND DESIGN, COPALUM, CORELINK, DIAL-A-KEY, DIAMOND GRIP, DIPLOMATE, DUALAN, DUALATCH, DUO-TYNE, DYNA-CRIMP, ECONOMATE, EDGEMATE, ELECTRO-TAP, ERGO-MATE, ETHERSTACK, EUROBLOK, EUROLATCH, EXACTON, EXCELL-PAK, FASTIN-FASTON, FASTON, FIBERNUT, FLASHLITE, FLEX-MODE, FLEXI-BLOCK, FSD, FUTURELAN, GLOBE-ABLE, HELICON, HOMEVIEW, INFOPORT, INTELLIGENT AGENT, INTERPOSER, LAN-LINE, LANCELOK, LGH, LightCrimp, LIGHTPLANE, LYTEL, MAG-MATE, MATE-N-LOK, MATRIX, MATRIX SCIENCE, MAXIWEDGE, MICRO-DENSE, MICRO-EDGE, MICRO-PITCH, MICROSTACK, MICTOR, MINIWEDGE, MULTILOCK, NAVIGATOR, NETCONNECT, NETGAIN, NONCOR, omni-tact, OPTIMATE, PARAGON, PED-CON, PICABOND, PIDG, PLASTI-GRIP, PLASTI-STRIP, PRO-CRIMPER, QUADLAN, QUIET POWER, RASTERVIDEO, ROTA-CRIMP, RSD, SHEAR-LOK, SHUR-PLUG, SILENT SLOT, SOLISTRAND, SPADE-LOK, SPIRAL-MATE, SPIRAP, STRATO-THERM, SUPER CHAMP, T-HEAD, TAYP-AIR, TELEDENSITY, TERMA-SHIELD, TERMALUM, TERMASHIELD, TERMASPLICE, TERMI-BLOK, TERMI-FOIL, TERMI-GRID, TERMI-POINT, TERMI-TWIST, TERMINATOR, TERMINYL, TETRA-CRIMP, TOKENWATCH, TORECS, TRACKSTACK, U-GRIP, VIDEOWORKS, VIZE-AN-AMMER, WRENCH-LOK, XTC and Z-PACK are trademarks.

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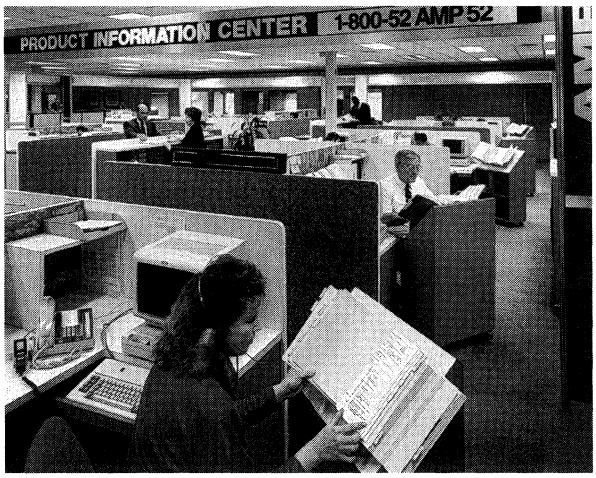

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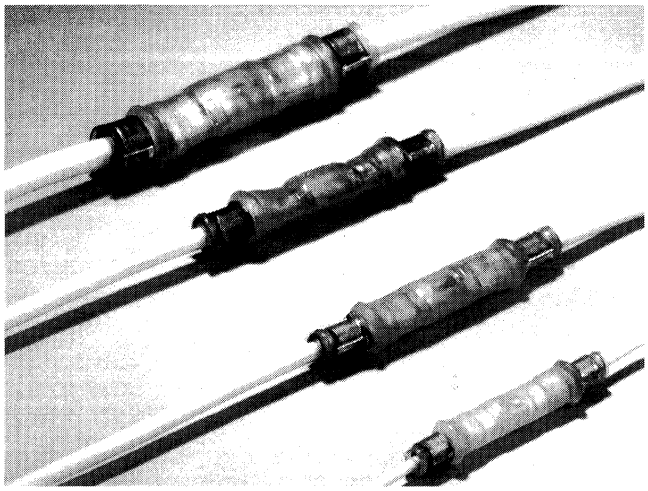
CERTI-SEAL Splice

Prevents moisture breathing in aircraft and missile applications

Product Facts

- **Nylon window splice for aircraft and missile applications**
- **Seals out moisture and provides exceptional wire insulation support**
- **Fits more than 100 insulation diameters from 24 to 10 AWG**
- **Locator notches for correct positioning of crimping tool**
- **Visible wire stops indicate insertion depth of stripped wire ends**



The CERTI-SEAL splice is the AMP nylon window splice for military, commercial, aircraft, and missile applications that seals out vapors and fluids and imparts exceptional wire insulation support.

Metal rings at both ends of splice are permanently crimped to wire insulation for a moisture tight seal, even at altitude. The CERTI-SEAL splice is designed to fit more than 100 insulation diameters in MIL-Spec wires from 24 to 10 AWG.

The first type is made with a nylon ring adapter within the wire entrance; the second, without nylon ring adapters; the third with a nylon ring adapter in one end only.

Special notch feature on the outside of the splice allows locator in the crimping tool to precisely position splice before crimping and to prevent twisting or horizontal movement during crimping.

Wire-stops in splice barrel indicate insertion depth of stripped wire ends.

Specifications
For MIL-W-5086 Wire Type I and III or MIL-W-16878.

Butt Splices with nylon wire insulation diameter adapters

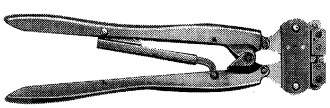
Wire Range [AWG]	Max. Insulation Dia.	Body Color	Ring Color	Part Numbers	Hand Tool Part No.
24-20	**.065** [1.65]	Natural	Green	324987	46073
24-20	**.073** [1.85]	Natural	Orange	1-324987-0	46073
22-18	**.083** [2.11]	Red	Green	324988	46074
16-14	**.120** [3.05]	Blue	Green	324989	59282
12-10	**.150** [3.81]	Yellow	Green	324990	58325-1

Butt Splices without nylon wire insulation diameter adapters

Wire Range [AWG]	Max. Insulation Dia.	Body Color	Ring Color	Part Numbers	Hand Tool Part No.
24-20	**.100** [2.54]	Natural	Tin Plated	324544	46073
22-18	**.133** [3.38]	Red	Tin Plated	324548	46074
16-14	**.157** [3.99]	Blue	Tin Plated	324549	59282
12-10	**.218** [5.54]	Yellow	Tin Plated	324631	58325-1

Butt Splice with nylon wire insulation diameter adapter in one end

Wire Range [AWG]	Max. Insulation Diameter		Body Color	Ring Color	Part Number	Hand Tool Part No.
	Adapter End	Other End				
24-20	**.073** [1.85]	**.094** [2.39]	Natural	Orange & Tin Plated	1-324987-1	46073



Tool Part Number: 46073 or 46074

Hand tooling features the AMP CERTI-CRIMP ratchet which will not release until operator fully closes tool so that crimping dies in tool head fully "bottom". Locator feature in head helps position splice properly in tool.

Tool Part Number: 59282 or 58325-1

CERTI-SEAL tools do not require wire insulation adjustment prior to crimping.

SOURCE: Catalog 82544

Specifications subject to change.

1-800-522-6752
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Tooling/Technical Assistance Center

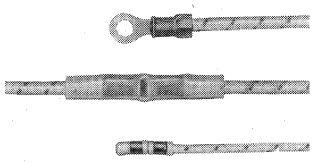
(STRATO-THERM) Terminals and Splices for High Temperature Applications

All five types of STRATO-THERM terminals and splices provide optimum corrosion and vibration resistance plus outstanding tensile characteristics.

All types, except the STRATO-THERM PIDG terminals, splices and pre-insulated spare wire caps, employ the famous "W" crimp.

STRATO-THERM PIDG terminals and splices employ the confined "C" crimp plus multiple position insulation support crimp.

PIDG Insulated Terminals and Splices, and Pre-Insulated Spare Wire Caps 550°F [288°C] Range

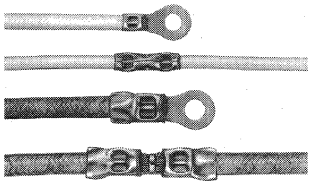


Designed for reliable performance up to 550°F [288°C], this line of ring-tongue terminals, butt splices and spare wire caps features a pre-insulation sleeve of TEFLON (TFE) insulation material. A special funnel entry feature has been added to provide easy entry and proper seating of wire. The body is copper with a choice of gold over nickel plating or nickel plating. The terminal and splice barrel accommodates stranded wire conductors only. The spare wire caps are designed for unstripped wire.

Post-Insulated Splices 550°F [288°C] and 500°F [260°C] Range

The temperature range of this butt splice is up to 550°F [288°C], for gold over nickel plated copper and 500°F [260°C] for silver plating. The splice accommodates solid and/or stranded conductors.

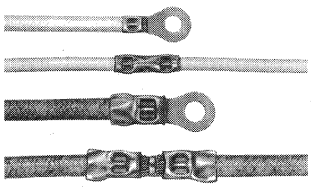
Uninsulated Terminals and Splices 1200°F [649°C] Range



Nickel material is used for the body of both the terminal and splice. They are available with or without wire insulation support sleeve of nickel-silver alloy material. Accommodating either solid or stranded conductors in different combinations, these terminals and splices are made to cover a broad wire size range, listed in the tabular data section.

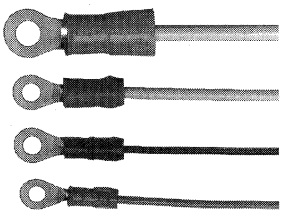
Terminals made of alumel and chromel material with nickel-silver alloy sleeves are available for thermocouple applications. When using either alumel or chromel conductors, a terminal of the same material should be selected.

Uninsulated Terminals and Splices 650°F [343°C] Range



These terminals and splices are available with and without wire insulation support. Both types are manufactured from electrolytic copper, plated with nickel. In the insulation support type, the support sleeve is fabricated from nickel-silver alloy. Both types accommodate solid or stranded conductors in various combinations. Wire size range is listed in the tabular data section.

PIDG Insulation Restriction Terminals 550°F [288°C] Range



These pre-insulated insulation restriction terminals prevent the insulation of thin-wall insulation wire from entering the terminal's wire crimp area during the crimping process.

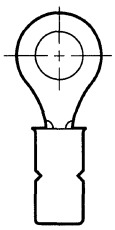
Designed for reliable performance up to 550°F [288°C], these terminals feature a pre-insulation sleeve of TEFLON (TFE) insulation material.

Because of features such as a one-piece constructed inner sleeve and a wide funnel entry design which facilitates wire entry, standard STRATO-THERM PIDG tooling may be used to terminate this product.

SOURCE: Catalog 82011

PIDG Insulated Ring Tongue Terminals

550°F [288°C], Nickel plated
500°F [260°C], Gold plated

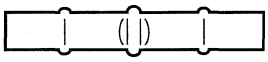


Wire Range AWG	Wire Range mm²	Wire Insul. Dia.	Sleeve Color Code	Stud Size	Part Numbers Gold Plated*	Part Numbers Nickel Plated**
26–24	0.12–0.2	**.032–.082** 0.81–2.08	Black	4	—	50829
				6 M3.5	—	50830
22–20	0.3–0.6	**.035–.100** 0.89–2.54	Green	4	—	50831
				6 M3.5	1-332433-0	50831-1†
				8 M4	332434	50832†
				10	1-332434-0	50832-1†
18–16	0.8–1.4	**.055–.135** 1.4–3.43	Orange	4	—	50834
				6 M3.5	332453	50835†
				8 M4	332454	50836
				10	1-332454-0	50836-1
				1/4 M6	—	50837
				3⁄8	—	50838
14	2	**.080–.150** 2.03–3.81	White	6 M3.5	1-332438-0	—
				8 M4	—	50840
				10	1-332439-0	50840-1
				1/4 M6	—	50841
12–10	3–6	**.102–.214** 2.59–5.44	Black	4	—	50844
				6 M3.5	—	50845
				8 M4	—	50845-1
				10	1-332446-1	50845-2
				1/4 M6	—	50846
				5/16 M8	—	50847
				3/8	—	50848

† Indicates terminal is available in tape mounted form.
* To be used with silver plated wire.
** To be used with nickel plated wire.

PIDG Pre-Insulated Butt Splices

500°F [260°C], Gold plated



Wire Range AWG	Wire Range mm²	Wire Insul. Dia.	Sleeve Color Code	Part Numbers Gold Plated
22–20	0.3–0.6	**.046–.100** 1.17–2.54	Natural	330377
18–16	0.8–1.4	**.090–.140** 2.29–3.56	Red	330378
14–12	2–3	**.105–.170** 2.67–4.32	Blue	330379

SOURCE: Catalog 82011

Specifications subject to change.

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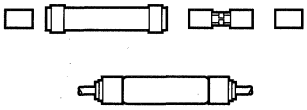
Post-Insulated Butt Splices

550°F [288°C], Gold plated
500°F [260°C], Silver plated



Wire Range AWG	Wire Range mm²	Wire Insul. Dia.	Sleeve Color Code	Part Numbers Gold Plated	Part Numbers Silver Plated
26–24	0.12–0.2	**.040–.050*** 1.02–1.27	Yellow	324370	—
22–20	0.3–0.6	**.046–.063** 1.17–1.6	Natural	—	326760
		.046–.063* 1.17–1.6	Natural	329645	—
		.080–.100 2.03–2.54	Natural	—	326835
18–16	0.8–1.4	**.064–.088*** 1.63–2.24	Red	329647	—
		.105–.130** 2.67–3.3	Red	329646	—
		.105–.130 2.67–3.3	Red	—	326839
8	7–8	**.215–.255** 5.46–6.48	Red	329716	—

Only those O.D. wire dimensions with asterisks have applicable MIL specs.
* For MIL-W-16878, NAS 703 Wire—Use Splices with Smaller Wire Insul. O.D.
** For MIL-W-8777, MIL-W-7139 Wire—Use Splices with Larger Wire Insul. O.D.

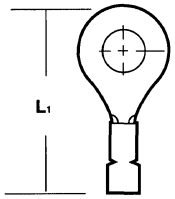
PIDG Pre-Insulated Spare Wire Caps (For unstripped wire)

550°F [288°C], Nickel plated

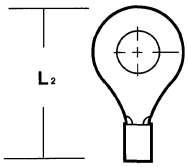
Wire Insul. Dia.	Color Ring	Part Numbers Nickel Plated
.036–.043 0.91–1.09	Red and Green	328854
.044–.051 1.12–1.3	Blue and Green	328855
.052–.056 1.32–1.42	Yellow and Green	328856
.056–.064 1.42–1.63	Brown and Green	328857
.065–.074 1.65–1.88	Violet and Green	328858
.075–.087 1.91–2.21	Black and Orange	328859
.088–.110 2.24–2.79	Gray and Orange	328860
.125–.138 3.18–3.51	Nickel and Nickel	328861
.111–.150 2.82–3.81	Brown	329638*

*One Crimping ring only.

Uninsulated Ring Tongue Terminals
1200°F [649°C]



Insulation Support



Non-Insulation Support

Wire Range AWG	Wire Range mm²	Wire Insulation Dia. Range	Stud Size	Terminal Body Material	Color Code	Part Numbers Dim. L_1	Part Numbers Insulation Support	Part Numbers Dim. L_2	Part Numbers Non-Insulation Support
22–16	0.3–1.4	**.105–.140** 2.67–3.56	4	Nickel	Orange	—	321887	—	321884†
			5 M3	Nickel	Orange	—	—	—	321885
			6 M3.5	Nickel	Orange	**.728** 18.5	321892	**.574** 14.58	321889†
						.775 19.69	322873	**.621** 15.78	322872
			6 M3.5	Chromel	Gray	—	2-322873-1	—	—
			8 M4	Nickel	Orange	**.728** 18.5	321893	**.574** 14.58	321890†
						.775 19.69	321897†	**.621** 15.78	321895
				Nickel	Gray	—	1-321897-0†	—	—
				Chromel	Green	—	1-321897-3	—	—
			10	Nickel	Orange	**.728** 18.5	321894	**.574** 14.58	321891
						.775 19.69	321898†	**.621** 15.78	321896†
				Chromel	Gray	—	1-321897-4	—	—
				Alumel	Green	—	1-321898-0†	—	—
			1/4 M6	Nickel	Orange	—	322320	—	—
16–14	1.5–2	**.140–.195** 3.56–4.95	4	Nickel	Orange	—	—	—	322328
			6 M3.5	Nickel	Orange	**.644** 16.36	322332	**.480** 12.2	322329†
						.800 20.32	322336†	**.636** 16.16	322333†
			8 M4	Nickel	Orange	—	322337†	—	322334
				Chromel	Gray	—	1-322337-0	—	—
				Alumel	Green	—	1-322338-1	—	—
			10	Nickel	Orange	—	322338†	—	322335†
				Chromel	Gray	—	1-322337-1	—	—
				Alumel	Green	—	1-322338-0	—	—
			1/4 M6	Nickel	Orange	—	322341	—	322339
			5/16 M8	Nickel	Orange	—	—	—	322340
			3/8	Nickel	Orange	—	322344	—	322343
12–10	3–6	**.150–.230** 3.81–5.84	6 M3.5	Nickel	Orange	—	323748	—	323059
			8 M4	Nickel	Orange	—	323749	—	323745
				Chromel	Gray	—	2-323749-1†	—	—
				Alumel	Green	—	2-323750-3	—	—
			10	Nickel	Orange	—	323750	—	323680†
				Alumel	Green	—	2-323750-1	—	—
			1/4 M6	Nickel	Orange	—	323751	—	323683†
			5/16 M8	Nickel	Orange	—	323752	—	323746
			3/8	Nickel	Orange	—	—	—	323747
8	7–8	—	10	Nickel	Orange	—	—	—	328822

†Indicates terminal is available in tape mounted form.

SOURCE: Catalog 82011

Specifications subject to change.

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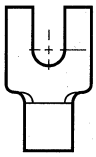
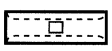
Uninsulated Spade Tongue Terminal
1200°F [649°C]



Wire Range AWG	Wire Range mm²	Stud Size	Terminal Body Material	Part Number Non-Insulation Support
16–14	1.25–2	8	Nickel	323905

Uninsulated Splices
1200°F [649°C]



Style A Non-Insulation Support Butt Splice

Style B Non-Insulation Support Parallel Splice

Style C Non-Insulation Support Butt Splice

Style D Insulation Support Butt Splice

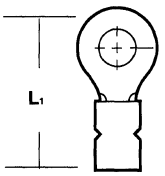
Style	Wire Range 22–16 AWG [0.3–1.4 mm²] Splice Material	Color Code	Part Numbers	Wire Range 16–14 AWG [1.25–2 mm²] Splice Material	Color Code	Part Numbers	Wire Range 12–10 AWG [3–6 mm²] Splice Material	Color Code	Part Numbers
A	Nickel	Orange	322324	Nickel	Orange	322345	Nickel	Orange	323696
B	Nickel	Orange	322326	Nickel	Orange	322347	Nickel	Orange	323672
C	Nickel	Orange	323876	Nickel	Orange	323878	Nickel	Orange	323698
D	Nickel	Orange	322325	Nickel	Orange	322346	Nickel	Orange	323699
	Alumel	Green	1-322325-0	Alumel	Green	1-322346-0	—	—	—
	Chromel	Gray	1-322325-1	Chromel	Gray	1-322346-1	—	—	—

SOURCE: Catalog 82011

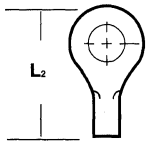
Uninsulated Ring Tongue Terminals

650°F [343°C]

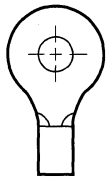
Copper per QQ-C-576, Nickel Plated



Insulation Support



Non-Insulation Support



Non-Insulation Support (Wire Range 2 & 1/0)

Wire Range AWG	Wire Range mm²	Stud Size	Dim. L1	Part Numbers: Insulation Support, Wire Insul. Dia. Range .080 [2.03] to .125 [3.18]	Part Numbers: Insulation Support, Wire Insul. Dia. Range .105 [2.67] to .140 [3.56]	Dim. L2	Non-Insulation Support
22–16	0.3–1.4	4	—	—	322363†	—	—
		6 M3.5	**.728** 18.5	—	323199	**.574** 14.58	323219
			.603 15.32	323151	322364	**.449** 11.41	322797†
		8 M4	—	323152†	322365	—	322798
		10	—	323153	322366	—	322799
		1/4 M6	—	323154	322367	—	—
				.105 [2.67] to .150 [3.81]	**.140 [3.56] to .195 [4.95]**		
16–14	1.25–2	4	—	—	322371	—	—
		6 M3.5	**.800** 20.33	—	322373	**.636** 16.16	322693
			.644 16.36	323158	—	**.480** 12.2	322805
		8 M4	—	323160	322374	—	322694†
		10	—	323161	322375	—	322695†
		1/4 M6	—	323162	322376	—	322733
				.150 [3.81] to .230 [5.84]	**.150 [3.81] to .250 [6.35]**		
12–10	3–6	6 M3.5	—	323066	—	—	323060
		8 M4	—	323067	—	—	323061
		10	—	323068†	325154	—	323062†
		1/4 M6	—	323069	—	—	323063†
		5/16 M8	—	—	—	—	323064†
		3/8	—	—	—	—	323065
8	7–8	10	—	—	—	—	323165
		1/4 M6	—	—	—	—	323166
		5/16 M8	—	—	—	—	323167
				.080 [2.03] to .125 [3.18]	**.105 [2.67] to .140 [3.56]**		
6	13–15	10	—	—	—	—	323169
		1/4 M6	—	—	—	—	323170
		5/16 M8	—	—	—	—	323171
		3/8	—	—	—	—	323172
4	21	1/4 M6	—	—	—	—	323173
		5/16 M8	—	—	—	—	323174
		3/8	—	—	—	—	323175
2	34–35	3/8	—	—	—	—	323177
1/0	50–60	3/8	—	—	—	—	323180

†Indicates terminal is available in tape mounted form.

SOURCE: Catalog 82011

Specifications subject to change.

1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

Uninsulated Splices

650°F [343°C]

Copper per QQ-C-576, Nickel Plated

Style A
Non-Insulation
Support
Butt Splice

Style B
Non-Insulation
Support
Parallel Splice

Style C
Non-Insulation
Support
Butt Splice

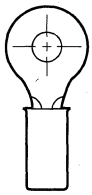
Style D
Insulation
Support
Butt Splice

Style	Part Numbers Wire Range 22–16 AWG [0.3–1.4 mm²]	Wire Range 16–14 AWG [1.25–2 mm²]	Wire Range 12–10 AWG [3–6 mm²]	Wire Range 8 AWG [7–8 mm²]
A	323796	323795	323755	—
B	323030	323794	323754	2-34318-1
C	322822	322824	323756	—
	Wire Ins. Dia. Range .105 [2.67] to .140 [3.56]	**Wire Ins. Dia. Range .140 [3.56] to .195 [4.95]**	**Wire Ins. Dia. Range .150 [3.81] to .230 [5.84]**	
D	322823	322825	323757	—

PIDG Insulated Ring Tongue Terminals Insulation Restriction

550°F [288°C]

Copper per QQ-C-576, Nickel Plated



Wire Range AWG	Wire Range mm²	Wire Insulation Dia.	Color Code	Stud Size	Part Numbers Nickel Plated
24	0.2	**.055** 1.40	Blue	6	53567-1
		.055 1.40	Blue	4	53566-1
22	0.3	**.110** 2.79	Green	4	53572-1
16	1.4	**.130** 3.30	Blue	6	53580-1
12	3	**.200** 5.08	Yellow	6	53585-1
		.200 5.08	Yellow	10	53587-1

SOURCE: Catalog 82011

Standard Terminals and Splices

All terminals and splices are cataloged by tongue type and wire size.

Insulated terminals and splices are color coded to indicate wire range and to help match the terminal with the appropriate tool. The table shown at right identifies the specific wire range insulation color.

Insulation Color Code

Insulation Color Code	Wire Size Range AWG
Yellow	26-22
Transparent	24-20
Red	22-16
Blue	16-14
Yellow/Black	16-14 (Heavy Duty)
Yellow	12-10
Red	8
Blue	6
Yellow	4
Red	2
Blue	1/0
Yellow	2/0

Performance Specifications

For detailed test information and product specifications, request appropriate report.

Product Type	Test Report Number	Applicable Specification
PIDG Terminals Nylon Insulation	501-31	MIL-T-7928
PIDG Insulation Restriction Terminals	GPR-575-69 110-236	MIL-T-7928/1
PLASTI-GRIP Terminals	110-11514	UL486
AMPLI-BOND Terminals	501-33	MIL-T-7928
TERMINYL Terminals	110-178	MIL-T-7928
PIDG FASTON Terminals	—	UL310
DIAMOND GRIP Terminals	110-180	MIL-T-7928
SOLISTRAND Terminals	110-303 (Ring Tongue) 110-173 (Rectangular Tongue)	MIL-T-7928

Temperature Rating: 105°C Max.

AMP PIDG Terminals (Use PIDG Tooling)

AMP Wire Range	UL Listed	CSA LR 7189 Certified	
22-16	22-16 Solid or Stranded	300 V Max., 105°C. Max.[1]	
16-14	16-14 Solid or Stranded		
12-10	12-10 Solid or Stranded		

Note: 22-16 splices are stamped 22-18 in accordance with MIL-T-7928.
[1]UL & CSA—Nylon

AMP PIDG Nylon Butt Window Splice (Use PIDG Tooling)

AMP Wire Range	UL Listed	CSA LR 7189 Certified	
22-16	22-16 Stranded or Solid	300 V Max., 105°C. Max.	
16-14	16-14 Stranded or Solid		
12-10	12-10 Stranded or Solid		

Note: 22-16 splices are stamped 22-18 in accordance with MIL-T-7928.

Temperature Rating: 105°C Max.

PIDG Insulation Restriction Terminals (Use PIDG Tooling)

AMP Wire Range	UL Listed
22-10 Stranded and Solid	22-10 Stranded and Solid

Temperature Rating: 90°C Max.

AMP PLASTI-GRIP Terminals and Splices (Use PLASTI-GRIP or PIDG Tooling)

AMP Wire Range	UL Listed	CSA LR 7189 Certified	8 thru 4/0 600V
22-16	Terminals, Butt & Parallel Splices 22-16 Solid or Stranded[1]	600 V Max. (1000 V Fixture or Sign) 90°C Max.	Recognized under the component program of Underwriters Laboratories Incorporated File No. E13288
16-14	Terminals, Butt & Parallel Splices 16-14 Solid or Stranded[1]		
12-10	Terminals, Butt & Parallel Splices 12-10 Solid or Stranded[1]		

Note: 22-16 terminals and splices are stamped 22-18 in accordance with MIL-T-7928.
[1]Stranded wire only using TETRA-CRIMP tooling.

Temperature Rating: 170°C Max.

DIAMOND GRIP Terminals and Splices (Use DIAMOND GRIP Tooling)

AMP Wire Range	UL Listed	CSA LR 7189 Certified
22-16	22-16 Stranded	22-16 Stranded
16-14	16-14 Stranded	16-14 Stranded
16-14 HD	16-14 HD Stranded	—
12-10	12-10 Stranded	12-10 Stranded

Note: 22-16 splices are stamped 22-18 in accordance with MIL-T-7928.

Temperature Rating: 170°C Max.

AMP SOLISTRAND Terminals and Splices (Use SOLISTRAND Tooling)

AMP Wire Size	UL Listed File No. E13288	CSA LR 7189 Certified
22-16 Solid or Stranded	22-16 Solid or Stranded	22-16 Solid or Stranded
16-14 Solid or Stranded	16-14 Solid or Stranded	16-14 Solid or Stranded
16-14 Heavy Duty Solid or Stranded	16-14 Heavy Duty Stranded	16-14 Heavy Duty Solid or Stranded
14-12 Solid or Stranded	14-12 Stranded	14-12 Solid or Stranded
12-10 Solid or Stranded	12-10 Stranded	12-10 Solid or Stranded
8 thru 600 MCM Solid or Stranded	8 thru 600 MCM Stranded	8 thru 600 MCM Solid or Stranded

Note: 22-16 terminals and splices are stamped 22-18 in accordance with MIL-T-7928.

Temperature Rating: 170°C Max.

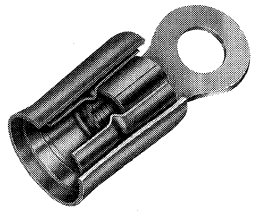
AMP Budget Terminals and Splices (Use Budget Tooling)

AMP Wire Size	UL Listed File No. E13288
22-16 Stranded	22-16 Stranded
16-14 Stranded	16-14 Stranded
12-10 Stranded	12-10 Stranded

Note: 22-16 terminals and splices are stamped 22-18 in accordance with MIL-T-7928.

SOURCE: Catalog 82042

PIDG (Pre-Insulated Diamond Grip) Terminal

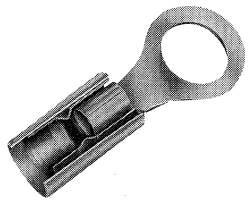


SOURCE: Catalog 82042

Product Facts

- Designed for complete and uniform reliability in the most difficult circuit environments
- Terminals consist of a fine grade high conductivity copper per QQ-C-576 and tin-plated per MIL-T-10727. (Spring Spade, phosphor bronze per QQ-B-750 and tin-plated per MIL-T-10727)
- Nylon insulation sleeve provides high dielectric strength
- Serrations inside barrel provide maximum contact and tensile strength after crimping
- Funnel ramp entry guards against turned back wire strands and permits rapid wire insertion
- Specially designed copper sleeve provides circumferential insulation wire support
- Temperature rating 221°F [105°C] 300 V max.
- Color coded for easy wire and tool match
- Wire size AWG 26-10 [0.12-6.64 mm²]
- PIDG terminals meet or exceed the requirements of MIL-T-7928, Type II, Class 1 and 2
- Listed by Underwriters Laboratories Inc., File No. E13288*
- Certified by Canadian Standards Association, File No. LR 7189*

PIDG Insulation Restriction Terminal

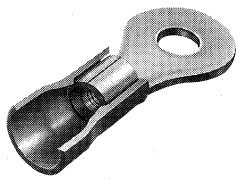


SOURCE: Catalog 82042

Product Facts

- Insulation restriction terminals prevent the insulation of thin-wall insulation wire from entering the terminal's wire crimp area
- Terminals consist of a fine grade high conductivity copper per QQ-C-576 and tin-plated per MIL-T-10727
- Nylon insulation sleeve provides high dielectric strength
- Serrations inside barrel provide maximum contact and tensile strength after crimping
- Funnel ramp entry guards against turned back wire strands and permits rapid wire insertion
- Specially designed copper sleeve provides circumferential insulation wire support
- Temperature rating 221°F [105°C]
- Color coded for easy wire and tool match
- Color strip provides additional identification of the wire size
- Wire size AWG 26-10 [0.12-6.64 mm²]
- PIDG terminals meet or exceed the requirements of MIL-T-7928, Type II, Class 1 and 2
- Listed by Underwriters Laboratories Inc., File No. E13288*

PLASTI-GRIP Terminal

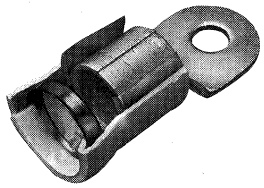


SOURCE: Catalog 82042

Product Facts

- Designed specifically to answer the need for inexpensive, insulated electrical terminals
- Can be used in almost every type of commercial application
- Terminals consist of a fine grade high conductivity copper per QQ-C-576 and tin-plated per MIL-T-10727. (Spring Spade, phosphor bronze per QQ-B-750 and tin-plated per MIL-T-10727)
- Vinyl insulation sleeve provides good dielectric strength and support
- Serrations inside barrel provide maximum contact and tensile strength after crimping (Dimples on 8 to 2/0 range)
- Funnel entry guards against turned back wire strands and permits rapid wire insertions
- Temperature rating of 194°F [90°C]—600 V rated
- Wide range of wire sizes from AWG 22-2/0 [0.41-70 mm²]
- Listed or Recognized under the Component Program of Underwriters Laboratories Inc., File No. E13288*
- Certified by Canadian Standards Association, File No. LR7189*

AMPLI-BOND Terminal



SOURCE: Catalog 82042

Product Facts

- Terminals for wire size AWG 8-2/0 [6.64-70 mm²] meet the requirements of MIL-T-7928, Type II, Class 2
- Bonded insulation provides uniform insulation thickness, maintains proper dielectric and tensile values
- Terminal consists of a fine grade high conductivity copper per QQ-C-576 and tin-plated per MIL-T-10727
- Barrel with brazed seam, dimpled inner surface for ruggedness and deformation control during crimping
- Separate metal ring provides insulation support to dampen vibration and prevent sharp bends of conductor
- Vinyl insulation extends minimum distance beyond terminal barrel to prevent exposure of conductor
- Temperature rating 221°F [105°C]
- Color coded for easy wire and tool match

*See page 1009 for UL and CSA listings.

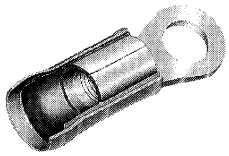
TERMINYL Terminal

SOURCE: Catalog 82042

Product Facts

- Designed to withstand extreme vibration, shock, structural stresses and elevated temperatures
- TERMINYL Terminals meet or exceed the requirements of MIL-T-7928, Type II, Class 2
- Wire size range of terminal is AWG 8-2/0 [6.64-70 mm²]
- Terminals consist of a fine grade high conductivity copper per QQ-C-576 and tin-plated per MIL-T-10727
- Dimples afford maximum contact of barrel and wire and maximum tensile strength
- Molded insulation funnel entry for ease of wire insertion and snug fit over MIL-standard wire diameters
- Color coded nylon also acts as insulation support

Radiation Resistant Terminals

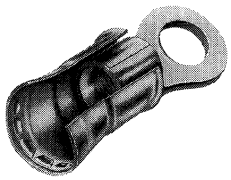


SOURCE: Catalog 82038

Product Facts

- Select items have MIL-T-7928 approval under M7928/4 and /6
- Insulation is polyvinylidene fluoride (PVF_2) for high radiation resistance (to 200 megarads)
- Temperature range of -65°C to + 150°C
- Withstands 4 days of steam/chemical spray washdown which simulates LOCA (loss of coolant accident) conditions
- Uses AMP standard PIDG and PLASTI-GRIP tooling
- Color coded for easy wire and tool match
- Covers wide range of wire sizes—AWG 26-2/0 [0.12-70 mm²]
- Tin-plated per MIL-T-10727
- Butt splice for wire sizes—AWG 26-10 [0.12-6 mm²]

DIAMOND GRIP Terminal

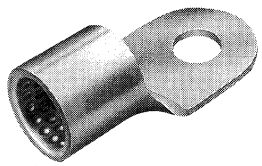


SOURCE: Catalog 82042

Product Facts

- Designed for completely uniform reliability under the most critical conditions of vibration, thermal shock, corrosion, tension and current overload
- Terminals consist of a fine grade high conductivity copper per QQ-C-576 and tin-plated per MIL-T-10727 (Spring Spade tongue terminals, phosphor bronze per QQ-B-750 and tin-plated per MIL-T-10727)
- Specially designed copper sleeve, fitted over the terminal barrel, provides circumferential insulation support
- "V" notches lock wire insulation against vibration and pullout
- Serrations inside barrel provide maximum contact and tensile strength after crimping
- Terminals meet or exceed the requirements of MIL-T-7928, Type I, Class 2
- Temperature rating of 338°F [170°C]
- Color coded for easy wire and tool match
- Wire size AWG 22-10 [0.41-6.64 mm²]
- Listed by Underwriters Laboratories Inc., File No. E13288*
- Certified by Canadian Standards Association, File No. LR7189*

SOLISTRAND Terminal

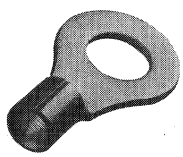


SOURCE: Catalog 65505

Product Facts

- Utilize a brazed seam
- Applied with "W" crimp tooling
- Terminals consist of a fine grade high conductivity copper per ASTM B-152 and tin-plated per MIL-T-10727 (Spring Spade tongue terminals, phosphor bronze per ASTM B-103 and tin-plated per MIL-T-10727)
- Dimples or serrations inside barrel provide maximum contact and tensile strength after crimping
- Bell mouth shape of barrel entrance makes insertion of wire easier
- Terminals meet or exceed the requirements of MIL-T-7928, Type I, Class 1 and 2
- Available in wire sizes 26 AWG-600 MCM [0.12-304 mm²]
- For terminating solid and stranded wires
- Temperature rating of 338°F [170°C] max.
- Listed by Underwriters Laboratories Inc., File No. E13288*
- Certified by Canadian Standards Association, File No. LR7189*

Budget Terminal



SOURCE: Catalog 65505

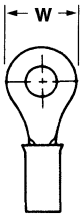
Product Facts

- Designed to meet the need for an economical and electrically superior termination where extreme vibration and tension on the wire are not present
- Utilize a butted seam
- Applied with "F" crimp tooling
- For terminating stranded wire only
- Temperature rating of 338°F [170°C] max.
- Terminals consist of a fine grade high conductivity copper per ASTM B-152 and tin-plated per MIL-T-10727 (Spring Spade tonque terminals, phosphor bronze per ASTM B-103 and tin-plated per MIL-T-10727)
- Serrations inside barrel provide maximum contact and tensile strength after crimping
- Bell mouth shape of barrel entrance makes insertion of wire easier
- Available in wire sizes 26-10 AWG [0.12-6.64 mm²]
- Listed by Underwriters Laboratories Inc., File No. E13288*

*See page 1009 for UL and CSA listings.

Ring Tongue Terminals, Insulated

PIDG

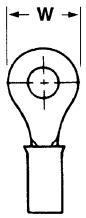


Wire Range Circular Mils [mm²]	Stud Size	Terminal Insulation Color	Dim. W	Wire Insulation Diameter Max.	Part Numbers	
					Loose Piece	Tape Mounted
26-22 202-810 [0.1-0.4]	0	Yellow	**.140** [3.56]	**.082** [2.08]	321013	—
	2 M2	Yellow	**.140** [3.56]	**.082** [2.08]	323912	2-323912-1
		Yellow	**.203** [5.16]	**.082** [2.08]	323913	—
		Yellow	**.140** [3.56]	**.082** [2.08]	329951	2-329951-1
		Yellow/Brown	**.165** [4.20]	**.082** [2.08]	321620	1-321620-0
	4	Yellow	**.203** [5.16]	**.082** [2.08]	323914	2-323914-1
	6 M3.5	Yellow	**.203** [5.16]	**.082** [2.08]	323915	2-323915-2
		Yellow	**.250** [6.35]	**.082** [2.08]	326875	2-326875-1
	8 M4	Yellow	**.250** [6.35]	**.082** [2.08]	323916	2-323916-1
	10	Yellow	**.250** [6.35]	**.082** [2.08]	324075	2-324075-1
22-16 509-3,260 [0.26-1.65]	2 M2	Red	**.218** [5.54]	**.125** [3.18]	328657	2-328657-1
	4	Red	**.218** [5.54]	**.140** [3.56]	31880	2-31880-1
		Red	**.218** [5.54]	**.125** [3.18]	320553	2-320553-2
		Red	**.182** [4.63]	**.140** [3.56]	320882	2-320882-1
		Red	**.250** [6.35]	**.125** [3.18]	323758	2-323758-1
		Red	**.250** [6.35]	**.140** [3.56]	330648	2-330648-1
	6 M3.5	Red	**.218** [5.54]	**.125** [3.18]	36149	2-36149-2
		Red	**.218** [5.54]	**.140** [3.56]	36150	2-36150-1
		Red	**.250** [6.35]	**.125** [3.18]	51863	51863-1
		Red	**.281** [7.14]	**.125** [3.18]	36151	2-36151-2
		Red	**.281** [7.14]	**.140** [3.56]	36152	2-36152-1
		Red	**.312** [7.93]	**.125** [3.18]	323008	2-323008-1
		Red	**.312** [7.93]	**.140** [3.56]	326878	2-326878-1
	8 M4	Red	**.312** [7.93]	**.140** [3.56]	31890	2-31890-1
		Red	**.312** [7.93]	**.125** [3.18]	320551	1-320551-1
		Red	**.281** [7.14]	**.140** [3.56]	31886	2-31886-2
		Red	**.281** [7.14]	**.125** [3.18]	320554	2-320554-1
		Red	**.344** [8.74]	**.140** [3.56]	32835	2-32835-2
	10	Red	**.312** [7.93]	**.125** [3.18]	36153	2-36153-2
		Red	**.312** [7.93]	**.140** [3.56]	36154	2-36154-2
		Red	**.281** [7.14]	**.140** [3.56]	31887	2-31887-1
		Red	**.281** [7.14]	**.125** [3.18]	320552	2-320552-1
		Red	**.344** [8.74]	**.125** [3.18]	32836	—
		Red	**.344** [8.74]	**.140** [3.56]	32837	32837-1
	1/4 M6	Red	**.469** [11.92]	**.140** [3.56]	31894	2-31894-2
		Red	**.469** [11.92]	**.125** [3.18]	320571	2-320571-2
	5/16 M8	Red	**.469** [11.92]	**.140** [3.56]	31895	2-31895-1
		Red	**.469** [11.92]	**.125** [3.18]	320572	2-320572-1
		Red	**.531** [13.49]	**.125** [3.18]	324123	—
	3/8	Red	**.531** [13.49]	**.140** [3.56]	31897	2-31897-2
		Red	**.531** [13.49]	**.125** [3.18]	320573	2-320573-4
	1/2 M12	Red	**.713** [18.11]	**.140** [3.56]	328975	—
16-14 2,050-5,180 [1.04-2.62]	4	Blue	**.250** [6.35]	**.150** [3.81]	324159	2-324159-2
		Blue	**.250** [6.35]	**.170** [4.32]	328996	2-328996-1
	6 M3.5	Blue	**.312** [7.93]	**.150** [3.81]	51864	51864-3
		Blue	**.343** [8.72]	**.150** [3.81]	36157	2-36157-2
		Blue	**.343** [8.72]	**.170** [4.32]	36158	2-36158-1
		Blue	**.250** [6.35]	**.150** [3.81]	320561	2-320561-2
		Blue	**.250** [6.35]	**.170** [4.32]	320619	2-320619-1
		Blue	**.312** [7.93]	**.170** [4.32]	326882	2-326882-1
	8 M4	Blue	**.312** [7.93]	**.150** [3.81]	51864-1	51864-5
		Blue	**.343** [8.72]	**.150** [3.81]	320560	2-320560-1
		Blue	**.343** [8.72]	**.170** [4.32]	320565	2-320565-1
		Blue	**.312** [7.93]	**.170** [4.32]	53941-1	53941-2
	10	Blue	**.312** [7.93]	**.150** [3.81]	51864-2	51864-4
		Blue	**.343** [8.72]	**.150** [3.81]	320574	2-320574-2
		Blue	**.343** [8.72]	**.170** [4.32]	36160	2-36160-1
		Blue	**.312** [7.93]	**.170** [4.32]	53942-1	53942-2
		Blue	**.469** [11.92]	**.170** [4.32]	324533	2-324533-2

SOURCE: Catalog 82042

Ring Tongue Terminals, Insulated
(Continued)

PIDG



Wire Range Circular Mils [mm²]	Stud Size	Terminal Insulation Color	Dim. W	Wire Insulation Diameter Max.	Part Numbers	
					Loose Piece	Tape Mounted
16-14 2,050-5,180 [1.04-2.62]	1/4 M6	Blue	**.469** [11.92]	**.150** [3.81]	320563	2-320563-2
		Blue	**.469** [11.92]	**.170** [4.32]	321045	2-321045-1
	5/16 M8	Blue	**.469** [11.92]	**.170** [4.32]	328998	2-328998-1
		Blue	**.469** [11.92]	**.150** [3.81]	320575	2-320575-1
	3/8	Blue	**.531** [13.49]	**.150** [3.81]	320564	2-320564-3
		Blue	**.531** [13.49]	**.170** [4.32]	328999	2-328999-1
	1/2 M12	Blue	**.713** [18.11]	**.150** [3.81]	328976	—
		Blue	**.713** [18.11]	**.170** [4.32]	328849	—
Heavy Duty[2] 16-14 2,050-5,180 [1.04-2.62]	6 M3.5	Yellow/Blk.	**.281** [7.14]	**.250** [6.35]	35634	—
		Yellow/Blk.	**.281** [7.14]	**.230** [5.84]	320631	2-320631-1
	8 M4	Yellow/Blk.	**.343** [8.72]	**.250** [6.35]	35106	2-35106-1
		Yellow/Blk.	**.343** [8.72]	**.230** [5.84]	320627	1-320627-0
	10	Yellow/Blk.	**.343** [8.72]	**.230** [5.84]	320630	2-320630-2
		Yellow/Blk.	**.343** [8.72]	**.250** [6.35]	34805	2-34805-1
		Yellow/Blk.[1]	**.343** [8.72]	**.300** [7.62]	35363	—
	1/4 M6	Yellow/Blk.	**.500** [12.70]	**.230** [5.84]	34974	2-34974-1
		Yellow/Blk.	**.531** [13.49]	**.230** [5.84]	327743	1-327743-1
		Yellow/Blk.	**.531** [13.49]	**.250** [6.35]	34806	—
		Yellow/Blk.[1]	**.531** [13.49]	**.300** [7.62]	35362	—
	1/2 M12	Yellow/Blk.	**.750** [19.05]	**.250** [6.35]	35316	—
12-10 5,180-13,100 [2.62-6.64]	4	Yellow	**.281** [7.14]	**.250** [6.35]	35148	1-35148-1
	6 M3.5	Yellow	**.281** [7.14]	**.250** [6.35]	35149	2-35149-1
		Yellow	**.281** [7.14]	**.230** [5.84]	320634	2-320634-1
		Yellow	**.312** [7.93]	**.230** [5.84]	326886	326886-1
		Yellow	**.375** [9.53]	**.250** [6.35]	35107	2-35107-1
		Yellow	**.375** [9.53]	**.230** [5.84]	320567	2-320567-2
	8 M4	Yellow	**.312** [7.93]	**.230** [5.84]	35787	—
		Yellow	**.312** [7.93]	**.230** [5.84]	324915	—
		Yellow	**.375** [9.53]	**.250** [6.35]	35108	2-35108-1
		Yellow[1]	**.375** [9.53]	**.300** [7.62]	35605	2-35605-2
		Yellow	**.375** [9.53]	**.230** [5.84]	320568	2-320568-1
	10	Yellow	**.343** [8.72]	**.230** [5.84]	32883	1-32883-0
		Yellow	**.312** [7.93]	**.230** [5.84]	324918	1-324918-0
		Yellow	**.375** [9.53]	**.250** [6.35]	35109	2-35109-1
		Yellow[1]	**.375** [9.53]	**.300** [7.62]	35364	2-35364-1
		Yellow	**.375** [9.53]	**.230** [5.84]	36161	2-36161-2
	1/4 M6	Yellow	**.500** [12.70]	**.230** [5.84]	35273	2-35273-2
		Yellow[1]	**.500** [12.70]	**.300** [7.62]	323763	2-323763-2
		Yellow	**.531** [13.49]	**.250** [6.35]	35110	2-35110-1
		Yellow[1]	**.531** [13.49]	**.300** [7.62]	35345	2-35345-1
		Yellow	**.531** [13.49]	**.230** [5.84]	320569	2-320569-3
	5/16 M8	Yellow	**.531** [13.49]	**.250** [6.35]	35111	2-35111-1
		Yellow[1]	**.531** [13.49]	**.300** [7.62]	35346	2-35346-1
		Yellow	**.531** [13.49]	**.230** [5.84]	320576	2-320576-1
	3/8	Yellow	**.593** [15.07]	**.250** [6.35]	35112	—
		Yellow	**.593** [15.07]	**.230** [5.84]	320577	2-320577-3
	1/2 M12	Yellow	**.750** [19.05]	**.250** [6.35]	35151	—

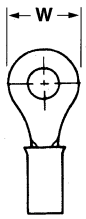
[1] Oversize expansions provided in insulation only.
[2] For extra mechanical strength.

SOURCE: Catalog 82042

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

Ring Tongue Terminals, Insulated
(Continued)

PIDG
Insulation Restriction

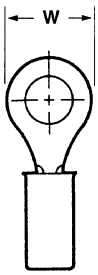


Wire Size Circular Mils [mm²]	Stud Size	Terminal Insulation Color Solid/Stripe	Dim. W	Wire Insulation Diameter Range	Part Numbers Loose Piece
24 475 [0.24]	6/M3.5	Yellow/Blue	**.250** [6.35]	**.031-.055** [.79-1.40]	2-326875-4
22 754 [0.38]	4	Red/Green	**.218** [5.54]	**.038-.110** [.97-2.79]	52273
	6/M3.5	Red/Green	**.218** [5.54]	**.038-.110** [.97-2.79]	2-36149-3
		Red/Green	**.250** [6.35]	**.038-.110** [.97-2.79]	51863-2
	8/M4	Red/Green	**.312** [7.93]	**.038-.110** [.97-2.79]	1-320551-2
	10	Red/Green	**.312** [7.93]	**.038-.110** [.97-2.79]	2-36153-3
	1/4 / M6	Red/Green	**.469** [11.92]	**.038-.110** [.97-2.79]	2-320571-3
20 1,186 [0.60]	4	Red/Red	**.218** [5.54]	**.046-.110** [1.17-2.79]	52273-1
	6/M3.5	Red/Red	**.218** [5.54]	**.046-.110** [1.17-2.79]	2-36149-4
		Red/Red	**.250** [6.35]	**.046-.110** [1.17-2.79]	51863-3
	8/M4	Red/Red	**.312** [7.93]	**.046-.110** [1.17-2.79]	1-320551-3
	10	Red/Red	**.312** [7.93]	**.046-.110** [1.17-2.79]	2-36153-4
	1/4 / M6	Red/Red	**.469** [11.92]	**.046-.110** [1.17-2.79]	2-320571-4
	5/16 / M8	Red/Red	**.469** [11.92]	**.046-.110** [1.17-2.79]	2-320572-3
	1/2 / M12	Red/Red	**.713** [18.11]	**.046-.110** [1.17-2.79]	2-328975-2
18 1,900 [0.96]	4	Red/White	**.218** [5.54]	**.056-.110** [1.42-2.79]	52273-2
	6/M3.5	Red/White	**.218** [5.54]	**.056-.110** [1.42-2.79]	2-36149-5
		Red/White	**.250** [6.35]	**.056-.110** [1.42-2.79]	51863-4
	8/M4	Red/White	**.312** [7.93]	**.056-.110** [1.42-2.79]	1-320551-4
	10	Red/White	**.312** [7.93]	**.056-.110** [1.42-2.79]	2-36153-5
	1/4 / M6	Red/White	**.469** [11.92]	**.056-.110** [1.42-2.79]	2-320571-5
16 2,426 [1.23]	4	Blue/Blue	**.250** [6.35]	**.063-.130** [1.60-3.30]	52274
	6/M3.5	Blue/Blue	**.250** [6.35]	**.063-.130** [1.60-3.30]	2-320561-3
		Blue/Blue	**.312** [7.93]	**.063-.130** [1.60-3.30]	51864-6
	8/M4	Blue/Blue	**.312** [7.93]	**.063-.130** [1.60-3.30]	1-51864-0
	10	Blue/Blue	**.312** [7.93]	**.063-.130** [1.60-3.30]	51864-7
14 3,831 [1.94]	6/M3.5	Blue/Green	**.312** [7.93]	**.078-.130** [1.98-3.30]	51864-8
	8/M4	Blue/Green	**.312** [7.93]	**.078-.130** [1.98-3.30]	1-51864-1
	10	Blue/Green	**.312** [7.93]	**.078-.130** [1.98-3.30]	51864-9
12 6,088 [3.08]	6/M3.5	Yellow/Yellow	**.375** [9.53]	**.095-.200** [2.41-5.08]	2-36161-5
	8/M4	Yellow/Yellow	**.375** [9.53]	**.095-.200** [2.41-5.08]	2-320568-2
	10	Yellow/Yellow	**.375** [9.53]	**.095-.200** [2.41-5.08]	2-36161-3
	5/16 / M8	Yellow/Yellow	**.531** [13.49]	**.095-.200** [2.41-5.08]	2-320576-2
10 10,319 [5.23]	6/M3.5	Yellow/Brown	**.375** [9.53]	**.119-.200** [3.02-5.08]	2-36161-6
	8/M4	Yellow/Brown	**.375** [9.53]	**.119-.200** [3.02-5.08]	2-320568-3
	10	Yellow/Brown	**.375** [9.53]	**.119-.200** [3.02-5.08]	2-36161-4

SOURCE: Catalog 82042

Ring Tongue Terminals, Insulated (Continued)

PIDG Radiation Resistant



Wire Range Circular Mils [mm²]	Stud Size	Stripe Color Code	Dim. W	Wire Ins. Dia. Max.	Part Numbers		
					Gold Plated	Tin Plated	
					Loose Piece	Tape Mounted	Loose Piece
26-24 202-509 [0.10-0.26]	2 M2	Yellow	**.203** [5.16]	**.082** [2.08]	—	—	53400-1
	4	Yellow	**.203** [5.16]	**.082** [2.08]	—	—	53401-1
	6 M3.5	Yellow	**.250** [6.35]	**.082** [2.08]	—	—	53402-1
	8 M4	Yellow	**.281** [7.13]	**.082** [2.08]	—	—	53403-1
	10	Yellow	**.312** [7.92]	**.082** [2.08]	—	—	53404-1
24-20 320-1,290 [0.16-0.65]	4	White	**.281** [7.13]	**.100** [2.54]	—	—	53809-1
	6 M3.5	White	**.281** [7.13]	**.100** [2.54]	—	—	53809-2
22-16 509-3,260 [0.26-1.65]	4	Red	**.218** [5.54]	**.125** [3.18]	—	—	53405-1
	6 M3.5	Red	**.218** [5.54]	**.125** [3.18]	—	—	53406-1
		Red	**.250** [6.35]	**.125** [3.18]	—	53407-2	53407-1
	8 M4	Red	**.312** [7.92]	**.125** [3.18]	—	53408-2	53408-1
	10	Red	**.312** [7.92]	**.125** [3.18]	53409-3	—	53409-1
	1/4 M6	Red	**.469** [11.91]	**.125** [3.18]	—	53410-2	53410-1
	5/16 M8	Red	**.469** [11.91]	**.125** [3.18]	—	—	53411-1
	3/8	Red	**.531** [13.49]	**.125** [3.18]	—	—	53412-1
	1/2 M12	Red	**.713** [18.11]	**.125** [3.18]	—	—	53413-1
16-14 2,050-5,180 [1.04-2.62]	4	Blue	**.250** [6.35]	**.150** [3.81]	53414-3	—	53414-1
	6 M3.5	Blue	**.250** [6.35]	**.150** [3.81]	—	—	53415-1
		Blue	**.312** [7.92]	**.150** [3.81]	—	53416-2	53416-1
	8 M4	Blue	**.312** [7.92]	**.150** [3.81]	53417-3	—	53417-1
	10	Blue	**.312** [7.92]	**.150** [3.81]	—	53418-2	53418-1
	1/4 M6	Blue	**.469** [11.91]	**.150** [3.81]	—	—	53419-1
	5/16 M8	Blue	**.469** [11.91]	**.150** [3.81]	—	—	53420-1
	3/8	Blue	**.531** [13.49]	**.150** [3.81]	—	—	53421-1
	1/2 M12	Blue	**.713** [18.11]	**.150** [3.81]	—	—	53422-1
Heavy Duty 16-14 2,050-5,180 [1.04-2.62]	6 M3.5	Black	**.343** [8.71]	**.230** [5.84]	—	—	53964-1
	8 M4	Black	**.343** [8.71]	**.230** [5.84]	—	—	53982-1
	10	Black	**.343** [8.71]	**.230** [5.84]	—	—	53983-1
	1/4 M6	Black	**.531** [13.49]	**.230** [5.84]	—	—	53984-1
	3/8	Black	**.531** [13.49]	**.230** [5.84]	—	—	53966-1
	1/2 M12	Black	**.750** [19.05]	**.230** [5.84]	—	—	53967-1
12-10 5,180-13,100 [2.62-6.64]	6 M3.5	Yellow	**.375** [9.53]	**.230** [5.84]	53423-2	—	53423-1*
	8 M4	Yellow	**.375** [9.53]	**.230** [5.84]	—	53424-2	53424-1*
	10	Yellow	**.375** [9.53]	**.230** [5.84]	—	53425-2	53425-1*
	1/4 M6	Yellow	**.531** [13.49]	**.230** [5.84]	—	—	53426-1*
	5/16 M8	Yellow	**.531** [13.49]	**.230** [5.84]	—	53427-2	53427-1*
	3/8	Yellow	**.593** [15.06]	**.230** [5.84]	—	—	53428-1*
	1/2 M12	Yellow	**.715** [18.16]	**.230** [5.84]	—	—	53429-1*

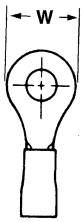
*Brazed Body

SOURCE: Catalog 82038

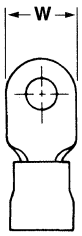
Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

Ring Tongue Terminals, Insulated
(Continued)

PLASTI-GRIP



Style A



Style B

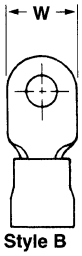
Wire Range Circular Mils [mm²]	Stud Size	Style	Terminal Insulation Color	Dim. W	Wire Insulation Diameter Max.	Part Numbers	
						Loose Piece	Tape Mounted
22-16 509-3,260 [0.26-1.65]	2/M2	A	Red	**.218** [5.54]	**.140** [3.56]	34140	2-34140-1
	4	A	Red	**.218** [5.54]	**.125** [3.18]	32944	2-32944-1
			Red	**.218** [5.54]	**.140** [3.56]	34141	2-34141-1
	6/M3.5	A	Red	**.218** [5.54]	**.125** [3.18]	32945	2-32945-1
			Red	**.218** [5.54]	**.140** [3.56]	34142	1-34142-1
			Red	**.218** [5.54]	**.125** [3.18]	32947	2-32947-1
			Red	**.218** [5.54]	**.140** [3.56]	34144	2-34144-1
			Red	**.312** [7.93]	**.125** [3.18]	32950	2-32950-1
			Red	**.312** [7.93]	**.140** [3.56]	34147	2-34147-1
	8/M4	A	Red	**.312** [7.93]	**.125** [3.18]	32951	2-32951-1
			Red	**.312** [7.93]	**.140** [3.56]	34148	2-34148-1
			Red	**.281** [7.14]	**.125** [3.18]	32948	2-32948-1
			Red	**.281** [7.14]	**.140** [3.56]	34145	2-34145-1
	10	A	Red	**.312** [7.93]	**.125** [3.18]	32952	2-32952-1
			Red	**.312** [7.93]	**.140** [3.56]	34149	2-34149-1
			Red	**.281** [7.14]	**.125** [3.18]	32949	2-32949-1
			Red	**.281** [7.14]	**.140** [3.56]	34146	2-34146-1
	1/4 / M6	A	Red	**.469** [11.92]	**.125** [3.18]	32953	2-32953-1
			Red	**.469** [11.92]	**.140** [3.56]	34150	2-34150-1
	5/16 / M8	A	Red	**.469** [11.92]	**.140** [3.56]	34151	2-34151-1
	3/8	A	Red	**.531** [13.49]	**.140** [3.56]	34152	2-34152-2
16-14 2,050-5,180 [1.04-2.62]	4	A	Blue	**.250** [6.35]	**.170** [4.32]	34157	2-34157-1
	6 M3.5	A	Blue	**.343** [8.72]	**.140** [3.56]	32958	2-32958-1
			Blue	**.343** [8.72]	**.170** [4.32]	34159	2-34159-1
			Blue	**.250** [6.35]	**.140** [3.56]	32957	2-32957-1
			Blue	**.250** [6.35]	**.170** [4.32]	34158	2-34158-1
	8/M4	A	Blue	**.343** [8.72]	**.140** [3.56]	32959	2-32959-1
			Blue	**.343** [8.72]	**.170** [4.32]	34160	2-34160-1
			Blue	**.312** [7.93]	**.170** [4.32]	328527	2-328527-1
	10	A	Blue	**.343** [8.72]	**.140** [3.56]	32960	2-32960-1
			Blue	**.343** [8.72]	**.170** [4.32]	34161	2-34161-1
	1/4 / M6	A	Blue	**.469** [11.92]	**.140** [3.56]	32961	2-32961-1
			Blue	**.469** [11.92]	**.170** [4.32]	34162	2-34162-1
	5/16 / M8	A	Blue	**.469** [11.92]	**.170** [4.32]	34163	2-34163-1
	3/8	A	Blue	**.531** [13.49]	**.170** [4.32]	34164	2-34164-2
Heavy Duty[1] 16-14 2,050-5,180 [1.04-2.62]	6/M3.5	A	Yellow/Blk.	**.281** [7.14]	**.200** [5.08]	34821	2-34821-1
	8/M4	A	Yellow/Blk.	**.343** [8.72]	**.200** [5.08]	34822	—
	10	A	Yellow/Blk.	**.343** [8.72]	**.200** [5.08]	34823	2-34823-1
12-10 5,180-13,100 [2.62-6.64]	4	A	Yellow	**.281** [7.14]	**.250** [6.35]	34835	2-34835-1
	6/M3.5	A	Yellow	**.281** [7.14]	**.250** [6.35]	34852	2-34852-1
			Yellow	**.375** [9.53]	**.230** [5.84]	34168	2-34168-1
	8/M4	A	Yellow	**.375** [9.53]	**.230** [5.84]	34169	2-34169-1
			Yellow	**.375** [9.53]	**.250** [6.35]	34853	2-34853-1
	10	A	Yellow	**.375** [9.53]	**.230** [5.84]	34170	2-34170-1
			Yellow	**.375** [9.53]	**.250** [6.35]	34854	2-34854-1
	1/4 / M6	A	Yellow	**.531** [13.49]	**.230** [5.84]	34171	2-34171-1
			Yellow	**.531** [13.49]	**.250** [6.35]	34855	2-34855-1
	5/16 / M8	A	Yellow	**.531** [13.49]	**.230** [5.84]	34172	2-34172-1
			Yellow	**.531** [13.49]	**.250** [6.35]	34856	2-34856-1
	3/8	A	Yellow	**.593** [15.07]	**.230** [5.84]	34173	2-34173-1
	1/2 / M12	A	Yellow	**.750** [19.05]	**.250** [6.35]	34837	—
8 13,100-20,800 [6.64-10.5]	10	B	Red	**.431** [10.95]	**.325** [8.26]	52263-1	52263-3
			Red	**.431** [10.95]	**.360** [9.14]	52263	52263-2
	1/4 / M6	B	Red	**.478** [12.15]	**.325** [8.26]	52041-3	52263-9
			Red	**.478** [12.15]	**.360** [9.14]	52041-1	52263-7
	5/16 / M8	B	Red	**.587** [14.91]	**.360** [9.14]	52291	52263-4
6 20,800-33,100 [10.5-16.8]	8/M4	B	Blue	**.625** [15.88]	**.340** [8.64]	52042-2	—
	10	B	Blue	**.468** [11.89]	**.436** [11.07]	52265	—
	1/4 / M6	B	Blue	**.500** [12.70]	**.340** [8.64]	52042-3	52042-9
			Blue	**.500** [12.70]	**.436** [11.07]	52042-1	52042-7
	5/16 / M8	B	Blue	**.625** [15.88]	**.436** [11.07]	52264	—

SOURCE: Catalog 82042

[1]Heavy duty for extra mechanical strength.

Ring Tongue Terminals, Insulated (Continued)

PLASTI-GRIP

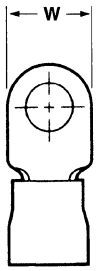


Style B

Wire Range Circular Mils [mm²]	Stud Size	Style	Terminal Insulation Color	Dim. W	Wire Insulation Diameter Max.	Part Numbers Loose Piece
4 33,100-52,600 [16.8-26.7]	10	B	Yellow	**.546** [13.87]	**.450** [11.43]	52043-2
	1/4 / M6	B	Yellow	**.546** [13.87]	**.450** [11.43]	52043-3
			Yellow	**.546** [13.87]	**.515** [13.08]	52043-1
	5/16 / M8	B	Yellow	**.679** [17.25]	**.450** [11.43]	52266-3
			Yellow	**.679** [17.25]	**.515** [13.08]	52266
2 52,600-83,700 [26.7-42.2]	1/4 / M6	B	Red	**.675** [17.15]	**.560** [14.22]	52267-1
			Red	**.675** [17.15]	**.632** [16.05]	52267-1
1/0 83,700-119,500 [42.2-60.6]	5/16 / M8	B	Blue	**.807** [20.50]	**.684** [17.37]	52045-1
2/0 119,500-150,500 [60.6-76.3]	5/16 / M8	B	Yellow	**.926** [23.52]	**.775** [19.69]	52046-1

SOURCE: Catalog 82042

PLASTI-GRIP Radiation Resistant



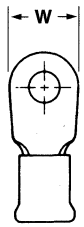
Wire Range Circular Mils [mm²]	Stud Size	Stripe Color Code	Dim. W	Wire Ins. Dia. Max.	Part Numbers Loose Piece
8 13,100-20,800 [6.64-10.5]	10	Red	**.431** [10.95]	**.380** [9.65]	53978-1
	1/4 M6	Red	**.478** [12.15]	**.380** [9.65]	53943-1
	5/16 M8	Red	**.587** [14.91]	**.380** [9.65]	54947-1
	3/8	Red	**.587** [14.91]	**.380** [9.65]	53944-1
6 20,800-33,100 [1.05-16.8]	10	Blue	**.468** [11.89]	**.436** [11.07]	53975-1
	1/4 M6	Blue	**.500** [12.70]	**.436** [11.07]	53946-1
	3/8	Blue	**.625** [15.88]	**.436** [11.07]	53947-1
4 33,100-52,600 [16.8-26.7]	10	Yellow	**.546** [13.87]	**.515** [13.08]	53949-1
	1/4 M6	Yellow	**.546** [13.87]	**.515** [13.08]	53980-1
	3/8	Yellow	**.679** [17.25]	**.515** [13.08]	53950-1
	1/2 M12	Yellow	**.679** [17.25]	**.515** [13.08]	53951-1
2 52,600-83,700 [26.7-42.2]	10	Red	**.711** [18.06]	**.560** [14.22]	53952-1
	3/8	Red	**.711** [18.06]	**.560** [14.22]	53953-1
	1/2 M12	Red	**.855** [21.72]	**.560** [14.22]	53954-1
2/0 119,500-150,500 [60.6-76.3]	3/8	Yellow	**.926** [23.52]	**.775** [19.69]	53971-1

SOURCE: Catalog 82038

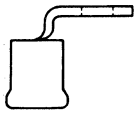
Specifications subject to change.
1-800-522-6752 Product Information Center/ AMP FAX Service
1-800-722-1111 Tooling/Technical Assistance Center

Ring Tongue Terminals, Insulated
(Continued)

AMPLI-BOND



Style A


Style B

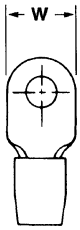
Wire Range Circular Mils [mm²]	Stud Size	Style	Terminal Insulation Color	Dim. W	Wire Insulation Diameter Max.	Part Numbers	
						Loose Piece	Tape Mounted
8 13,100-20,800 [6.64-10.5]	8/M4	A	Red	**.478** [12.15]	**.298** [7.57]	322047	—
	10	A	Red	**.406** [10.32]	**.298** [7.57]	323197	—
			Red	**.587** [14.91]	**.298** [7.57]	322002	—
			Red	**.431** [10.95]	**.298** [7.57]	322128	2-322128-2
			Red	**.431** [10.95]	**.377** [9.58]	322154	—
	1/4 / M6	A	Red	**.478** [12.15]	**.298** [9.58]	322049	—
	5/16 / M8	A	Red	**.587** [14.91]	**.298** [7.57]	322003	—
	3/8	A	Red	**.587** [14.91]	**.298** [7.57]	322004	—
6 20,800-33,100 [10.5-16.8]	10	A	Blue	**.468** [11.89]	**.377** [9.58]	322153	—
			Blue	**.500** [12.70]	**.377** [9.58]	322050	—
	10	B	Blue	**.500** [12.70]	**.377** [9.58]	322887	—
	1/4 / M6	A	Blue	**.500** [12.70]	**.377** [9.58]	322051	—
	1/4 / M6	B	Blue	**.500** [12.70]	**.377** [9.58]	322888	—
	5/16 / M8	A	Blue	**.625** [15.88]	**.377** [9.58]	322006	—
	3/8	A	Blue	**.625** [15.88]	**.377** [9.58]	322007	—
4 33,100-52,600 [16.8-26.7]	10	A	Yellow	**.546** [13.87]	**.436** [11.07]	322052	—
			Yellow	**.679** [17.25]	**.436** [11.07]	322009	—
	1/4 / M6	A	Yellow	**.546** [13.87]	**.436** [11.07]	322053	—
	1/4 / M6	B	Yellow	**.546** [13.87]	**.436** [11.07]	322894	—
	5/16 / M8	A	Yellow	**.679** [17.25]	**.436** [11.07]	322010	—
	3/8	A	Yellow	**.679** [17.25]	**.436** [11.07]	322011	—
	3/8	B	Yellow	**.679** [17.25]	**.436** [11.07]	322898	—
2 52,600-83,700 [26.7-42.2]	10	A	Red	**.711** [18.06]	**.505** [12.83]	322122	—
	1/4 / M6	A	Red	**.675** [17.15]	**.505** [12.83]	322125	—
			Red	**.675** [17.15]	**.632** [16.05]	322157	—
	1/4 / M6	B	Red	**.610** [15.50]	**.505** [12.83]	52097	—
	3/8	A	Red	**.711** [18.06]	**.505** [12.83]	322055	—
1/0 83,700-119,500 [42.2-60.6]	5/16 / M8	A	Blue	**.807** [20.50]	**.632** [16.05]	322086	—
			Blue	**.807** [20.50]	**.684** [17.37]	328526	—
	3/8	A	Blue	**.807** [20.50]	**.632** [16.05]	322087	—
			Blue	**.807** [20.50]	**.684** [17.37]	322173	—
	1/2 / M12	A	Blue	**.875** [22.23]	**.632** [16.05]	321677	—
2/0 119,500-150,500 [60.6-76.3]	5/16 / M8	A	Yellow	**.926** [23.52]	**.684** [17.37]	322089	—
	3/8	A	Yellow	**.926** [23.52]	**.684** [17.37]	322090	—
	1/2 / M12	A	Yellow	**.926** [23.52]	**.684** [17.37]	322092	—

SOURCE: Catalog 82042

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

Ring Tongue Terminals, Insulated (Continued)

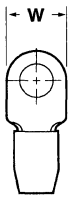
TERMINYL



Wire Range Circular Mils [mm²]	Stud Size	Terminal Insulation Color	Dim. W	Wire Ins. Dia. Max.	Part Numbers Loose Piece
8 13,100-20,800 [6.64-10.5]	8/M4	Red	**.478** [12.15]	**.257** [6.53]	53041
	10	Red	**.431** [10.95]	**.257** [6.53]	324043
	1/4 / M6	Red	**.478** [12.15]	**.257** [6.53]	324082
	5/16 / M8	Red	**.587** [14.91]	**.257** [6.53]	324044
	3/8	Red	**.587** [14.91]	**.257** [6.53]	324045
6 20,800-33,100 [10.5-16.8]	10	Blue	**.468** [11.89]	**.314** [7.98]	324046
		Blue	**.398** [10.11]	**.314** [7.98]	53119-1
	1/4 / M6	Blue	**.500** [12.70]	**.314** [7.98]	324047
	5/16 / M8	Blue	**.625** [15.88]	**.314** [7.98]	324048
	3/8	Blue	**.625** [15.88]	**.314** [7.98]	324049
4 33,100-52,600 [16.8-26.7]	8 / M4	Yellow	**.437** [11.10]	**.382** [9.70]	331456
	10	Yellow	**.546** [13.87]	**.382** [9.70]	324111
	1/4 / M6	Yellow	**.546** [13.87]	**.382** [9.70]	324050
	5/16 / M8	Yellow	**.679** [17.25]	**.382** [9.70]	324051
	3/8	Yellow	**.679** [17.25]	**.382** [9.70]	324052
	1/2 / M12	Yellow	**.679** [17.25]	**.382** [9.70]	324114
2 52,600-83,700 [26.7-42.2]	10	Red	**.711** [18.06]	**.473** [12.01]	328655
	1/4 / M6	Red	**.675** [17.15]	**.473** [12.01]	324053
	5/16 / M8	Red	**.711** [18.06]	**.473** [12.01]	324112
	3/8	Red	**.711** [18.06]	**.473** [12.01]	324054
	1/2 / M12	Red	**.855** [21.72]	**.473** [12.01]	324055
1/0 83,700-119,500 [42.2-60.6]	1/4 / M6	Blue	**.807** [20.50]	**.580** [14.73]	324056
	5/16 / M8	Blue	**.807** [20.50]	**.580** [14.73]	324113
	3/8	Blue	**.807** [20.50]	**.580** [14.73]	324057
	1/2 / M12	Blue	**.875** [22.23]	**.580** [14.73]	324058
2/0 119,500-150,500 [60.6-76.3]	5/16 / M8	Yellow	**.926** [23.52]	**.610** [15.49]	324083
	3/8	Yellow	**.926** [23.52]	**.610** [15.49]	324084
	1/2 / M12	Yellow	**.926** [23.52]	**.610** [15.49]	324085

SOURCE: Catalog 82042

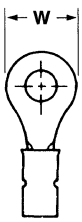
TERMINYL Radiation Resistant



Wire Range Circular Mils [mm²]	Stud Size	Stripe Color Code	Dim. W	Wire Ins. Dia. Max.	Part Numbers Loose Piece Gold Plated	Part Numbers Loose Piece Unplated
8 13,100-20,800 [6.64-10.5]	5/16 M8	Red	**.587** [14.91]	**.252** [6.40]	—	53506-3
6 20,800-33,100 [10.5-16.8]	1/4 M6	Blue	**.500** [12.70]	**.309** [7.85]	53509-1	—

SOURCE: Catalog 82038

DIAMOND GRIP

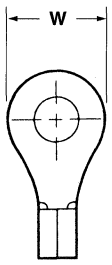


Wire Range Circular Mils [mm²]	Stud Size	Dim. W	Wire Insulation Diameter Max.	Part Numbers Loose Piece	Part Numbers Tape Mounted
26-22 202-810 [0.10-0.41]	0	**.140** [3.56]	**.082** [2.08]	31516	—
	2/M2	**.140** [3.56]	**.082** [2.08]	31518	2-31518-1
	4	**.203** [5.16]	**.082** [2.08]	31679	2-31679-1
	6/M3.5	**.250** [6.35]	**.082** [2.08]	32861	2-32861-2
22-16 509-3,260 [0.26-1.65]	4	**.218** [5.54]	**.125** [3.18]	31094	—
	6M3.5	**.218** [5.54]	**.125** [3.18]	31096	2-31096-1
		.281 [7.14]	**.125** [3.18]	31269	2-31269-1
		.281 [7.14]	**.140** [3.56]	31396	2-31396-2
		.312 [7.93]	**.125** [3.18]	30996	2-30996-1
		.312 [7.93]	**.140** [3.56]	31160	2-31160-1
	8/M4	**.281** [7.14]	**.125** [3.18]	31270	2-31270-1
		.281 [7.14]	**.140** [3.56]	31397	2-31397-1
	10	**.312** [7.93]	**.125** [3.18]	30997	2-30997-1
		.281 [7.14]	**.140** [3.56]	31398	2-31398-1
16-14 2,050-5,180 [1.04-2.62]	6/M3.5	**.250** [6.35]	**.170** [4.32]	32190	2-32190-1
	8/M4	**.343** [8.72]	**.170** [4.32]	30927	2-30927-1
	10	**.343** [8.72]	**.150** [3.81]	30993	2-30993-1
		.343 [8.72]	**.170** [4.32]	30928	2-30928-1
12-10 5,180-13,100 [2.62-6.64]	10	**.375** [9.53]	**.230** [5.84]	31771	2-31771-1
	1/4 / M6	**.531** [13.49]	**.230** [5.84]	31772	2-31772-1
	3/8	**.593** [15.07]	**.230** [5.84]	31828	—

SOURCE: Catalog 82042

Ring Tongue Terminals, Uninsulated (Continued)

SOLISTRAND and Budget

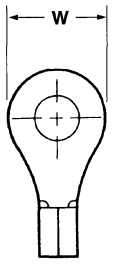


Wire Range Circular Mils [mm²]	Stud Size	Style	Dim. W	Part Numbers			
				SOLISTRAND		Budget	
				Loose Piece	Tape Mounted	Loose Piece	Tape Mounted
26–22 202–810 [0.1–0.41]	0	A	**.140** [3.56]	—	—	31423	—
	2 M2	A	**.140** [3.56]	—	—	31425	2-31425-2
		A	**.203** [5.16]	—	—	33695	—
		A	**.140** [3.56]	50334*	—	322771	—
	4	A	**.203** [5.16]	—	—	31428	—
	6 M3.5	A	**.203** [5.16]	—	—	31430	—
		A	**.250** [6.35]	331401	1-331401-1	32858	—
	8	A	**.250** [6.35]	—	—	32859	—
	10	A	**.250** [6.35]	—	—	32860	—
22–16 509–3,260 [0.26–1.65]	1	A	**.218** [5.54]	—	—	31087	—
	2 M2	A	**.218** [5.54]	34103	2-34103-1	31088	—
		A	**.182** [4.63]	322927	—	320677	—
	4	A	**.250** [6.35]	34104*	2-34104-6	31089	3-31089-6
		A	**.218** [5.54]	36467*	—	36189	—
		A	**.250** [6.35]	323096	2-323096-2	322418	—
	5 M3	A	**.218** [5.54]	—	—	31090	2-31090-1
	6 M3.5	A	**.218** [5.54]	34105*	2-34105-2	31091	—
		A	**.218** [5.54]	34194	—	31101	—
		A	**.281** [7.14]	34107*	2-34107-2	31264	—
		A	**.312** [7.93]	34110*	2-34110-3	30691	1-30691-1
		A	**.344** [8.74]	—	—	32822	—
	8 M4	A	**.312** [7.93]	34111*	2-34111-3	30692	—
		A	**.281** [7.14]	34108*	2-34108-2	31265	—
		A	**.344** [8.74]	323086	—	32823	—
	10	A	**.312** [7.93]	34112*	2-34112-2	30693	3-30693-7
		A	**.281** [7.14]	34109*	2-34109-2	31266	—
		A	**.344** [8.74]	323087*	—	32824	—
	12	A	**.312** [7.93]	—	—	30694	2-30694-1
	1/4 M6	A	**.469** [11.92]	34113*	2-34113-2	31172	—
	5/16 M8	A	**.469** [11.92]	34114*	2-34114-2	31173	3-31173-3
		A	**.531** [13.49]	—	—	324124	—
	3/8	A	**.531** [13.49]	34115*	2-34115-2	31498	—
	1/2 M12	A	**.713** [18.11]	329966*	—	328970	—
16–14 2,050–5,180 [1.04–2.62]	2 M2	A	**.250** [6.35]	—	—	321007	—
		A	**.180** [4.58]	328377	—	326854	—
	4	A	**.250** [6.35]	34119*	2-34119-1	32185	—
	6 M3.5	A	**.343** [8.72]	34121*	2-34121-1	30695	—
		A	**.250** [6.35]	34120*	2-34120-1	32186	—
		A	**.312** [7.93]	321684*	2-321684-1	321683	—
	8 M4	A	**.343** [8.72]	34122*	2-34122-1	30696	—
		A	**.312** [7.93]	324955*	2-324955-1	322235	1-322235-1
	10	A	**.312** [7.93]	—	—	51872-5	—
		A	**.343** [8.72]	34123*	2-34123-1	30697	—

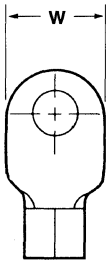
*Part numbers are available in small quantity packages.

Ring Tongue Terminals, Uninsulated
(Continued)

SOLISTRAND and Budget



Style A



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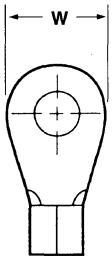

Style C

Wire Range Circular Mils [mm²]	Stud Size	Style	Dim. W	Part Numbers SOLISTRAND Loose Piece	Part Numbers SOLISTRAND Tape Mounted	Part Numbers Budget Loose Piece
16–14 2,050–5,180 [1.04–2.62]	10	A	**.312** [7.93]	320093	2-320093-1	31049
	12	A	**.469** [11.92]	—	—	31163
	14	A	**.312** [7.93]	—	—	34896
	1/4 M6	A	**.469** [11.92]	34124*	2-34124-1	31164
	5/16 M8	A	**.469** [11.92]	34125*	2-34125-6	31165
	3/8	A	**.531** [13.49]	34126*	2-34126-2	31499
	1/2	A	**.713** [18.11]	—	—	328971
	M12	A	**.750** [19.05]	50981	—	50982
14–12 3,260–8,230 [1.65–4.17]	8 M	B	**.312** [7.93]	321827	—	—
	10	B	**.421** [10.70]	34484	1-34484-0	—
		B	**.312** [7.93]	321828	1-321828-0	—
	1/4 M6	B	**.421** [10.70]	34487	—	—
	3/8	B	**.687** [17.45]	34486	—	—
12–10 5,180–13,100 [2.62–6.64]	4	A	**.281** [7.14]	322447	—	34891
	6 M3.5	A	**.281** [7.14]	35476*	2-35476-1	34892
		A	**.312** [7.93]	324911	—	324910
		A	**.375** [9.53]	33456	2-33456-1	31112
	8 M4	A	**.312** [7.93]	322454*	—	34404
		A	**.375** [9.53]	32994*	2-32994-1	31113
	10	A	**.343** [8.72]	322455	2-322455-1	32882
		A	**.375** [9.53]	33457*	2-33457-2	31114
		A	**.375** [9.53]	31805	—	321829
		A	**.500** [12.70]	35771*	2-35771-1	34964
		A	**.531** [13.49]	36451	—	31120
	1/4 M6	A	**.500** [12.70]	35772*	2-35772-1	34965
		A	**.531** [13.49]	33458*	2-33458-3	31122
	5/16 M8	A	**.500** [12.70]	—	—	34966
		A	**.531** [13.49]	33459*	2-33459-6	31123
	3/8	A	**.593** [15.07]	33220*	—	30972
		A	**.750** [19.05]	322242	—	34833
	1/2 M12	A	**.715** [18.17]	—	—	52269-1
		A	**.750** [19.05]	35135	—	34834
		A	**1.250** [31.75]	320763	—	320760
	5/8 M6	A	**1.250** [31.75]	320764	—	320761
	3/4	A	**1.250** [31.75]	320765	—	320762
	7/8 M22	A	**1.250** [31.75]	1-320765-1	—	—
	1	A	**1.250** [31.75]	1-320765-0	—	—
8 13,100–20,800 [6.64–10.5]	8 M4	C	**.406** [10.31]	324061*	—	—
		C	**.469** [11.92]	32996*	—	—
	10	C	**.469** [11.92]	33460*	2-33460-2*[1] 2-33460-3*[2]	—
		C	**.406** [10.31]	31807	2-31807-2*[2]	—
	1/4 M6	C	**.469** [11.92]	33461*	2-33461-2*[1] 2-33461-3*[2]	—

*Part numbers are available in small quantity packages.
[1]Requires a **Part No. 69875** standard TAPETRONIC machine for application.
[2]Requires a **Part No. 68251** Heavy Duty TAPETRONIC machine for application.

SOURCE: Catalog 65505

Specifications subject to change.
1-800-522-6752
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1-800-722-1111
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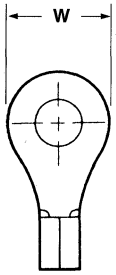
Ring Tongue Terminals, Uninsulated
(Continued)

SOLISTRAND



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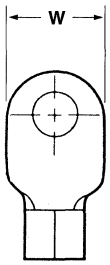
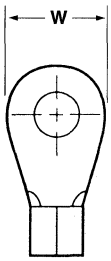
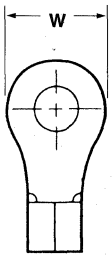


Style B



Style C



Style D

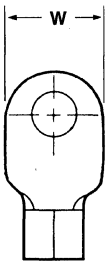
Wire Range Circular Mils [mm²]	Stud Size	Style	Dim. W	Part Numbers	
				Loose Piece	Tape Mounted
8 13,100–20,800 [6.64–10.5]	1/4 M6	A	**.594** [15.09]	35247*	—
	5/16 M8	A	**.594** [15.09]	33462*	—
		A	**.562** [14.28]	31808*	—
	3/8	A	**.594** [15.09]	33463*	—
		A	**1.250** [31.75]	36499	—
	1/2 M12	A	**1.250** [31.75]	35664*	—
	5/8 M16	A	**1.250** [31.75]	35665	—
6 20,800–33,100 [10.5–16.8]	10	C	**.406** [10.32]	52197*	52197-1
		C	**.406** [10.32]	53106-1	—
		C	**.625** [15.88]	33464*	—
		C	**.468** [11.89]	321298*	—
	1/4 M6	C	**.625** [15.88]	33465*	2-33465-1
		C	**.468** [11.89]	321598*	2-321598-3
	5/16 M8	C	**.625** [15.88]	33466*	2-33466-3
	3/8	C	**.625** [15.88]	33467*	—
		A	**1.250** [31.75]	36807	—
	7/16	C	**.625** [15.88]	320745	—
	1/2 M12	C	**.875** [22.23]	320344*	—
		A	**1.250** [31.75]	36808	—
	5/8	A	**1.250** [31.75]	36809	—
	3/4	A	**1.250** [31.75]	36810	—
4 33,100–52,600 [16.8–26.7]	10	A	**.656** [16.67]	33468*	—
		C	**.500** [12.70]	33114	—
	1/4 M6	A	**.656** [16.67]	33469*	—
		C	**.500** [12.70]	31811	—
	5/16 M8	A	**.656** [16.67]	33470*	—
		C	**.625** [15.88]	33115	—
	3/8	A	**.656** [16.67]	33471*	—
		A	**1.250** [31.75]	36815	—
		C	**.875** [22.23]	322704	—
		C	**.625** [15.88]	31812	—
	7/16	A	**.656** [16.67]	320743	—
	1/2 M12	A	**1.250** [31.75]	35668*	—
		C	**.875** [22.23]	327175*	—
	5/8 M16	A	**1.250** [31.75]	35669	—
	3/4	A	**1.250** [31.75]	35670	—
2 52,600–83,700 [26.7–42.2]	10	B	**.625** [15.88]	330301	—
	1/4 M6	B	**.625** [15.88]	320383*	—
		D	**.890** [22.61]	320138	—
	5/16 M8	D	**.890** [22.61]	35183	—
		B	**.625** [15.88]	322870*	—
	3/8	B	**.625** [15.88]	321600*	—
		D	**.890** [22.61]	35184	—
	7/16	D	**.890** [22.61]	320741	—
	1/2 M12	D	**.890** [22.61]	35185*	—
		D	**1.250** [31.75]	323291	—
	5/8 M16	D	**1.250** [31.75]	320754	—
	3/4	D	**1.250** [31.75]	320755	—
1/0 83,700–119,500 [42.2–60.6]	1/4 M6	C	**.875** [22.23]	36915	—
		C	**.807** [20.50]	321866	—
	5/16 M8	C	**.875** [22.23]	36916*	—
		C	**.807** [20.50]	321867*	—
	3/8	C	**.875** [22.23]	36917*	—

*Part numbers are available in small quantity packages.

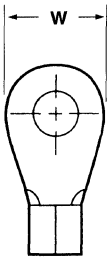
SOURCE: Catalog 65505

Ring Tongue Terminals, Uninsulated (Continued)

SOLISTRAND



Style B



Style C

Wire Range Circular Mils [mm²]	Stud Size	Style	Dim. W	Part Numbers Loose Piece
1/0 83,700–119,500 [42.2–60.6]	3/8	C	**.807** [20.50]	321868
	7/16	C	**.875** [22.23]	36918
	1/2	C	**.875** [22.23]	36919*
	M12	C	**1.265** [32.14]	322291
	5/8 M16	C	**1.265** [32.14]	320744
	3/4	C	**1.265** [32.14]	320748
2/0 119,500–150,500 [60.6–76.3]	1/4	C	**.926** [23.52]	321869
	M6	C	**.946** [24.03]	36921
	5/16	C	**.926** [23.52]	321870*
	M8	C	**.946** [24.03]	36922
	3/8	C	**.926** [23.52]	321871*
		C	**.946** [24.03]	36923*
	7/16	C	**.926** [23.52]	321872
	1/2	C	**.926** [23.52]	321873*
	M12	C	**.946** [24.03]	36925*
		C	**1.270** [32.26]	322391
	5/8 M16	C	**1.270** [32.26]	322224
	3/4	C	**1.270** [32.26]	322225
3/0 150,500–190,000 [76.3–96.3]	1/4	B	**1.020** [25.91]	323868
	5/16	B	**1.020** [25.91]	321874
	M8	B	**1.082** [27.49]	320266
	3/8	B	**1.020** [25.91]	321875*
		B	**1.082** [27.49]	36927*
	7/16	B	**1.020** [25.91]	321876
	1/2	B	**1.082** [27.49]	36929*
	M12	B	**1.020** [25.91]	321877*
		C	**1.270** [32.26]	1-322222-0
	5/8	C	**1.270** [32.26]	322222
	M16	B	**1.082** [27.49]	36930
	3/4	C	**1.270** [32.26]	322223
4/0 190,000-231,000 [96.3–117]	1/4 M6	B	**1.150** [29.21]	2-36932-2
	5/16 M8	B	**1.150** [29.21]	321271
	3/8	B	**1.150** [29.21]	36932
		B	**1.087** [27.61]	321878*
	7/16	B	**1.087** [27.61]	321879
	1/2	B	**1.087** [27.61]	321880*
	M12	B	**1.150** [29.21]	36934*
		B	**1.150** [29.21]	321163
	5/8	B	**1.150** [29.21]	36935
	M16	C	**1.275** [32.29]	322227
	3/4	C	**1.275** [32.29]	322228
	7/8 M22	C	**1.275** [32.29]	321625
250–300 MCM 231,000-300,000 [117–152]	3/8	B	**1.435** [36.45]	322252
	7/16	B	**1.435** [36.45]	322253
	1/2 M12	B	**1.435** [36.45]	322254
	5/8 M16	B	**1.435** [36.45]	323050
	3/4	B	**1.435** [36.45]	323140
	1	B	**1.435** [36.45]	323034
300–350 MCM 300,000–380,000 [152–193]	3/8	B	**1.545** [39.25]	322257
		B	**1.545** [39.25]	322763
	7/16	B	**1.545** [39.25]	322258
	1/2	B	**1.545** [39.25]	322259
	M12	B	**1.545** [39.25]	322764
	5/8	B	**1.545** [39.25]	324105
	3/4	B	**1.545** [39.25]	322428

*Part numbers are available in small quantity packages.

SOURCE: Catalog 65505

Specifications subject to change.
1-800-522-6752
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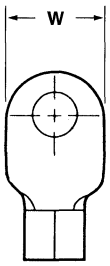
Ring Tongue Terminals, Uninsulated (Continued)

SOLISTRAND

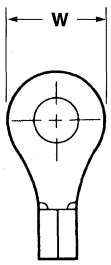


Style B

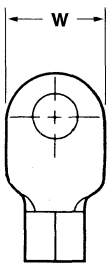
Wire Range Circular Mils [mm²]	Stud Size	Style	Dim. W	Part Numbers Loose Piece
400 MCM 380,000–478,000 [193–242]	3/8	B	**1.749** [44.43]	322262
	7/16	B	**1.749** [44.43]	322263
	1/2	B	**1.749** [44.43]	322264
	M12	B	**1.749** [44.43]	327882
	5/8 M16	B	**1.749** [44.43]	324202
	3/4	B	**1.749** [44.43]	323222
	1	B	**1.749** [44.43]	322939
500–600 MCM 478,000–600,000 [242–304]	3/8	B	**2.015** [51.19]	322267
		B	**2.015** [51.19]	322772
	1/2	B	**2.015** [51.19]	322269
	M12	B	**2.015** [51.19]	322773
	5/8 M16	B	**2.015** [51.19]	322270
	3/4	B	**2.015** [51.19]	322271
	1	B	**2.015** [51.19]	322273

Heavy Duty Ring Tongue Terminals, Uninsulated

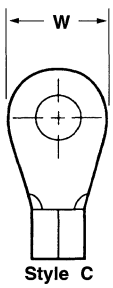
SOLISTRAND and Budget



Style A



Style B

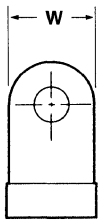


Style C

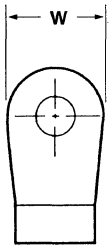
Wire Range Circular Mils [mm²]	Stud Size	Style	Dim. W	Part Numbers SOLISTRAND Loose Piece	SOLISTRAND Tape Mounted	Budget Loose Piece
16–14 2,050–5,180 [1.04–2.62]	4	A	**.281** [7.14]	—	—	33728
	6 M3.5	A	**.281** [7.14]	—	—	33729
		A	**.343** [8.72]	322833	—	33716
	8 M4	A	**.343** [8.72]	35432	—	33717
	10	A	**.343** [8.72]	34567*	2-34567-1	33718
		A	**.500** [12.70]	—	—	34967
		A	**.531** [13.49]	—	—	33646
	1/4 M6	A	**.500** [12.70]	35775*	2-35775-1	34968
		A	**.531** [13.49]	—	—	33195
	5/16 M8	A	**.500** [12.70]	35776	—	34969
		A	**.531** [13.49]	—	—	33647
	3/8	A	**.531** [13.49]	322832	—	33648
		A	**.750** [19.05]	327732	—	34829
	1/2 M12	A	**.750** [19.05]	321165*	—	34830
		A	**1.250** [31.75]	—	—	36199
	5/8 M16	A	**1.250** [31.75]	320758	—	36200
	3/4	A	**1.250** [31.75]	320759	—	36201
8 13,100–20,800 [6.64–10.5]	10	C	**.587** [14.91]	331414	—	—
	1/4 M6	C	**.500** [12.70]	330968	—	—
		C	**.468** [11.89]	332042	—	—
	5/16 M8	C	**.587** [14.91]	1-331414-1	—	—
6 20,800–33,100 [10.5–16.8]	10	B	**.500** [12.70]	2-330969-1	—	—
	1/4 M6	B	**.500** [12.70]	330969	—	—
		C	**.625** [15.88]	331417	—	—
	3/8	C	**.625** [15.88]	1-331417-1	—	—
4 33,100–52,600 [16.8–26.7]	1/4 M6	B	**.500** [12.70]	330970	—	—
		C	**.679** [17.25]	331420	—	—
	5/16 M8	C	**.679** [17.25]	1-331420-0	—	—
	3/8	C	**.679** [17.25]	1-331420-1	—	—
2 52,600–83,700 [26.7–42.2]	3/8	C	**.855** [21.72]	1-331423-0	—	—
	1/2 M12	C	**.855** [21.72]	1-331423-1	—	—
1/0 83,700–119,500 [42.2–60.6]	3/8	B	**.822** [20.88]	1-331880-0	—	—
	1/2 M12	B	**.822** [20.88]	1-331880-1	—	—

*Part numbers are available in small quantity packages.

Flag Ring Tongue Terminals, Uninsulated
SOLISTRAND



Style A



Style B

Wire Range Circular Mils [mm²]	Stud Size	Style	Dim. W	Part Numbers Loose Piece
16–14 2,050–5,180 [1.04–2.62]	8 M4	A	**.312** [7.93]	325069
	10	A	**.312** [7.93]	322819
12–10 5,180–13,100 [2.62–6.64]	6 M3.5	A	**.375** [9.53]	36269
	8 M4	A	**.375** [9.53]	36270
	10	A	**.375** [9.53]	36271*
	1/4 M6	A	**.375** [9.53]	36272
8 13,100–20,800 [6.64–10.5]	10	B	**.500** [12.70]	321051
		B	**.500** [12.70]	321441
	1/4 M6	B	**.609** [15.47]	322727
6 20,800–33,100 [10.5–16.8]	10	A	**.500** [12.70]	323196
	1/4 M6	A	**.500** [12.70]	321576
	5/16 M8	B	**.625** [15.88]	321056
	3/8	B	**.625** [15.88]	322204
4 33,100–52,600 [16.8–26.7]	10	A	**.546** [13.87]	321059
	1/4 M6	A	**.546** [13.87]	321275
	5/16 M8	B	**.682** [17.33]	321060
	3/8	B	**.682** [17.33]	321121
2 52,600–83,700 [26.7–42.4]	10	B	**.713** [18.11]	321063
	1/4 M6	B	**.713** [18.11]	321201
	5/16 M8	B	**.713** [18.11]	321064
	3/8	B	**.713** [18.11]	321253
1/0 83,700–119,500 [42.4–60.6]	1/4 M6	A	**.875** [22.23]	322215
	5/16 M8	A	**.875** [22.23]	321580
	3/8	A	**.875** [22.23]	321066
	1/2 M12	A	**.875** [22.23]	321123
2/0 119,500–150,500 [60.6–76.3]	5/16 M8	A	**.920** [23.37]	321582
	3/8	A	**.920** [23.37]	321584
4/0 190,000-231,000 [96.3–117]	5/16 M8	A	**1.115** [28.23]	321277
	3/8	A	**1.115** [28.23]	321277-1
	1/2 M12	A	**1.115** [28.23]	321259

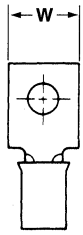
*Part numbers are available in small quantity packages.

SOURCE: Catalog 65505

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

Rectangular Tongue Terminals, Insulated

PIDG

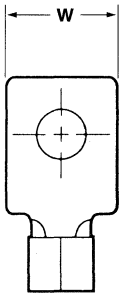


Wire Range Circular Mils [mm²]	Stud Size	Terminal Insulation Color	Dim. W	Wire Insulation Diameter Max.	Part Numbers	
					Loose Piece	Tape Mounted
22-16 509-3,260 [0.26-1.65]	4	Red	**.237** [6.02]	**.140** [3.56]	327962	—
		Red	**.237** [6.02]	**.140** [3.56]	2-327968-1	—
	5/M3	Red	**.277** [7.04]	**.140** [3.56]	2-327950-1	—
	6/M3.5	Red	**.237** [6.02]	**.140** [3.56]	2-327956-1	2-327956-2
		Red	**.250** [6.35]	**.125** [3.18]	320629	2-320629-1
		Red	**.250** [6.35]	**.140** [3.56]	33476	2-33476-1
	8/M4	Red	**.302** [7.67]	**.140** [3.56]	327944	2-327944-2
	10	Red	**.312** [7.93]	**.140** [3.56]	320209	—
16-14 2,050-5,180 [1.04-2.62]	6/M3.5	Blue	**.244** [6.20]	**.170** [4.32]	33173	—
		Blue	**.237** [6.02]	**.170** [4.32]	2-327958-1	—
	8/M4	Blue	**.296** [7.52]	**.170** [4.32]	321283	—
12-10 5,180-13,100 [2.62-6.64]	6/M3.5	Yellow	**.290** [7.37]	**.230** [5.84]	34512	—
		Yellow	**.237** [6.02]	**.230** [5.84]	2-327960-2	2-327960-2

SOURCE: Catalog 82042

Rectangular Tongue Terminals, Uninsulated

SOLISTRAND and Budget

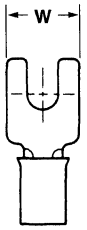


Wire Range Circular Mils [mm²]	Stud Size	Dim. W	Part Numbers		
			SOLISTRAND		Budget
			Loose Piece	Tape Mounted	Loose Piece
22-16 509–3,260 [0.26–1.65]	2 M2	**.182** [4.63]	—	—	320870
	4	**.213** [5.41]	—	—	32579
		.237 [6.02]	328363	—	328349
		.182 [4.63]	323119	—	322408
	6 M3.5	**.237** [6.02]	—	—	327955
		.302 [7.67]	328353	—	328339
		.312 [7.93]	323112	—	321691
	8 M4	**.302** [7.67]	328355	—	328341
	10	**.312** [7.93]	330539	—	—
		.375 [9.53]	323106	2-323106-1	34525
		.344 [8.74]	34459	—	31821
16–14 2,050–5,180 [1.04–2.62]	4	**.215** [5.47]	—	—	31691
	5 M3	**.277** [7.04]	—	—	327951
	6 M5	**.250** [6.35]	320815	—	320814
		.296 [7.52]	34266	2-34266-1	31813
	8 M4	**.244** [6.20]	—	—	35278
		.302 [7.67]	328356	—	328342
	10	**.312** [7.93]	320819	—	320818
	12	**.375** [9.53]	—	—	320820
12–10 5,180–13,100 [2.62–6.64]	4	**.237** [6.02]	328050	—	327971
	5 M3	**.277** [7.04]	—	—	327953
	6 M3.5	**.290** [7.37]	321499	2-321499-1	33426
		.237 [6.02]	—	—	327959
		.296 [7.52]	322946	—	322945
	8 M4	**.302** [7.67]	—	—	331269
	10	**.312** [7.93]	321558	—	321557
	1/4 M6	**.469** [11.92]	320823	—	320822

SOURCE: Catalog 65505

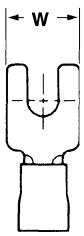
Spade Tongue Terminals, Insulated

PIDG



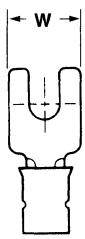
Wire Range Circular Mils [mm²]	Stud Size	Terminal Insulation Color	Dim. W	Wire Insulation Diameter Max.	Part Numbers	
					Loose Piece	Tape Mounted
26-22 202-810 [0.1-0.41]	4	Yellow	**.203** [5.16]	**.082** [2.08]	321035	2-321035-1
22-16 509-3,260 [0.26-1.65]	2/M2	Red	**.182** [4.63]	**.140** [3.56]	328394	2-328394-1
	4	Red	**.218** [5.54]	**.140** [3.56]	327717	—
	6/M3.5	Red	**.344** [8.74]	**.125** [3.18]	32403	—
		Red	**.297** [7.55]	**.125** [3.18]	34080	2-34080-1
		Red	**.297** [7.55]	**.140** [3.56]	326861	2-326861-1
		Red	**.250** [6.35]	**.140** [3.56]	34541	2-34541-1
	8/M4	Red	**.375** [9.53]	**.125** [3.18]	32050	2-32050-1
		Red	**.375** [9.53]	**.140** [3.56]	32053	2-32053-1
	10	Red	**.375** [9.53]	**.125** [3.18]	32051	2-32051-1
		Red	**.375** [9.53]	**.140** [3.56]	32054	2-32054-1
16-14 2,050-5,180 [1.04-2.62]	6/M3.5	Blue	**.375** [9.53]	**.170** [4.32]	32058	—
		Blue	**.297** [7.55]	**.170** [4.32]	35559	2-35559-1
		Blue	**.244** [6.20]	**.170** [4.32]	328281	1-328281-1
	8/M4	Blue	**.375** [9.53]	**.150** [3.81]	32056	2-32056-1
		Blue	**.297** [7.55]	**.170** [4.32]	321233	2-321233-1
	10	Blue	**.375** [9.53]	**.170** [4.32]	32060	2-32060-1
12-10 5,180-13,100 [2.62-6.64]	6/M3.5	Yellow	**.290** [7.37]	**.230** [5.84]	322985	1-322985-0
		Yellow	**.312** [7.93]	**.230** [5.84]	326859	2-326859-1
	8/M4	Yellow	**.406** [10.32]	**.230** [5.84]	32588	2-32588-1
		Yellow	**.406** [10.32]	**.250** [6.35]	35152	2-35152-1
	10	Yellow	**.406** [10.32]	**.230** [5.84]	32589	2-32589-1

PLASTI-GRIP



Wire Range Circular Mils [mm²]	Stud Size	Terminal Insulation Color	Dim. W	Wire Insulation Diameter Max.	Part Numbers	
					Loose Piece	Tape Mounted
22-16 509-3,260 [0.26-1.65]	6/M3.5	Red	**.297** [7.55]	**.125** [3.18]	327735	2-327735-1
		Red	**.297** [7.55]	**.140** [3.56]	320665	2-320665-1
		Red	**.250** [6.35]	**.140** [3.56]	327043	2-327043-1
	8/M4	Red	**.375** [9.53]	**.125** [3.18]	32981	2-32981-1
		Red	**.375** [9.53]	**.140** [3.56]	34155	2-34155-1
	10	Red	**.375** [9.53]	**.140** [3.56]	34156	2-34156-1
16-14 2,050-5,180 [1.04-2.62]	6/M3.5	Blue	**.297** [7.55]	**.140** [3.56]	322994	2-322994-1
	8/M4	Blue	**.375** [9.53]	**.170** [4.32]	34166	2-34166-1
	10	Blue	**.375** [9.53]	**.170** [4.32]	34167	2-34167-1
12-10 5,180-13,100 [2.62-6.64]	10	Yellow	**.406** [10.32]	**.230** [5.84]	34176	.2-34176-1

DIAMOND GRIP

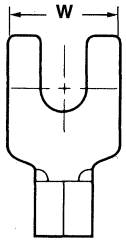


Wire Range Circular Mils [mm²]	Stud Size	Dim. W	Wire Insulation Diameter Max.	Part Numbers
				Loose Piece
22-16 509-3,260 [.026-1.65]	6/M3.5	**.297** [7.55]	**.140** [3.56]	33799
	10	**.343** [8.72]	**.125** [3.18]	320379

SOURCE: Catalog 82042

Spade Tongue Terminals, Uninsulated
(Continued)

SOLISTRAND and Budget



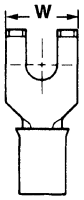
Wire Range Circular Mils [mm²]	Stud Size	Dim. W	Part Numbers		
			SOLISTRAND		Budget
			Loose Piece	Tape Mounted	Loose Piece
26–22 202–810 [0.1–0.41]	0	**.125** [3.18]	—	—	32501
	4	**.203** [5.16]	—	—	34247
22–16 509–3,260 [0.26–1.65]	2 M2	**.182** [4.63]	53555-1*	53555-2	328395
	4	**.218** [5.54]	321463	2–321463-1	323834
	6 M3.5	**.375** [9.53]	—	—	31634
		.297 [7.55]	36195*	2–36195-3	33765
		.250 [6.35]	323127*	—	34518
	8 M4	**.375** [9.53]	34117*	2-34117-2	31635
		.343 [8.72]	—	—	323823
	10	**.344** [8.74]	34583	—	34582
		.375 [9.53]	34118*	2-34118-2	31636
16–14 2,050–5,180 [1.04–2.62]	6 M3.5	**.385** [9.78]	—	—	31704
		.297 [7.55]	322996*	2-322996-1	33202
		.244 [6.20]	330827	—	33221
	8 M4	**.385** [9.78]	34128*	—	31705
		.297 [7.55]	36880	2-36880-1	35116
	10	**.385** [9.78]	33219*	—	31442
		.385 [9.78]	34129*	—	31706
		.344 [8.74]	324521	—	—
12–10 5,180–13,100 [2.62–6.64]	6 M3.5	**.406** [10.32]	—	—	31587
		.282 [7.17]	322451*	—	34384
		.312 [7.93]	—	—	35493
	8 M4	**.312** [7.93]	325196	—	325195
		.406 [10.32]	32995*	—	31588
	10	**.406** [10.32]	33479*	2-33479-1	31589
		.375 [9.53]	35495*	2-35495-2	35494

*Part numbers are available in small quantity packages.

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

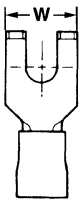
Flanged Spade Tongue Terminals, Insulated

PIDG



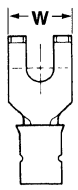
Wire Range Circular Mils [mm²]	Stud Size	Terminal Insulation Color	Dim. W	Wire Insulation Diameter Max.	Part Numbers	
					Loose Piece	Tape Mounted
26-22 202-810 [0.1-0.41]	2/M2	Yellow	**.182** [4.63]	**.082** [2.08]	324597	2-324597-1
	4	Yellow	**.196** [4.98]	**.082** [2.08]	52369	—
	6/M3.5	Yellow	**.250** [6.35]	**.082** [2.08]	51874	51874-1
22-16 509-3,260 [0.26-1.65]	2/M2	Red	**.182** [4.63]	**.125** [3.18]	2-324608-2	—
		Red	**.182** [4.63]	**.140** [3.56]	324608	2-324608-1
	6/M3.5	Red	**.328** [8.33]	**.140** [3.56]	324557	—
		Red	**.296** [7.52]	**.125** [3.18]	32561	2-32561-1
		Red	**.296** [7.52]	**.140** [3.56]	32562	2-32562-1
		Red	**.250** [6.35]	**.125** [3.18]	322777	2-322777-1
	8/M4	Red	**.416** [10.57]	**.125** [3.18]	32497	2-32497-1
		Red	**.416** [10.57]	**.140** [3.56]	32498	2-32498-1
16-14 2,050-5,180 [1.04-2.62]	6/M3.5	Blue	**.294** [7.47]	**.150** [3.81]	2-320861-2	2-320861-3
		Blue	**.294** [7.47]	**.170** [4.32]	320861	2-320861-1
		Blue	**.328** [8.33]	**.170** [4.32]	324567	—
	8/M4	Blue	**.416** [10.57]	**.150** [3.81]	33155	2-33155-1
		Blue	**.294** [7.47]	**.170** [4.32]	320862	2-320862-1
	10	Blue	**.294** [7.47]	**.170** [4.32]	320863	2-320863-2
12-10 5,180-13,100 [2.62-6.64]	6/M3.5	Yellow	**.296** [7.52]	**.250** [6.35]	325150	—
		Yellow	**.328** [8.33]	**.230** [5.84]	324587	—
	8/M4	Yellow	**.416** [10.57]	**.230** [5.84]	32510	2-32510-1
	10	Yellow	**.416** [10.57]	**.250** [6.35]	324015	2-324015-1

PLASTI-GRIP



Wire Range Circular Mils [mm²]	Stud Size	Terminal Insulation Color	Dim. W	Wire Insulation Diameter Max.	Part Numbers	
					Loose Piece	Tape Mounted
22-16 509-3,260 [0.26-1.65]	6/M3.5	Red	**.328** [8.33]	**.140** [3.56]	324560	2-324560-1
		Red	**.296** [7.52]	**.140** [3.56]	322249	1-322249-1
	8/M4	Red	**.416** [10.57]	**.140** [3.56]	324169	2-324169-1
		Red	**.296** [7.52]	**.140** [3.56]	1-322249-0	1-322249-9
	10	Red	**.296** [7.52]	**.140** [3.56]	328516	2-328516-1
16-14 2,050-5,180 [1.04-2.62]	6/M3.5	Blue	**.294** [7.47]	**.170** [4.32]	324165	2-324165-1
12-10 5,180-13,100 [2.62-6.64]	6/M3.5	Yellow	**.296** [7.52]	**.230** [5.84]	324581	1-324581-1
	8/M4	Yellow	**.416** [10.57]	**.230** [5.84]	324172	1-324172-0

DIAMOND GRIP



Wire Range Circular Mils [mm²]	Stud Size	Dim. W	Wire Insulation Diameter Max.	Part Numbers
				Loose Piece
26-22 202-810 [0.1-0.41]	2/M2	**.182** [4.63]	**.082** [2.08]	324598
22-16 509-3,260 [0.26-1.65]	6/M3.5	**.296** [7.52]	**.125** [3.18]	32419

SOURCE: Catalog 82042

Specifications subject to change.
1-800-522-6752
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1-800-722-1111
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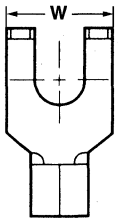
Flanged Spade Tongue Terminals, Uninsulated
(Continued)

SOLISTRAND and Budget



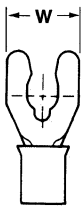
Wire Range Circular Mils [mm²]	Stud Size	Dim. W	Part Numbers		
			SOLISTRAND		Budget
			Loose Piece	Tape Mounted	Loose Piece
26–22 202–810 [0.1–0.41]	2 M2	**.182** [4.63]	—	—	324599
	4	**.193** [4.91]	—	—	52512-1
	6 M3.5	**.250** [6.35]	—	—	51875-1
22–16 509–3,260 [0.26–1.65]	2 M2	**.182** [4.63]	324605*	—	324604
	6 M3.5	**.296** [7.52]	320749*	2-320749-2	32418
		.250 [6.35]	323136*	2-323136-1	322776
	8 M4	**.416** [10.57]	323124*	—	32494
		.296 [7.52]	52730*	52730-1	1-32418-2 1-32418-4
	10	**.296** [7.52]	—	—	328522
16–14 2,050–5,180 [1.04–2.62]	6 M3.5	**.294** [7.47]	320855*	2-320855-1	320852
	8 M4	**.294** [7.47]	320856*	2-320856-1	320853
	10	**.294** [7.47]	320857*	2-320857-1	320854
	6 M3.5	**.296** [7.52]	324578	1-324578-0	324579
12-10 5,180–13,100 [2.62–6.64]	8 M4	**.416** [10.57]	323143	—	32416
	10	**.416** [10.57]	323144	2-323144-1	322725

*Part numbers are available in small quantity packages.

SOURCE: Catalog 65505

Short Spring Spade Tongue Terminals, Insulated

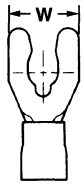
PIDG



Wire Range Circular Mils [mm²]	Stud Size	Terminal Insulation Color	Dim. W	Wire Insulation Diameter Max.	Part Numbers	
					Loose Piece	Tape Mounted
26-22 202-810 [0.1-0.41]	2/M2	Yellow	**.171** [4.35]	**.082** [2.08]	52921	52921-1
	4	Yellow	**.203** [5.16]	**.082** [2.08]	52922	52922-1
	5/M3	Yellow	**.250** [6.35]	**.082** [2.08]	52923	52923-1
	6/M3.5	Yellow	**.250** [6.35]	**.082** [2.08]	52924	52924-1
	8/M4	Yellow	**.375** [9.53]	**.082** [2.08]	52925	52925-1
22-16 509-3,260 [0.26-1.65]	4	Red	**.203** [5.16]	**.125** [3.18]	52927	52927-1
	5/M3	Red	**.250** [6.35]	**.125** [3.18]	52928	52928-1
	6/M3.5	Red	**.250** [6.35]	**.125** [3.18]	52929	52929-1
	8/M4	Red	**.375** [9.53]	**.125** [3.18]	52930	52930-1
	10	Red	**.406** [10.32]	**.125** [3.18]	52931	52931-1
16-14 2,050-5,180 [1.04-2.62]	5/M3	Blue	**.250** [6.35]	**.170** [4.32]	52934	52934-1
	6/M3.5	Blue	**.250** [6.35]	**.170** [4.32]	52935	52935-1
		Blue	**.250** [6.35]	**.182** [4.62]	52935-2	52935-3
	8/M4	Blue	**.375** [9.53]	**.170** [4.32]	52936	52936-1
		Blue	**.375** [9.53]	**.182** [4.62]	52936-2	52936-3
	10	Blue	**.406** [10.32]	**.170** [4.32]	52937	52937-1
		Blue	**.406** [10.32]	**.182** [4.62]	52937-2	52937-3
12-10 5,180-13,100 [2.62-6.64]	5/M3	Yellow	**.250** [6.35]	**.250** [6.35]	52940	52940-1
	6/M3.5	Yellow	**.250** [6.35]	**.250** [6.35]	52941	52941-1
	8/M4	Yellow	**.375** [9.53]	**.250** [6.35]	52942	52942-1
	10	Yellow	**.406** [10.32]	**.250** [6.35]	52943	52943-1
	1/4 / M6	Yellow	**.625** [15.88]	**.250** [6.35]	52945	—

SOURCE: Catalog 82042

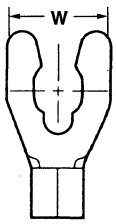
Short Spring Spade Tongue Terminals, Insulated
(Continued)
PLASTI-GRIP



Wire Range Circular Mils [mm²]	Stud Size	Terminal Insulation Color	Dim. W	Wire Insulation Diameter Max.	Part Numbers	
					Loose Piece	Tape Mounted
22-16 509-3,260 [0.26-1.65]	4	Red	**.203** [5.16]	**.140** [3.56]	52947	52947-1
	5/M3	Red	**.250** [6.35]	**.140** [3.56]	52948	52948-1
	6/M3.5	Red	**.250** [6.35]	**.140** [3.56]	52949	52949-1
		Red	**.234** [5.94]	**.140** [3.56]	53240-1	53240-2
	8/M4	Red	**.375** [9.53]	**.140** [3,56]	52950	52950-1
		Red	**.244** [6.20]	**.140** [3.56]	53241-1	53241-2
	10	Red	**.406** [10.32]	**.140** [3.56]	52951	52951-1
		Red	**.294** [7.47]	**.140** [3.56]	53242-1	53242-2
16-14 2,050-5,180 [1.04-2.62]	6/M3.5	Blue	**.250** [6.35]	**.170** [4.32]	52955	52955-1
		Blue	**.250** [6.35]	**.250** [6.35]	52955-2	52955-3
	8/M4	Blue	**.375** [9.53]	**.170** [4.32]	52956	52956-1
		Blue	**.375** [9.53]	**.250** [6.35]	52956-2	52956-3
		Blue	**.244** [6.20]	**.170** [4.32]	53244-1	53244-2
	10	Blue	**.406** [10.32]	**.170** [4.32]	52957	52957-1
		Blue	**.406** [10.32]	**.250** [6.35]	52957-2	52957-3
		Blue	**.294** [7.47]	**.170** [4.32]	53245-1	53245-2
12-10 5,180-13,100 [2.62-6.64]	6/M3.5	Yellow	**.250** [6.35]	**.200** [5.08]	52961	52961-1
		Yellow	**.250** [6.35]	**.250** [6.35]	53246-1	—
	8/M4	Yellow	**.375** [9.53]	**.200** [5.08]	52962	52962-1
		Yellow	**.375** [9.53]	**.300** [7.62]	52962-2	52962-3
	10	Yellow	**.406** [10.32]	**.200** [5.08]	52963	52963-1

SOURCE: Catalog 82042

Short Spring Spade Tongue Terminals, Uninsulated
SOLISTRAND and Budget



Wire Size Circular Mils [mm²]	Stud Size	Dim. W	Part Numbers		
			SOLISTRAND		Budget
			Loose Piece	Tape Mounted	Loose Piece
26–22 202–810 [0.1–0.41]	2/M2	**.171** [4.35]	—	—	53000-1
	4	**.203** [5.16]	—	—	53001-1
	5/M3	**.250** [6.35]	—	—	53002-1
	6/M3.5	**.250** [6.35]	—	—	53003-1
	8/M4	**.375** [9.53]	—	—	53004-1
22–16 509–3,260 [0.26–1.65]	4	**.203** [5.16]	53175-1*	—	53150-2
	5/M3	**.250** [6.35]	—	—	53005-1
	6 M3.5	**.250** [6.35]	53120-1	53120-2	53006-1
		.234 [5.94]	53830-1	53830-2	53266-2
	8 M4	**.375** [9.53]	53121-1	—	53007-1
		.244 [6.20]	53831-1*	53831-2	53267-2
	10	**.294** [7.47]	53832-1	53832-2	53268-2
	1/4-28 UNF M6	**.625** [15.88]	—	—	53235-2
16–14 2,050–5,180 [1.04–2.62]	5/M3	**.250** [6.35]	53177-1	—	53009-1
	6/M3.5	**.250** [6.35]	53123-1*	53123-2	53010-1
	8 M4	**.375** [9.53]	53124-1*	53124-2	53011-1
		.244 [6.20]	53833-1	53833-2	53270-2
	10	**.406** [10.32]	53125-1*	53125-2	53012-1
		.294 [7.47]	53834-1	53834-2	53271-2
	1/4-28 UNF M6	**.625** [15.88]	—	—	53032-1
12–10 5,180–13,100 [2.62–6.64]	5/M3	**.250** [6.35]	—	—	53013-1
	6/M3.5	**.250** [6.35]	53126-1*	53126-2	53014-1
	8 M4	**.375** [9.53]	53127-1*	53127-2	53015-1
		.312 [7.92]	53835-1	53835-2	53273-2
	10	**.406** [10.32]	53128-1*	53128-2	53016-1
		.312 [7.92]	53836-1	53836-2	53274-2
	1/4-28 UNF M6	**.375** [9.53]	—	—	53226-2

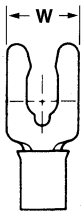
*Part numbers are available in small quantity packages.

SOURCE: Catalog 65505

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

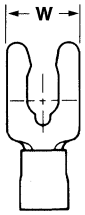
Long Spring Spade Tongue Terminals, Insulated

PIDG



Wire Range Circular Mils [mm²]	Stud Size	Terminal Insulation Color	Dim. W	Wire Insulation Diameter Max.	Part Numbers	
					Loose Piece	Tape Mounted
22-16 509-3,260 [0.26-1.65]	6/M3.5	Red	**.250** [6.35]	**.125** [3.18]	52409	52409-1
	8/M4	Red	**.281** [7.14]	**.125** [3.18]	52410	52410-1
	10	Red	**.343** [8.72]	**.125** [3.18]	52411	52411-1
16-14 2,050-5,180 [1.04-2.62]	6/M3.5	Blue	**.250** [6.35]	**.150** [3.81]	52420	52420-2
		Blue	**.250** [6.35]	**.170** [4.32]	52420-1	52420-3
	8/M4	Blue	**.281** [7.14]	**.150** [3.81]	52421	—
		Blue	**.281** [7.14]	**.170** [4.32]	52421-1	52421-3
	10	Blue	**.343** [8.72]	**.170** [4.32]	52422-1	52422-3

PLASTI-GRIP

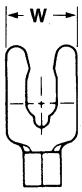


Wire Range Circular Mils [mm²]	Stud Size	Terminal Insulation Color	Dim. W	Wire Insulation Diameter Max.	Part Numbers	
					Loose Piece	Tape Mounted
22-16 509-3,260 [0.26-1.65]	6/M3.5	Red	**.250** [6.35]	**.140** [3.56]	52453	52453-1
	8/M4	Red	**.281** [7.14]	**.140** [3.56]	52454	52454-1
	10	Red	**.343** [8.72]	**.140** [3.56]	52455	52455-1
16-14 2,050-5,180 [1.04-2.62]	6/M3.5	Blue	**.250** [6.35]	**.170** [4.32]	52463	52463-1
	8/M4	Blue	**.281** [7.14]	**.170** [4.32]	52464	52464-1
	10	Blue	**.343** [8.72]	**.170** [4.32]	52465	52465-1

SOURCE: Catalog 82042

Long Spring Spade Tongue Terminals, Uninsulated

SOLISTRAND and Budget



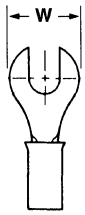
Wire Range Circular Mils [mm²]	Stud Size	Dim. W	Part Numbers			
			SOLISTRAND		Budget	
			Loose Piece	Tape Mounted	Loose Piece	Tape Mounted
26–22 202–810 [0.1–0.41]	4	**.203** [5.16]	—	—	52733-1	—
	6 M3.5	**.250** [6.35]	—	—	52734-1	—
	8 M4	**.281** [7.14]	—	—	52735-1	—
22–16 509–3,260 [0.26–1.65]	4	**.203** [5.16]	—	—	53047	—
	6 M3.5	**.250** [6.35]	52709-1	—	52700-1	—
	8 M4	**.281** [7.14]	52710-1*	52710-2	52701-1	—
	10	**.343** [8.72]	—	—	52702-1	—
	1/4-28 UNF M6	**.437** [11.10]	—	—	53111-2	—
16–14 2,050–5,180 [1.04–2.62]	6 M3.5	**.250** [6.35]	52712-1*	—	52703-1	—
	8 M4	**.281** [7.14]	52713-1*	52713-2	52704-1	52704-3
	10	**.343** [8.72]	52714-1*	—	52705-1	—
	1/4-28 UNF M6	**.437** [11.10]	—	—	53033-1	—
12–10 5,180–13,100 [2.62–6.64]	6 M3.5	**.312** [7.93]	52715-1	—	52706-1	—
	8 M4	**.375** [9.53]	52716-1	52716-2	52707-1	52707-3
	10	**.375** [9.53]	52717-1	52717-2	52708-1	—
	1/4-28 UNF M6	**.437** [11.10]	—	—	52772-1	—

*Part numbers are available in small quantity packages.

SOURCE: Catalog 65505

Slotted Ring Tongue Terminals, Insulated

PIDG

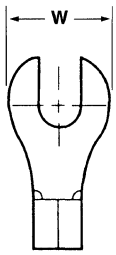


Wire Range Circular Mils [mm²]	Stud Size	Terminal Insulation Color	Dim. W	Wire Insulation Diameter Max.	Part Numbers	
					Loose Piece	Tape Mounted
26-22 202-810 [0.1-0.41]	6/M3.5	Yellow	**.250** [6.35]	**.082** [2.08]	323011	2-323011-2
22-16 509-3,260 [0.26-1.65]	6/M3.5	Red	**.312** [7.93]	**.140** [3.56]	35216	2-35216-1
	8/M4	Red	**.281** [7.14]	**.140** [3.56]	36954	2-36954-2
	1/4 / M6	Red	**.469** [11.92]	**.125** [3.18]	321808	—

SOURCE: Catalog 82042

Slotted Ring Tongue Terminals, Uninsulated

SOLISTRAND and Budget



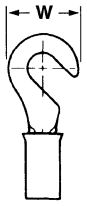
Wire Range Circular Mils [mm²]	Stud Size	Dim. W	Part Numbers		
			SOLISTRAND		Budget
			Loose Piece	Tape Mounted	Loose Piece
26–22 202–810 [0.1–0.41]	6 M3.5	**.250** [6.35]	—	—	322211
22–16 509–3,260 [0.26–1.65]	4	**.182** [4.63]	321288*	—	323838
	6 M3.5	**.218** [5.54]	321289	2-321289-1	323835
	8/M4	**.281** [7.14]	323129	—	36953
	10	**.312** [7.93]	—	—	323832
	1/4 / M6	**.469** [11.92]	321809	2-321809-1	323837
16–14 2,050–5,180 [1.04–2.62]	6 M3.5	**.250** [6.35]	322514	—	35555
	8/M4	**.344** [8.74]	—	—	34520
	10	**.343** [8.72]	—	—	328872
	1/4 M6	**.469** [11.92]	—	—	36216
12–10 5,180–13,100 [2.62–6.64]	1/4 M6	**.531** [13.49]	35680*	—	55812-2

*Part numbers are available in small quantity packages.

SOURCE: Catalog 65505

Hook Tongue Terminals, Insulated

PIDG

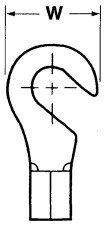


Wire Range Circular Mils [mm²]	Stud Size	Terminal Insulation Color	Dim. W	Wire Insulation Diameter Max.	Part Numbers	
					Loose Piece	Tape Mounted
22-16 509-3,260 [0.26-1.65]	6/M3.5	Red	**.281** [7.14]	**.140** [3.56]	34313	—
	8/M4	Red	**.343** [8.72]	**.140** [3.56]	32456	—
16-14 2,050-5,180 [1.04-2.62]	6/M3.5	Blue	**.343** [8.72]	**.150** [3.81]	320381	2-320381-1
	8/M4	Blue	**.343** [8.72]	**.170** [4.32]	320306	2-320306-1

SOURCE: Catalog 82042

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

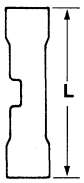
Hook Tongue Terminals, Uninsulated
(Continued)
SOLISTRAND and Budget



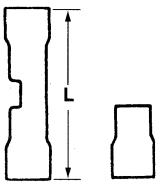
Wire Range Circular Mils [mm²]	Stud Size	Dim. W	Part Numbers		
			SOLISTRAND		Budget
			Loose Piece	Tape Mounted	Loose Piece
22–16 509–3,260 [0.26–1.65]	6 M3.5	**.281** [7.14]	—	—	34261
	8 M4	**.343** [8.72]	—	—	31628
16–14 2,050–5,180 [1.04–2.62]	6 M3.5	**.343** [8.72]	—	—	35212
	8 M4	**.343** [8.72]	—	—	32503
	10	**.343** [8.72]	—	—	33437
12–10 5,180–13,100 [2.62–6.64]	10	**.375** [9.53]	324209	2-324209-1	327902
	1/4 M6	**.531** [13.49]	321632	2-321632-1	327905

SOURCE: Catalog 65505

Butt Splices, Insulated
PIDG



Standard and Radiation Resistant



Step Down Assembly[1]

Wire Range Circular Mils[4] [mm²]	Style	Splice Insulation Color	Dim. L	Wire Insulation Diameter Max.	Part Numbers	
					Loose Piece	Tape Mounted
26-22[2] 202-810 [0.10-0.41]	Standard	Yellow	**.890** [22.61]	**.082** [2.08]	323994	2-323994-1
24-20 320-1,290 [0.16-0.65]		Trans.	**1.035** [26.29]	**.100** [2.54]	323975	2-323975-3
22-16[3] 509-3,260 [0.26-1.65]		Red	**1.265** [32.14]	**.125** [3.18]	320559	2-320559-4
16-14 2,050-5,180 [1.04-2.62]		Blue	**1.265** [32.14]	**.150** [3.81]	320562	2-320562-3
12-10 5,180-13,100 [2.62-6.64]		Yellow	**1.656** [42.07]	**.220** [5.59]	320570	—
16-14 to 22-16 2,050-5,180 to 509-3,260 [1.04-2.62 to 0.26-1.65]	Step Down Assembly	Blue	**1.265** [32.14]	**.150-.115** [3.81-2.92]	327583	—
12-10 to 16-14 5,180-13,100 to 2,050-5,180 [2.62-6.64 to 1.04-2.62]		Yellow	**1.656** [42.07]	**.220-.170** [5.59-4.32]	327638	—
12-10 to 22-16 5,180-13,100 to 509-3,260 [2.62-6.64 to 0.26-1.65]		Yellow	**1.656** [42.07]	**.220-.140** [5.59-3.56]	327639	—
26-22 202-810 [0.10-0.41]	Radiation Resistant	Yellow Stripe	**.859** [21.82]	**.082** [2.08]	53546-1	—
24-20 320-1,290 [0.16-0.65]		White Stripe	**.968** [24.59]	**.100** [2.54]	53547-1	53547-2
22-16 509-3,260 [0.26-1.65]		Red Stripe	**1.265** [32.14]	**.125** [3.18]	53548-1	53548-2
16-14 2,050-5,180 [1.04-2.62]		Blue Stripe	**1.265** [32.14]	**.150** [3.81]	53549-1	—
12-10 5,180-13,100 [2.62-6.64]		Yellow Stripe	**1.656** [42.07]	**.220** [5.59]	53550-1	—

[1] Includes adapter insert
[2] 26-22 splices are 26-24 range in accordance with MIL-T-7928.
[3] 22-16 splices are 22-18 range in accordance with MIL-T-7928.
[4] When using two or more wires in either end of a butt splice, the combined cross sectional area must be within the circular mil area (CMA) range listed.

SOURCE: Catalog 82042

Butt Splice Step Down Adapter Inserts[1]

PIDG

Step Down Adapter Insert

Butt Splice		Adapter Insert	
Wire Range Circular Mils [mm²]	Part Numbers	Wire Range Circular Mils [mm²]	Part Numbers
16-14 2,050-5,180 [1.04-2.62]	320562	22-16 509-3,260 [0.26-1.65]	327635
12-10 5,180-13,100 [2.62-6.64]	320570	16-14 2,050-5,180 [1.04-2.62]	327637
12-10 5,180-13,100 [2.62-6.64]	320570	22-16 509-3,260 [0.26-1.65]	327636

[1]Adapter inserts can be ordered separately for use in specific Standard PIDG Butt Splices; see chart on page 1034.

Butt Splices, Insulated

PLASTI-GRIP

Wire Range Circular Mils[3] [mm²]	Splice Insulation Color	Dim. L	Wire Insulation Diameter Max.	Part Numbers	
				Loose Piece	Tape Mounted
26-22[1] 202-810 [0.10-0.41]	Yellow	**.620** [15.75]	**.080** [2.03]	321026	2-321026-1
22-16[2] 509-3,260 [0.26-1.65]	Red	**1.065** [27.06]	**.125** [3.18]	34067	2-34067-1
	Red	**1.065** [27.06]	**.140** [3.56]	34070	1-34070-1
	Red	**1.065** [27.06]	**.170** [4.32]	34243	1-34243-1
	Red	**1.065** [27.06]	**.083 x .171** [2.11 x 4.34]	34203[4]	—
16-14 2,050-5,180 [1.04-2.62]	Blue	**1.065** [27.06]	**.140** [3.56]	34068	—
	Blue	**1.065** [27.06]	**.170** [4.32]	34071	2-34071-1
	Blue	**1.065** [27.06]	**.215** [5.46]	35244	—
	Blue	**1.065** [27.06]	**.135 x .245** [3.43 x 6.22]	34204[4]	—
12-10 5,180-13,100 [2.62-6.64]	Yellow	**1.160** [29.47]	**.200** [5.08]	34069	—
	Yellow	**1.160** [29.47]	**.230** [5.84]	34072	—
	Yellow	**1.160** [29.47]	**.250** [6.25]	34945	—
	Yellow	**1.160** [29.47]	**.138 x .281** [3.51 x 7.14]	34205[4]	—

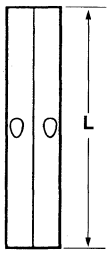
[1]26-22 splices are 26-24 range in accordance with MIL-T-7928.
[2]22-16 splices are 22-18 range in accordance with MIL-T-7928.
[3]When using two or more wires in either end of a butt splice, the combined cross sectional area must be within the circular mil area (CMA) range listed.
[4]Oval expansion.

SOURCE: Catalog 82042

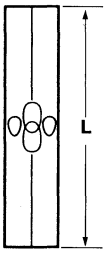
Specifications subject to change.
1-800-522-6752 Product Information Center/ AMP FAX Service
1-800-722-1111 Tooling/Technical Assistance Center

Butt Splices, Uninsulated
(Continued)

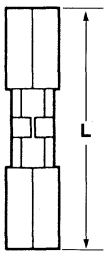
SOLISTRAND and Budget



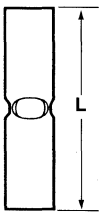
Standard



Sight Hole



Strap



Style A

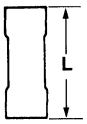
Wire Range Circular Mils [mm²]	Style	Dim. L	Part Numbers SOLISTRAND Loose Piece	Part Numbers SOLISTRAND Tape Mounted	Part Numbers Budget Loose Piece
26–22 202–810 [0.1–0.41]	Strap	**.385** [9.78]	321198*	—	321024
24–20 320–1,290 [0.16–0.65]	Strap	**.490** [12.45]	324001*	—	—
22–16 509–3,260 [0.26–1.65]	Strap	**.591** [15.02]	2-321801-3	2-321801-4	32463
	Standard	**.578** [14.69]	31818*	2-31818-1	34226
	Sight Hole	**.578** [14.69]	330367*	—	—
16–14 2,050–5,180 [1.04–2.62]	Strap	**.591** [15.02]	322459	—	32464
	Standard	**.567** [14.41]	31819*	2-31819-1	34227
	Strap	**.591** [15.02]	327025* (No Wire Stop)	—	—
	Sight Hole	**.567** [14.41]	330368*	—	—
14–12 3,260–8,230 [1.65–4.17]	Sight Hole	**.690** [17.53]	321280	—	—
12–10 5,180–13,100 [2.62–6.64]	Strap	**.703** [17.86]	—	—	30953
	Sight Hole	**.567** [14.41]	330369*	—	—
	Standard	**.565** [14.36]	32151*	—	34228
	Strap	**.765** [19.44]	324893	—	1-324898-0
8 13,100–20,800 [6.64–10.5]	Standard	**.827** [21.01]	34321*	—	—
	Sight Hole	**.827** [21.01]	36906*	—	—
6 20,800–33,100 [10.5–16.8]	Standard	**1.015** [25.79]	34322*	—	—
	Sight Hole	**1.015** [25.79]	36886*	—	—
4 33,100–52,600 [16.8–26.7]	Standard	**1.140** [28.96]	34323*	—	—
	Sight Hole	**1.140** [28.96]	320238	—	—
2 52,600–83,700 [26.7–42.4]	Standard	**1.265** [32.14]	35189*	—	—
	Sight Hole	**1.265** [32.14]	322246	—	—
1/0 83,700–119,500 [42.4–60.6]	A	**1.412** [35.87]	36957*	—	—
2/0 119,500–150,500 [60.6–76.3]	A	**1.437** [36.50]	36958*	—	—
3/0 150,500–190,000 [76.3–96.3]	A	**1.480** [37.60]	36959*	—	—
4/0 190,000-231,000 [96.3–117]	A	**1.484** [37.70]	36960*	—	—
250–300 MCM 231,000-300,000 [117–152]	A	**2.093** [53.17]	322279	—	—
300–350 MCM 300,000-380,000 [152–193]	A	**2.217** [56.32]	322280	—	—
400 MCM 380,000-478,000 [193–242]	A	**2.467** [62.67]	322281	—	—
500–600 MCM 478,000-600,000 [242–304]	A	**2.811** [71.40]	322282	—	—

*Part numbers are available in small quantity packages.

Notes: 1. When terminating two or more wires in either end of a butt splice, the combined cross sectional area must be within the listed circular mil area (CMA) range.
2. 22-16 splices are stamped 22-18 in order to comply with Military Specification MIL-T-7928, commercial wire range is 22-16.

Parallel Splices, Insulated

PLASTI-GRIP



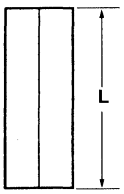
Wire Range Circular Mils[1] [mm²]	Splice Insulation Color	Dim. L	Wire Insulation Diameter Max.	Part Numbers Loose Piece
22-16 509-3,260 [0.26-1.65]	Red	**.760** [19.31]	**.120** [3.05]	34131
	Red	**.760** [19.31]	**.140** [3.56]	34132
16-14 2,050-5,180 [1.04-2.62]	Blue	**.760** [19.31]	**.140** [3.56]	34133
	Blue	**.760** [19.31]	**.170** [4.32]	34134
	Blue	**.760** [19.31]	**.135 x .245** [3.43 x 6.22]	34207[2]
12-10 5,180-13,100 [2.62-6.64]	Yellow	**.843** [21.42]	**.200** [5.08]	34135
	Yellow	**.870** [22.10]	**.230** [5.84]	34136

[1] When using two or more wires in a parallel splice, the combined cross sectional area must be within the circular mil area (CMA) listed.
[2] Oval expansion.

SOURCE: Catalog 82042

Parallel Splices, Uninsulated

SOLISTRAND



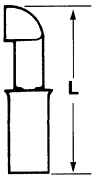
Wire Range Circular Mils [mm²]	Dim. L	Part Numbers Loose Piece
22–16 509–3,260 [0.26–1.65]	**.301** [7.65]	34130*
16–14 2,050–5,180 [1.04–2.62]	**.301** [7.65]	34137*
12–10 5,180–13,100 [2.62–6.64]	**.343** [8.72]	34138*
8 13,100–20,800 [6.64–10.5]	**.375** [9.53]	34318*
6 20,800–33,100 [10.5–16.8]	**.437** [11.10]	34319*
4 33,100–52,600 [16.8–26.7]	**.531** [13.49]	34320*
2 52,600–83,700 [26.7–42.4]	**.640** [16.26]	35187*
1/0 83,700–119,500 [42.4–60.6]	**.734** [18.65]	36946*
2/0 119,500–150,500 [60.6–76.3]	**.734** [18.65]	36948*
3/0 150,500–190,000 [76.3–96.3]	**.749** [19.03]	36909
4/0 190,000-231,000 [96.3–117]	**.765** [19.44]	36951*
250–300 MCM 231,000-300,000 [117–152]	**1.062** [26.98]	322275
300–350 MCM 300,000-380,000 [152–193]	**1.124** [28.55]	322276
400 MCM 380,000-478,000 [193–242]	**1.249** [31.73]	322277
500–600 MCM 478,000-600,000 [242–304]	**1.421** [36.10]	322278

Notes: 1. When terminating two or more wires in a parallel splice, the combined cross sectional area must be within the listed circular mil area (CMA) range.
2. 22-16 Splices are stamped 22-18 in order to comply with Military Specification MIL-T-7928, commercial wire range is 22-16.
*Part numbers are available in small quantity packages.

SOURCE: Catalog 65505

Knife Disconect Splices, Insulated

PIDG



Wire Range Circular Mils [mm²]	Splice Insulation Color	Dim. L	Wire Insulation Diameter Max.	Part Numbers Loose Piece
22-16 509-3,260 [0.26-1.65]	Red	**.878** [22.31]	**.125** [3.18]	320555
	Red	**.878** [22.31]	**.140** [3.56]	32446
16-14 2,050-5,180 [1.04-2.62]	Blue	**.878** [22.31]	**.150** [3.81]	320566
	Blue	**.878** [22.31]	**.170** [4.32]	32448

SOURCE: Catalog 82042

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

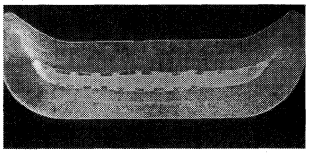
COPALUM Terminals and Splices

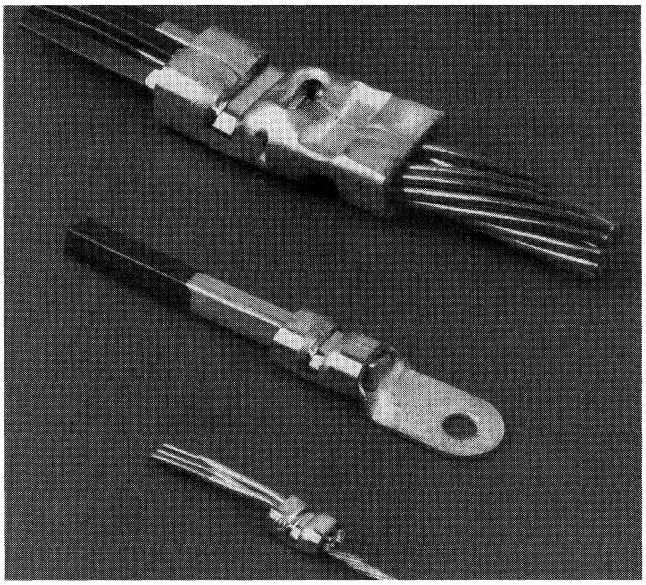
(For Solid & Stranded Aluminum or Copper Wire)

The AMP family of COPALUM terminals and splices provides reliable, low cost terminations for both aluminum and copper wire. Stranded, solid, round and rectangular conductors, individually or in combinations falling within a specified CMA range, can be terminated in the same wire barrel. Also, the same terminals and splices can be crimped to either uninsulated wire, using a bar crimp configuration or with the insulation piercing technique, to film insulated wire. Prestripping of conductors is not required. Because of this versatility, COPALUM terminals and splices are finding wide usage wherever aluminum wire is being used for its weight and cost savings advantages.

Bar Crimp Technique

The bar crimp technique employs the principle of high crimp deformation to achieve electrically and mechanically reliable terminations.





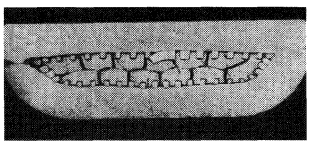
Product Facts

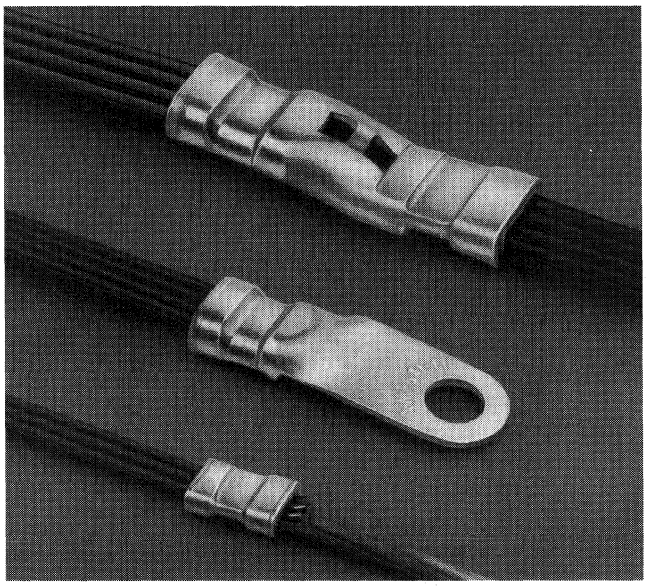
- **Terminals and splices for aluminum-to-aluminum and aluminum-to-copper stripped wire applications**
- **Terminates stripped, stranded and solid (round or rectangular) aluminum and copper conductors—individually or in combination**
- **Eliminates messy inhibitors**
- **Available for a broad range of wire sizes—from 16 AWG to 500 MCM [1.25 to 253 mm²]**
- **Low cost, reliable terminations provide stable electrical and mechanical performance**
- **UL 486B Listed where indicated in Appendix** [1]

[1] Bar crimp only

Insulation Piercing Crimp Technique

The insulation piercing crimp technique uses its specific crimp configuration and the perforated design of the terminal or splice liner to break down the film insulation and establish an electrical interface between the conductor and terminal or splice body.





Product Facts

- **Terminals and splices for aluminum-to-aluminum, copper-to-copper and aluminum-to-copper wire applications**
- **Terminates film insulated solid aluminum, film insulated solid copper, or uninsulated stranded copper conductors — individually or in combination**
- **Stripping of film insulated solid conductors not required**
- **Eliminates messy inhibitors**
- **Available for a broad range of wire sizes — from 16 to 4/0 AWG [1.25 to 105 mm²]**
- **Copper body construction**
- **Low cost, reliable terminations provide stable electrical and mechanical performance**

SOURCE: Catalog 82020

Specifications subject to change.

1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

Ring Tongue Terminals

Wire Size Range

Aluminum—AWG 16 to 10 [1.25 to 5.0 mm²], CMA 2,050 to 13,100

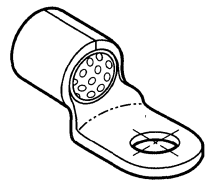
Copper—AWG 18 to 12 [0.8 to 3.0 mm²], CMA 1,290 to 8,230

Wire Size [mm²] Circular Mils		Stud Size	Part Numbers
Aluminum	Copper		
16-14 [1.25-2] 2,050-5,180	18-16 [0.8-1.25] 1,290-3,260	1/4 M6	52587-1
12-10 [3-5.0] 5,180-13,100	14-12 [2-3.0] 3,260-8,230	6 M3.5	51979
		8 M4	51979-1
		10	51979-2
		1/4 M6	51979-3
		1/4 M6	52590-1
		5/16 M8	52590-2

Wire Size Range

Aluminum—AWG 8 to 6 [8.0 to 14 mm²], CMA 13,100 to 33,100

Copper—AWG 12 to 8 [3.0 to 8.0 mm²], CMA 5,180 to 20,800

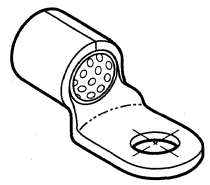


Wire Size [mm²] Circular Mils		Stud Size	Part Numbers
Aluminum	Copper		
8 [8.0] 13,100-20,800	12-10 [3-5.0] 5,180-13,100	10	50720
		1/4 M6	50720-1
		5/16 M8	50720-2
6 [14] 20,800-33,100	8 [8.0] 13,100-20,800	10	50719
		1/4 M6	50719-1
		5/16 M8	50719-2
		3/8	50719-3

Wire Size Range

Aluminum—AWG 4 to 500 MCM [21 to 253 mm²], CMA 33,100 to 600,000

Copper—AWG 6 to 400 MCM [14 to 203 mm²], CMA 20,800 to 478,000



Wire Size [mm²] Circular Mils		Stud Size	Part Numbers
Aluminum	Copper		
4 [21] 33,100-52,600	6 [14] 20,800-33,100	10	50717
		1/4 M6	50717-1
		5/16 M8	50717-2
		3/8	50717-3
		1/2	50717-5
2 [35] 52,600-83,700	4 [21] 33,100-52,600	1/4 M6	51982
		5/16 M8	51982-1
		3/8	51982-2
		1/2 M12	51982-3
1/0 [50] 83,700-119,500	2 [35] 52,600-83,700	1/4 M6	51986
		5/16 M8	51986-1
		3/8	51986-2
		1/2 M12	51986-3

Wire Size [mm²] Circular Mils		Stud Size	Part Numbers
Aluminum	Copper		
2/0 [70] 119,500-150,500	1/0 [50] 83,700-119,500	5/16 M8	51989-1
		3/8	51989-2
		1/2	51989-3
3/0 [85] 150,500-190,000	2/0 [70] 119,500-150,500	7/16	51992-2
		1/2 M12	51992-3
4/0 [105] 190,000-231,000	3/0 [85] 150,500-190,000	1/2 M12	51995-2
250 MCM [127] 231,000-300,000	4/0 [105] 190,000-231,000	1/2 M12	52559-4
300 MCM [152] 300,000-380,000	250 MCM [127] 231,000-300,000	1/2 M12	52558-4
400 MCM [203] 380,000-478,000	300 MCM [152] 300,000-380,000	1/2 M12	52568-4
500 MCM [253] 478,000-600,000	400 MCM [203] 380,000-478,000	1/2 M12	52569-4

SOURCE: Catalog 82020

Specifications subject to change.

1-800-522-6752
Product Information Center/ AMP FAX Service

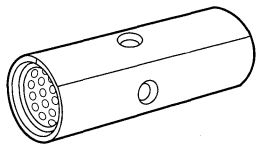
1-800-722-1111
Tooling/Technical Assistance Center

Butt Splices

Wire Size Range

Aluminum—AWG 16 to 10 [1.25 to 5.0 mm²], CMA 2,050 to 13,100

Copper—AWG 18 to 12 [0.8 to 3 mm²], CMA 1,290 to 8,230

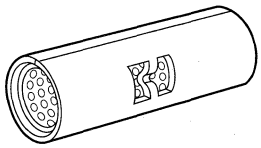


Wire Size [mm²] Circular Mils		Part Numbers
Aluminum	Copper	
16-14 [1.25-2.0] 2,050-5,180	18-16 [0.8-1.25] 1,290-3,260	52001
12-10 [3.0-5.0] 5,180-13,100	14-12 [2.0-3.0] 3,260-8,230	52004

Wire Size Range

Aluminum—AWG 8 to 4/0 [8.0 to 105 mm²], CMA 13,100 to 231,000

Copper—AWG 12 to 3/0 [3.0 to 85 mm²], CMA 5,180 to 190,000

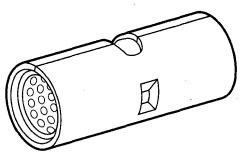


Wire Size [mm²] Circular Mils		Part Numbers
Aluminum	Copper	
8 [8.0] 13,100-20,800	12-10 [3.0-5.0] 5,180-13,100	51826
6 [14] 20,800-33,100	8 [8.0] 13,100-20,800	51941
4 [21] 33,100-52,600	6 [14] 20,800-33,100	51942
2 [35] 52,600-83,700	4 [21] 33,100-52,600	52007
1/0 [50] 83,700-119,500	2 [35] 52,600-83,700	52010
2/0 [70] 119,500-150,500	1/0 [50] 83,700-119,500	52013
3/0 [85] 150,500-190,000	2/0 [70] 119,500-150,500	52016
4/0 [105] 190,000-231,000	3/0 [85] 150,500-190,000	52019

Wire Size Range

Aluminum—AWG 250 to 500 MCM [127 to 253 mm²], CMA 231,000 to 600,000

Copper—AWG 4/0 to 400 MCM [105 to 203 mm²], CMA 190,000 to 478,000



Wire Size [mm²] Circular Mils		Part Numbers
Aluminum	Copper	
250 MCM [127] 231,000-300,000	4/0 [105] 190,000-231,000	52560
300 MCM [152] 300,000-380,000	250 MCM [127] 231,000-300,000	52561
400 MCM [203] 380,000-478,000	300 MCM [152] 300,000-380,000	52562
500 MCM [253] 478,000-600,000	400 MCM [203] 380,000-478,000	52563

Important:

Butt splices will accept the same wire size at either end for aluminum-to-aluminum applications. However, for aluminum-to-copper applications, when using bar crimp tooling, the size of the copper wire should be stepped down using one smaller wire size to compensate for the differences in the physical properties between copper and aluminum. For the correct butt splice to use, refer to the CMA ranges listed with each part number.

When two or more wires are used in either end of a butt splice, the combined cross-section area must be within the CMA range listed.

SOURCE: Catalog 82020

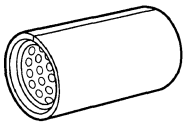
Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

Parallel Splices

Wire Size Range

Aluminum—AWG 16 to 4/0 [1.25 to 105 mm²], CMA 2,050 to 231,000

Copper—AWG 18 to 3/0 [0.8 to 85 mm²], CMA 1,290 to 190,000



Wire Size [mm²] Circular Mils		Part Numbers
Aluminum	Copper	
16-14 [1.25-2.0] 2,050-5,180	18-16 [0.8-1.25] 1,290-3,260	52791
12-10 [3.0-5.0] 5,180-13,100	14-12 [2.0-3.0] 3,260-8,230	52792
8 [8.0] 13,100-20,800	12-10 [3.0-5.0] 5,180-13,100	52745
6 [14] 20,800-33,100	8 [8.0] 13,100-20,800	52746
4 [21] 33,100-52,600	6 [14] 20,800-33,100	52747
2 [35] 52,600-83,700	4 [21] 33,100-52,600	52748
1/0 [50] 83,700-119,500	2 [35] 52,600-83,700	52749
2/0 [70] 119,500-150,500	1/0 [50] 83,700-119,500	52750
3/0 [85] 150,500-190,000	2/0 [70] 119,500-150,500	52751
4/0 [105] 190,000-231,000	3/0 [85] 150,500-190,000	52752

Note: When two or more wires are used in a parallel splice, the combined cross-sectional area must be within the CMA range listed.

SOURCE: Catalog 82020

Specifications subject to change.

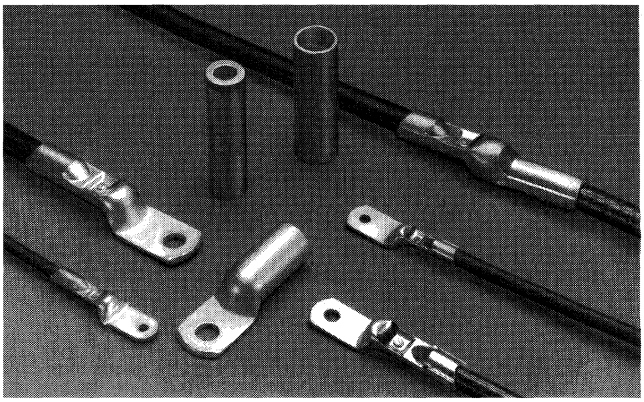
1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

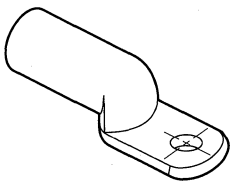
COPALUM Sealed Terminals and Splices

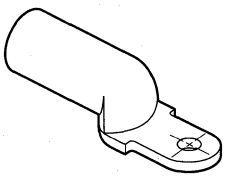
Product Facts

- No need for inhibitor agents, thanks to AMP "dry crimp" technique
- Terminating/splicing capabilities for stranded aluminum wire, plus splicing of aluminum wire to copper wire conductors
- Wide wire-size range—aluminum 8 to 4/0 [8.6 to 110.9 mm²] and copper 10 to 3/0 [4.8 to 85.9 mm²]
- Efficient production rates, uniform reliability, at low cost—all because of AMP electro-hydraulic DYNA-CRIMP tooling
- Optimum electrical, environmental, and mechanical performance crimps from AMP three-stage dies



Single-Hole Ring Tongue Terminals



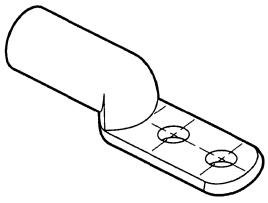


Sheared Tongue

Wire Size Circular Mils [mm²] Aluminum	Wire Size Circular Mils [mm²] Copper	Insul. Dia. Range	Stud Size	Tongue Type	Part Numbers
8 16,564 [8.6]	10 9,354 [4.8]	.182–.200 4.62–5.08	10	—	277147-1
			1/4 6.35	—	277147-3
			3/8 9.52	—	277147-2
			10	Sheared	277147-5
6 28,280 [14.6]	8 16,983 [8.8]	.225–.250 5.72–6.35	10	—	277148-1
			1/4 6.35	—	277148-2
			5/16 7.92	—	277148-3
			3/8 9.52	—	277148-4
			10	Sheared	277154-1
4 42,420 [21.9]	6 26,818 [13.8]	.276–.305 7.01–7.75	8	—	277149-5
			1/4 6.35	—	277149-2
			5/16 7.92	—	277149-3
			3/8 9.52	—	277149-4
2 67,872 [35.0]	4 42,615 [32.0]	.340–.380 8.64–9.65	1/4 6.35	—	277150-1
			3/8 9.52	—	277150-3
			1/4 6.35	Sheared	277155-1
1/0 17,464 [55.5]	2 66,500 [34.3]	.425–.470 10.79–11.94	1/4 6.35	Short	277151-3
			3/8 9.52	Short	277151-1
			5/16 7.92	Short	277151-7
			1/4 6.35	Long	277151-5
2/0 138,168 [71.3]	1/0 104,500 [53.9]	.500–.550 12.7–13.97	1/4 6.35	Short	277152-1
			3/8 9.52	Short	277152-2
			5/16 7.92	Long	277152-3
			3/8 9.52	Long	277152-4
			1/2 12.7	Long	277152-5
			3/8 9.52	Long (Narrow)	55944-1
3/0 168,872 [87.2]	2/0 133,000 [68.6]	.520–.645 13.21–16.38	3/8 9.52	—	277153-1

SOURCE: Catalog 82126

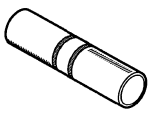
Double-Hole Ring Tongue Terminals

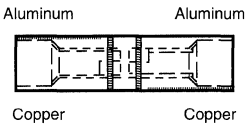


Wire Size Circular Mils [mm²] Aluminum	Wire Size Circular Mils [mm²] Copper	Insul. Dia. Range	Stud Size	Part Numbers
6 28,280 [14.6]	8 16,983 [8.8]	**.225–.250** 5.72–6.35	1/4 6.35	55832-1
			3/8 9.52	55832-2
4 42,420 [21.9]	6 26,818 [13.8]	**.276–.305** 7.01–7.75	1/4 6.35	55833-1 (55834-1)
			3/8 9.52	55833-2 (55834-2)
2 67,872 [35.0]	4 42,615 [22.0]	**.340–.380** 8.64–9.65	1/4 6.35	55835-1 (55836-1)
			3/8 9.52	55835-2 (55836-2)
1/0 107,464 [55.5]	2 66,500 [34.3]	**.425–.470** 10.79–11.94	3/8 9.52	55837-1 (55838-1)
2/0 138,168 [71.3]	1/0 104,500 [53.9]	**.500–.550** 12.7–13.97	3/8 9.52	55839-1 (55844-1)
3/0 168,872 [87.2]	2/0 133,000 [68.6]	**.520–.645** 13.21–16.38	3/8 9.52	55840-1
4/0 214,928 [110.94]	3/0 166,500 [85.94]	**.565–.690** 14.35–17.55	3/8 9.52	(55841-1)

Note: Part numbers with ( ) are silver plated, part numbers without are tin-plated.

Standard Butt Splices

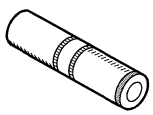


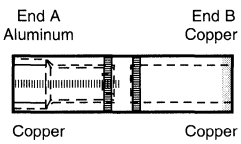


Wire Size* Circular Mils [mm²] Aluminum	Wire Size* Circular Mils [mm²] Copper	Insul. Dia. Range	Part Numbers
8 16,564 [8.6]	10 9,354 [4.8]	**.182–.200** 4.62–5.08	277156-1
6 28,280 [14.6]	8 16,983 [8.8]	**.225–.250** 5.72–6.35	277157-1
4 42,420 [21.9]	6 26,818 [13.8]	**.276–.305** 7.01–7.75	277158-1
2 67,872 [35.0]	4 42,615 [22.0]	**.340–.380** 8.64–9.65	277159-1
1/0 107,464 [55.5]	2 66,500 [34.3]	**.425–.470** 10.79–11.94	277160-1
2/0 138,168 [71.3]	1/0 104,500 [53.9]	**.500–.550** 12.70–13.97	277161-1
3/0 168,872 [87.2]	2/0 133,000 [68.6]	**.520–.645** 13.21–16.38	277162-1

* For aluminum-to-aluminum applications, splices will accept the same wire size at either end. For aluminum-to-copper applications, however, the size of the copper wire must be "stepped down" two wire sizes to compensate for differences in the electrical properties of copper and aluminum.

Transitional Butt Splices

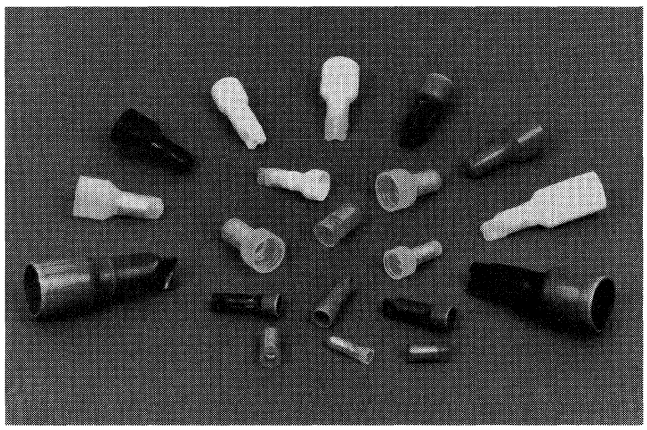




Wire Size Circular Mils [mm²] End A	Wire Size Circular Mils [mm²] End B	Insul. Dia. Range End A	Insul. Dia. Range End B	Part Numbers
1/0 107,464 [55.5]	4 42615 [22.0]	**.425–.470** 10.80–11.94	**.276–.305** 7.01–7.75	277163-1
4 42,420 [21.9]	8 16,983 [8.8]	**.276–.305** 7.01–7.75	**.210–.255** 5.33–6.48	277164-1
4 42,420 [21.9]	4 42,615 [22.0]	**.276–.305** 7.01–7.75	**.276–.305** 7.01–7.75	277165-1
3/0 168,872 [87.2]	1/0 104,500 [53.9]	**.520–.645** 13.21–16.38	**.430–.495** 10.92–12.57	277168-1

SOURCE: Catalog 82126

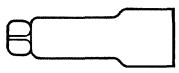
Closed End Splices



Product Facts

- For single and multiple wire applications
- Nylon or vinyl or PVF² insulated
- Temperature ratings of 90°C [194°F], 105°C [221°F], 150°C [302°F]
- 300 V, 600 V or 1000 V rated
- Crescent crimp configuration
- Covers wire ranges from 24 to 6 AWG [0.2 to 16 mm²] 509 to 42,700 CMA
- Copper or steel splice material
- Plated or unplated
- Solid or stranded copper wire
- Listed by Underwriters Laboratories Inc., File No. E13288
- Certified by Canadian Standards Association, File No. LR7189

Vinyl BOMB-TAIL Splices—VS, ECV



Wire Range [mm²] Circular Mils	Wire Combination Chart Literature No. ²	Insulation Color	Splice Marking* (Voltage & Temp. Rating Code)	Part Numbers	
				Loose Piece	Tape Mounted
22-16 AWG [0.3-1.4 mm²] 3,248-4,872 CMA	410-1396	Blue	VS	34306	—
		Blue	VS	34349	—
		Blue	VS	34864	—
22-16 AWG [0.3-1.4 mm²] 3,248-4,872 CMA	410-2228	Trans.	ECV	50920	—
	410-1395	Trans.	ECV	328890	2-328890-1
		Trans.	ECV	330021	1-330021-0
22-14 AWG [0.3-2.0 mm²] 509-5,180 CMA	410-1394	Red	VS	34304	—
		Purple	VS	36964	2-36964-2
		Purple	VS	2-36964-5[1]	—
		Purple	VS	2-328375-3	—
	410-9850	Purple	ECV	55843-1	—
22-12 AWG [0.3-3.0 mm²] 3,248-11,400 CMA	410-1479	Trans.	ECV	53234-1†	—
		Trans.	ECV	329251†	2-329251-1†
		Trans.	ECV	2-329251-2[1]	—
22-10 AWG [0.3-6.0 mm²] 3,248-13,100 CMA	410-1029	Purple	VS	36965	1-36965-1
		Purple	VS	1-36965-3[1]	—
	410-1002	Purple	ECV	321519	2-321519-2
22-10 AWG [0.3-6.0 mm²] 5,180-13,100 CMA	410-1397	Yellow	VS	34308	—
		Yellow	VS	34865	—
18-8 AWG [0.8-8.0 mm²] 10,320-20,820 CMA	410-1008	Black	ECV	55808-1	—
		Green	ECV	320788	—
18-6 AWG [0.8-15 mm²] 19,500-42,700 CMA	410-2605	Blue	ECV	53891-1	—

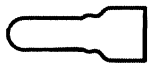
[1] Bulk Package
[2] Provides UL Listed and CSA Certified wire combinations.

***Splice Marking**
VS—300V, 90°C
ECV—600V max. Building Wiring
—1,000V max. Fixtures and Signs, 105°C UL, 90°C CSA
ECN—300V, 105°C
EC—600V max. Building Wiring
—1,000V max. Fixtures and Signs 105°C

† Stranded Wire Only
†† 150°C

SOURCE: Catalog 65472

Nylon Molded Splices—ECN, EC



Wire Range [mm²] Circular Mils	Wire Combination Chart Lit. No. [2]	Insulation Color	Splice Marking* (Voltage & Temp. Rating Code)	Part Numbers: Loose Piece	Part Numbers: Tape Mounted
22-14 AWG [0.3-2.0 mm²] 509-5,180 CMA	410-1271	Trans.	ECN	35115	1-35115-0
		Trans.	ECN	1-35115-2[1]	—
	410-8806	Black	ECN††	55927-1	1-55927-0
22-10 AWG [0.3-6.0 mm²] 3,248-13,100 CMA	410-1021	Trans.	ECN	35653	2-35653-1
		Trans.	ECN	2-35653-2[1]	—
	410-8807	Black	EC††	55929-1	—
	410-1003	Trans.	EC	53915-1	53915-2
		Black	EC	53915-4	—
		Trans.	EC	328730	2-328730-1
		Trans.	EC	328730-1[1]	—

[1] Bulk Package
[2] Provides UL Listed and CSA Certified wire combinations

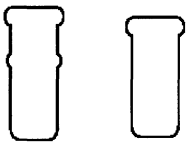
PVF² Molded Splices (Kynar)

Wire Range [mm²] Circular Mils	Wire Combination Chart Lit. No. [2]	Insulation Color	Splice Marking* (Voltage & Temp. Rating Code)	Part Numbers: Loose Piece	Part Numbers: Tape Mounted
22-12 AWG [0.3-3.0 mm²] 3,248-11,400 CMA	410-2907	Red	††	54316-1†	—

[1] Bulk Package
[2] Provides UL Listed and CSA Certified wire combinations

***Splice Marking**
VS—300V, 90°C
ECV—600V max. Building Wiring
—1,000V max. Fixtures and Signs, 105°C UL, 90°C CSA
ECN—300V, 105°C
EC—600V max. Building Wiring
—1,000V max. Fixtures and Signs 105°C
† Stranded Wire Only
†† 150°C

Spare Wire Caps (PIDG)



For Unstripped Wire — For Stripped Wire

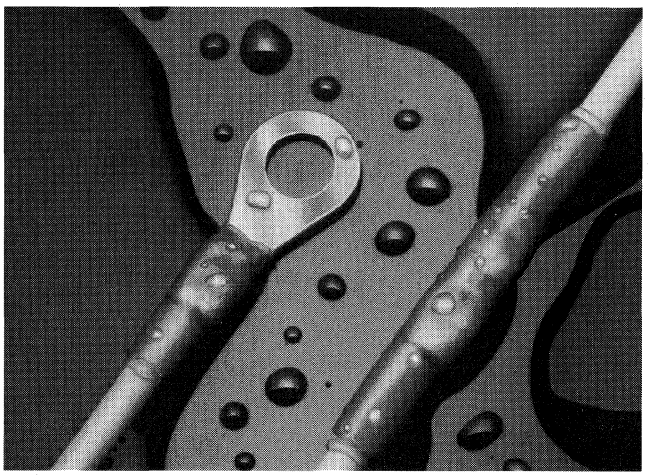
Wire Range [mm²] Circular Mils	Style	Cap Insulation Color	Wire Insulation Diameter Range	Wire Insulation Diameter Max.	Part Numbers: Loose Piece	Part Numbers: Tape Mounted
—	Unstripped Wire	Trans.	**.048-.075** 1.22-1.91	—	324484	—
		Red	**.080-.115** 2.03-2.92	—	324485	2-324485-1
		Blue	**.120-.145** 3.05-3.68	—	324486	—
		Yellow	**.150-.220** 3.81-5.59	—	324487	—
22-18 AWG [0.3-0.8 mm²] 509-3,248 CMA	Stripped Wire	Red	—	**.124** 3.15	328307[1]	—
16-14 AWG [1.4-2.0 mm²] 2,050-5,180 CMA	Stripped Wire	Blue	—	**.149** 3.78	328308[1]	2-328308-1
12-10 AWG [3.0-6.0 mm²] 5,180-13,100 CMA	Stripped Wire	Yellow	—	**.210** 5.33	328309[1]	—
—	Unstripped Wire	Trans.	**.048-.075** 1.22-1.91	—	324693[2]	—
		Red	**.080-.115** 2.03-2.92	—	324694[2]	—
		Blue	**.120-.145** 3.05-3.68	—	324695[2]	—
		Yellow	**.150-.220** 3.81-5.59	—	324696[2]	—

[1] Meets MIL-T-7928 and MS 25274 Class 1 and 2
[2] Moisture resistant

SOURCE: Catalog 65472

Specifications subject to change.
1-800-522-6752 Product Information Center/ AMP FAX Service
1-800-722-1111 Tooling/Technical Assistance Center

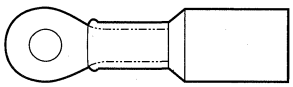
Pre-Insulated Sealed Terminals and Splices



Product Facts

- Moisture-proof seal prevents corrosion
- Insulation allows visual examination
- Seals out moisture and provides exceptional wire insulation support
- One piece assembly allows fast, easy terminations
- Body is copper, tin-plated with polyolefin insulation

Ring Tongue Terminals

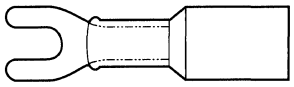


AWG [mm²] CMA	Terminal Insulation Color	Stud Size Dia.	Max. Wire Insulation Dia.	Part Numbers	Package Quantity
22–18 [0.26–0.96] 509–1,900	Red	6 M3.5	.170 4.32	55846-1	1000
				8-55846-2	50
		8 M4	.170 4.32	55847-1	1000
				8-55847-2	50
		10	.170 4.32	55848-1	1000
				8-55848-2	50
		1/4 M6	.170 4.32	55849-1	1000
				8-55849-2	50
16–14 [1.04–2.62] 2,050–5,180	Blue	6 M3.5	.190 4.83	55850-1	1000
				8-55850-2	50
		8 M4	.190 4.83	55851-1	1000
				8-55851-2	50
		10	.190 4.83	55852-1	1000
				8-55852-2	50
		1/4 M6	.190 4.83	55853-1	1000
				8-55853-2	50
		5/16 M8	.190 4.83	55854-1	1000
				8-55854-2	50
		3/8	.190 4.83	55855-1	1000
				8-55855-2	50
12–10 [2.62–6.64] 5,180–13,100	Yellow	8 M4	.240 6.10	55856-1	500
				8-55856-3	25
		10	.240 6.10	55857-1	500
				8-55857-3	25
		1/4 M6	.240 6.10	55858-1	500
				8-55858-3	25
		5/16 M8	.240 6.10	55859-1	500
				8-55859-3	25
		3/8	.240 6.10	55860-1	500
				8-55860-3	25
		1/2 M12	.240 6.10	55861-1	500
				8-55861-3	25
8 [6.64–10.5] 13,100–20,800	Red	10	.310 7.87	55862-1	100
				8-55862-5	10
		1/4 M6	.310 7.87	55863-1	100
				8-55863-5	10
		3/8	.310 7.87	55864-1	100
				8-55864-5	10
		1/2 M12	.310 7.87	55865-1	100
				8-55865-5	10

Note: Part numbers shown are standard quantity over small packaging quantity.

Pre-Insulated Sealed Terminals and Splices
(Continued)

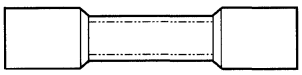
Spade Tongue Terminals



AWG [mm²] CMA	Terminal Insulation Color	Stud Size	Max. Wire Insulation Dia.	Part Numbers	Package Quantity
22–18 [0.26–0.96] 509–1,900	Red	6 M3.5	.170 4.32	55866-1	1000
				8-55866-2	50
		8 M4	.170 4.32	55867-1	1000
				8-55867-2	50
		10	.170 4.32	55868-1	1000
				8-55868-2	50
16–14 [1.04–2.62] 2,050–5,180	Blue	6 M3.5	.190 4.83	55869-1	1000
				8-55869-2	50
		8 M4	.190 4.83	55870-1	1000
				8-55870-2	50
		10	.190 4.83	55871-1	1000
				8-55871-2	50
12–10 [2.62–6.64] 5,180-13,100	Yellow	8 M4	.240 6.10	55872-1	500
				8-55872-3	25
		10	.240 6.10	55873-1	500
				8-55873-3	25
		1/4	.240 6.10	55874-1	500
				8-55874-3	25

Note: Part numbers shown are standard quantity over small packaging quantity.

Butt Splices



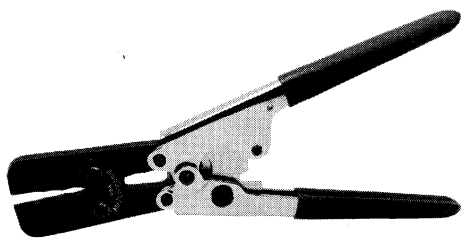
AWG [mm²] CMA	Splice Insulation Color	Max. Wire Insulation Dia.	Part Numbers	Package Quantity
22–18 [0.26–0.96] 509–1,900	Red	.170 4.32	55824-1	1000
			8-55824-2	50
16–14 [1.04–2.62] 2,050–5,180	Blue	.190 4.83	55825-1	1000
			8-55825-2	50
12–10 [2.62–6.64] 5,180–13,100	Yellow	.240 6.10	55826-1	500
			8-55826-3	25
8 [6.64–10.5] 13,100–20,800	Red	.310 7.87	55845-1	100
			8-55845-5	10

Note: Part numbers shown are standard quantity over small packaging quantity.

Seal 'N Splice Kit

Part No. 55892-1

Application Tooling



Part No. 55893-1
for AWG 22-10

Part No. 55894-1
for AWG 16-8

SOURCE: Catalog 82602

Specifications subject to change.

1-800-522-6752
Product Information Center/ AMP FAX Service

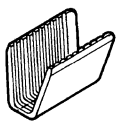
1-800-722-1111
Tooling/Technical Assistance Center

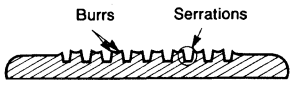
Machine Applied Terminations, Open Barrel

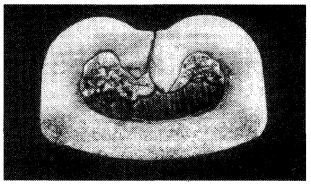
(Rings, Spades, Pins, Receptacles, Splices, Tabs)

Crimp Configuration Specifications

AMPLIVAR Terminals





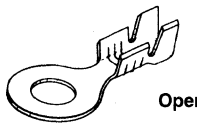


The basic design of the AMPLIVAR terminals encompasses two main areas, the burrs at the top of the serrations and the serrations themselves. During the crimping operation, the burrs pierce the insulation of the magnet wire and extrude the bare conductors into the serrations—creating intimate metal contact.

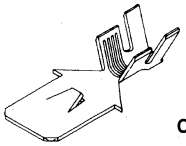
In a one-step operation the magnet wire is automatically multiple ring stripped of its insulation as it is forced into the serrations during the precisely controlled crimp. The resulting termination produces a high tensile strength, air sealed connection that is as resistant to corrosion as the insulated conductor.

AMPLIVAR terminals are shown on pages 1155 through 1158.

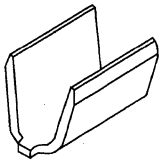
Standard "F"



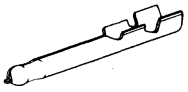
Open Barrel



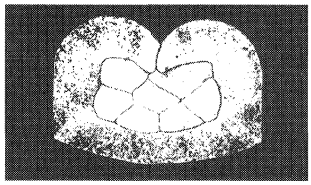
Contacts



Splices



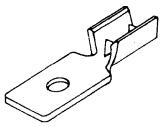
Pins



In the standard "F" crimp design, the open barrel consists of two wings that are wrapped around the conductor strands and butted together in a tight seam. Applied with Match-Mated tooling, the "F" crimp offers the optimum combination of mechanical strength and electrical conductivity. This method of termination also assures maximum resistance to vibration and corrosion.

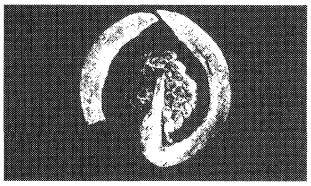
The insulation support feature was developed by AMP for applications where vibration tends to be excessive. This design offers the same fine quality characteristics found in the standard line plus firm, fully circumferential support to the wire insulation.

Insulation Piercing



Contacts

Pins



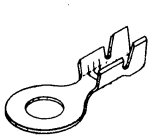
The insulation piercing line enjoys a durable popularity with electrical circuitry manufacturers because of the simplicity of attachment. The barrel contains two perpendicular lances that drive through the wire insulation to make contact with the conductor within.

Tensile characteristics vary, depending on the type of wire insulation. Because the barrel wraps around the insulation, it deters insulation fraying. The insulation piercing line is a low cost, high speed attachment suitable for many requirements.

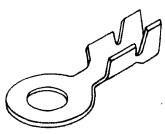
In general, insulation piercing terminals can be used where high currents, intensive vibration and mechanical loads are not critical factors on both stranded and tinsel wire.

SOURCE: Catalog 82227

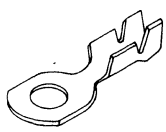
Ring Tongue Terminals, Insulation Support



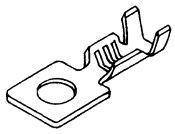
A



B



C



D

Type	Wire Range		Insul. Dia. Range	Stud Size/ Dia.	Stock Thk.	Material and Finish	Part Numbers	Quick Change Applicator Nos.		
	AWG	mm²						Model K	Model T	Model G
D	26-24	0.12–0.6	**.035–.065** 0.89–1.65	**.065** 1.65	**.012** 0.31	Brass	61652-1	466185-2	466185-1	—
D	26-24	0.12–0.6	**.035–.065** 0.89–1.65	**.094** 2.39	**.012** 0.31	Brass	61653-1	466185-2	466185-1	—
B	26-22	0.12–0.4	**.040–.060** 1.02–1.52	4	**.014** 0.36	Tin-Plated Brass	42547-2	687968-2	687968-1	—
			.040–.060 1.02–1.52	**.100** 2.54	**.014** 0.36	Tin-Plated Brass	60007-2	687968-2	687968-1	—
			.070–.110 1.78–2.79	**.100** 2.54	**.016** 0.41	Brass	61312-1	466111-2	466111-1	—
			.070–.110 1.78–2.79	**.100** 2.54	**.016** 0.41	Nickel-Plated Brass	61312-2	466111-2	466111-1	—
C	26-20	0.12–0.6	**.048–.078** 1.22–1.98	**.142** 3.61	**.020** 0.51	Tin-Plated Brass	60123-2	687962-2	687962-1	—
A	24-20	0.2–0.6	**.080–.100** 2.03–2.54	4	**.020** 0.51	Tin-Plated Brass	41579	687881-3	687881-1	—
				6	**.020** 0.51	Tin-Plated Brass	41580	687881-3	687881-1	—
				8	**.020** 0.51	Tin-Plated Brass	41581	687881-3	687881-1	—
			.048–.078 1.22–1.98	10	**.020** 0.51	Tin-Plated Brass	42164-2	687961-2	687961-1	—
				12	**.020** 0.51	Tin-Plated Brass	63721-1	687961-2	687961-1	—
				8	**.020** 0.51	Tin-Plated Brass	42508-2	687961-2	687961-1	—
				6	**.014** 0.36	Tin-Plated Brass	60553-1	466019-2	466019-1	—
				10	**.014** 0.36	Tin-Plated Brass	60555-1	466019-2	466019-1	—
B	22-20	0.3–0.6	**.070–.120** 1.78–3.05	**.126** 3.20	**.020** 0.51	Tin-Plated Brass	62638-1	466672-2	466672-1	—
A	22-18	0.3–0.9	**.060–.110** 1.52–2.79	6	**.020** 0.51	Tin-Plated Brass	40697	687851-2	687851-1	—
			.060–.110 1.52–2.79	8	**.020** 0.51	Tin-Plated Brass	40698	687851-2	687851-1	—
			.070–.100 1.78–2.54	5/16	**.030** 0.76	Tin-Plated Brass	41013	687843-2	687843-1	687843-3
			.070–.100 1.78–2.54	1/4	**.030** 0.76	Tin-Plated Brass	41711	687843-2	687843-1	687843-3
			.080–.110 2.03–2.79	8	**.020** 0.51	Brass	42036-1	687873-2	687873-1	—
			.080–.110 2.03–2.79	10	**.020** 0.51	Brass	42036-2	687873-2	687873-1	—
			.080–.110 2.03–2.79	6	**.020** 0.51	Tin-Plated Brass	42037	687832-2	687873-1	—
			.080–.110 2.03–2.79	4	**.020** 0.51	Tin-Plated Brass	63797-1	687832-2	687873-1	—
			.080–.110 2.03–2.79	8	**.020** 0.51	Tin-Plated Brass	42037-1	687832-2	687873-1	—
			.080–.110 2.03–2.79	10	**.020** 0.51	Tin-Plated Brass	42037-2	687873-2	687873-1	—
			.120–.170 3.05–4.32	8	**.020** 0.51	Nickel-Plated Steel	485003-1	466446-2	466446-1	—

Note: Applicator Part Numbers are for existing machine models. For Applicators for AMP-O-LECTRIC Model "G" Terminating Machine, call the Tooling Assistance Center.

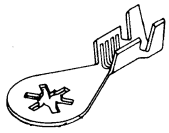
SOURCE: Catalog 82227

Specifications subject to change.

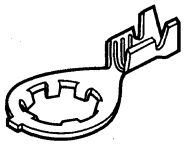
1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

Ring Tongue Terminals, Insulation Support
(Continued)



E



F

Type	Wire Range AWG	Wire Range mm²	Insul. Dia. Range	Stud Size/ Dia.	Stock Thk.	Material and Finish	Part Numbers	Quick Change Applicator Nos. Model K	Quick Change Applicator Nos. Model T
E	22-18	0.3–0.9	**.080–.120** 2.03–3.05	8	**.025** 0.64	Tin-Plated Steel	640204-1	466412-2	466412-1
				8	**.025** 0.64	Nickel-Plated Steel	640204-2	466412-2	466412-1
				10	**.025** 0.64	Tin-Plated Steel	640271-1	466412-2	466412-1
F	22-16	0.3–1.4	**.100–.140** 2.54–3.56	**.261** 6.63	**.025** 0.64	Tin-Plated Brass	61283-1	466124-3	466124-1
				.181 4.60	**.025** 0.64	Brass	61436-1	466123-2	466123-1
				.181 4.60	**.025** 0.64	Tin-Plated Brass	61436-2	466123-2	466123-1
				.181 4.60	**.025** 0.64	Tin-Plated Steel	61556-1	466123-2	466123-1
				6	**.025** 0.64	Tin-Plated Brass	61588-1	466123-2	466123-1
			.105 Max. 2.67	**.177** 4.50	**.025** 0.64	Brass	350509-1	466301-2	466301-1

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Specifications subject to change.
1-800-522-6752 Product Information Center/ AMP FAX Service
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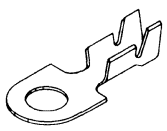
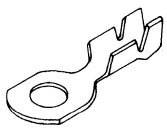
Ring Tongue Terminals, Insulation Support
(Continued)

A

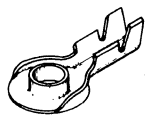
B



C



D



E

Type	Wire Range		Insul. Dia. Range	Stud Size/ Dia.	Stock Thk.	Material and Finish	Part Numbers	Quick Change Applicator Nos.		
	AWG	mm²						Model K	Model T	Model G
C	20-16	0.5–1.4	**.075–.120** 1.91–3.05	8	**.020** 0.51	Tin-Plated Brass	40888	687874-3	687874-1	—
A	20-16	0.5–1.4	**.100–.140** 2.54–3.56	10	**.030** 0.76	Tin-Plated Brass	40955	687855-2	687855-1	—
B	20-16	0.5–1.4	**.075–.110** 1.91–2.79	**.099** 2.52	**.025** 0.64	Brass	41406	687821-3	687821-1	687821-4
A	20-16	0.5–1.4	**.100–.140** 2.54–3.56	8	**.025** 0.64	Tin-Plated Brass	41456	687855-2	687855-1	—
B	20-16	0.5–1.4	**.100–.135** 2.54–3.43	**.156** 3.96	**.025** 0.64	Brass	41471	687819-2	687819-1	—
			.100–.135 2.54–3.43	**.156** 3.96	**.025** 0.64	Tin-Plated Brass	41472	687819-2	687819-1	—
			.100–.135 2.54–3.43	4	**.025** 0.64	Tin-Plated Brass	61386-1	466370-2	466370-1	—
			.090–.120 2.29–3.05	6	**.025** 0.64	Brass	61764-1	466370-2	466370-1	—
D	20-16	0.5–1.4	**.075–.110** 1.91–2.79	**.099** 2.52	**.025** 0.64	Brass	42065	687821-3	687821-1	687821-4
B	20-16	0.5–1.4	**.075–.110** 1.91–2.79	**.132** 3.35	**.025** 0.64	Brass	42721-1	687821-3	687821-1	687821-4
D	20-16	0.5–1.4	**.075–.110** 1.91–2.79	3	**.025** 0.64	Tin-Plated Brass	63514-1	687821-3	687821-1	687821-4
A	20-16	0.5–1.4	**.100–.140** 2.54–3.56	10	**.030** 0.76	Br. Tin-Plated Brass	640008-1	687855-2	687855-1	—
D	20-16	0.5–1.4	**.080–.120** 2.03–3.05	2	**.020** 0.51	Nickel-Plated Steel	640082-1	466052-2	—	—
A	20-16	0.5–1.4	**.110–.140** 2.79–3.56	6	**.030** 0.76	Tin-Plated Brass	42933-2	687912-2	687912-1	—
			.100–.140 2.54–3.56	10	**.020** 0.51	Brass	60394-1	466077-2	466077-1	—
			.080–.120 2.03–3.05	1/4	**.020** 0.51	Tin-Plated Brass	60700-2	466094-2	466094-1	—
			.080–.120 2.03–3.05	1/4	**.020** 0.51	Brass	60700-3	466094-2	466094-1	—
A	18-14	0.8–2.0	**.100–.140** 2.54–3.56	8	**.030** 0.76	Brass	40660	687858-3	687858-1	—
			.100–.140 2.54–3.56	10	**.030** 0.76	Brass	40661	687858-3	687858-1	—
			.100–.140 2.54–3.56	6	**.030** 0.76	Tin-Plated Brass	40723	687858-3	687858-1	—
			.100–.140 2.54–3.56	8	**.030** 0.76	Tin-Plated Brass	40724	687858-3	687858-1	—
			.100–.140 2.54–3.56	10	**.030** 0.76	Tin-Plated Brass	40725	687858-3	687858-1	—
			.120–.170 3.05–4.32	6	**.020** 0.51	Brass	41558	687811-3	687811-1	687811-7
			.120–.170 3.05–4.32	6	**.020** 0.51	Pre-Ni Plated Steel	41558-1	687811-3	687811-1	687811-7
E	18-14	0.8–2.0	**.120–.170** 3.05–4.32	**.194** 4.93	**.020** 0.51	Brass	60546-1	466365-2	466365-1	—

Note: Applicator Part Numbers are for existing machine models. For Applicators for AMP-O-LECTRIC Model "G" Terminating Machine, call the Tooling Assistance Center.

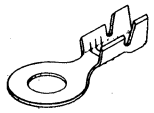
SOURCE: Catalog 82227

Specifications subject to change.

1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

Ring Tongue Terminals, Insulation Support
(Continued)



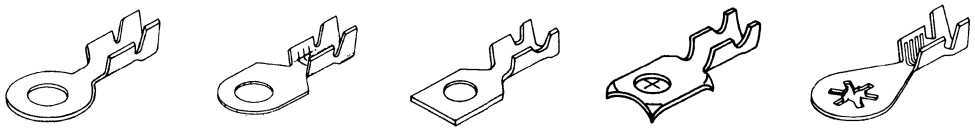
A

Type	Wire Range AWG	Wire Range mm²	Insul. Dia. Range	Stud Size/ Dia.	Stock Thk.	Material and Finish	Part Numbers	Quick Change Applicator Nos. Model K	Model T	Model G
A	18-14	0.8–2.0	**.120–.170** 3.05–4.32	2	**.020** 0.51	Tin-Plated Brass	63750-1	567435-2	567435-1	567435-3
				6	**.020** 0.51	Tin-Plated Brass	41330*	687811-3	687811-1	687811-7
				8	**.020** 0.51	Tin-Plated Brass	41332*	687811-3	687811-1	687811-7
				10	**.020** 0.51	Tin-Plated Brass	41333*	687811-3	687811-1	687811-7
				10	**.020** 0.51	Pre-Tin Brass	63628-1†	567435-2	567435-1	567435-3
				8	**.020** 0.51	Brass	41559*	687811-3	687811-1	687811-7
				8	**.020** 0.51	Brass	63678-1†	567435-2	567435-1	567435-3
				10	**.020** 0.51	Brass	41560*	687811-3	687811-1	687811-7
			.100–.140 2.54–3.56	8	**.025** 0.64	Tin-Plated Brass	60024-2	466065-2	466065-1	—
				10	**.025** 0.64	Tin-Plated Brass	60433-2	466065-2	466065-1	—
				1/4	**.025** 0.64	Tin-Plated Brass	60625-1	466065-2	466065-1	—
			.120–.160 3.05–4.07	10	**.025** 0.64	Brass	60744-1	466064-4	466064-3	—
				10	**.025** 0.64	Tin-Plated Brass	60744-2	466064-4	466064-3	—
			.100–.140 2.54–3.56	6	**.018** 0.46	Brass	60770-1	466095-2	466095-1	466095-5
				6	**.018** 0.46	Tin-Plated Brass	60770-2	466095-2	466095-1	466095-5
				8	**.018** 0.46	Brass	60771-1	466095-2	466095-1	466095-5
				8	**.018** 0.46	Tin-Plated Brass	60771-2	466095-2	466095-1	466095-5
				10	**.018** 0.46	Brass	60772-1	466095-2	466095-1	466095-5
				10	**.018** 0.46	Tin-Plated Brass	60772-2	466095-2	466095-1	466095-5
				10	**.018** 0.46	Tin Plated Brass	60772-3	466095-2	466095-1	466095-5
			.090–.145 2.29–3.68	1/2	**.025** 0.64	Pre-Tin Plated Steel	61777-1	687787-2	687787-1	—
			.140–.190 3.56–4.83	10	**.030** 0.76	Tin-Plated Brass	61397-1	466140-2	466140-1	—
			.080–.150 2.03–3.81	1/4	**.030** 0.76	Tin-Plated Brass	61867-2	687784-2	687784-1	687784-3
				1/2	**.030** 0.76	Tin-Plated Brass	61863-2	687784-2	687784-1	687784-3
			.100–.180 2.54–4.57	10	**.030** 0.76	Brass	62700-1	—	—	—
			.090–.145 2.29–3.68	1/2	**.025** 0.64	Stainless Steel	62786-1**	687787-2	687787-1	—

*Not recommended for 2 wire applications
**Stainless steel wire connectors cannot be certified under the current CSA Standard.
†Recommended for 2 wire applications
Note: Applicator Part Numbers are for existing machine models. For Applicators for AMP-O-LECTRIC Model "G" Terminating Machine, call the Tooling Assistance Center.

SOURCE: Catalog 82227

Ring Tongue Terminals, Insulation Support
(Continued)



B C D E F

Type	Wire Range AWG	Wire Range mm²	Insul. Dia. Range	Stud Size/ Dia.	Stock Thk.	Material and Finish	Part Numbers	Quick Change Applicator Nos. Model K	Quick Change Applicator Nos. Model T
E	18-14	0.8–2.0	**.090–.140** 2.29–3.56	5/16	**.030** 0.76	Tin-Plated Steel	61359-1	—	466610-1
F	18-14	0.8–2.0	**.105–.145** 2.67–3.68	5	**.025** 0.64	Tin-Plated Steel	63640-1	466192-5	466192-4
				6	**.025** 0.64	Tin-Plated Steel	61793-1	466192-5	466192-4
				8	**.025** 0.64	Tin-Plated Steel	61794-1	466192-5	466192-4
				8	**.025** 0.64	Brass	61794-4	466192-5	466192-4
				8	**.024** 0.61	Stainless Steel	640051-1*	466192-5	466192-4
			.105–.145 2.67–3.68 or **(2).110** 2.79	10	**.025** 0.64	Tin-Plated Steel	63482-1	567280-2	567280-1
			.105–.145 2.67–3.68	10	**.025** 0.64	Tin-Plated Steel	350436-2[1]	466192-5	466192-4
				10	**.024** 0.61	Stainless Steel	640052-1*	466192-5	466192-4
				10	**.025** 0.64	Tin-Plated Steel	61795-1[2]	466192-5	466192-4
				10	**.025** 0.64	Tin-Plated Brass	61795-3	466192-5	466192-4
				1/4	**.025** 0.64	Stainless Steel	63602-1*	687787-2	687787-1
B	18-14	0.8–2.0	**.090–.145** 2.29–3.68	5/16	**.025** 0.64	Stainless Steel	62787-1*	687787-2	687787-1
D	18-14	0.8–2.0	**.085–.140** 2.16–3.56	8	**.025** 0.64	Tin-Plated Phos. Brz.	62975-1	687436-8	687436-4
C	18-14	0.8–2.0	**.085–.140** 2.16–3.56	1/4	**.025** 0.64	Tin-Plated Brass	485029-1	687436-8	687436-4
			.085–.140 2.16–3.56	5/16	**.025** 0.64	Tin-Plated Brass	485030-1	687436-8	687436-4

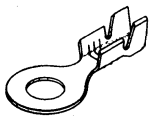
*Stainless steel wire connectors cannot be Certified under the current CSA Standard.
[1]Tongue width .370 [9.40]
[2]Tongue width .445 [11.30]
Note: Applicator Part Numbers are for existing machine models. For Applicators for AMP-O-LECTRIC Model "G" Terminating Machine, call the Tooling Assistance Center.

SOURCE: Catalog 82227

Specifications subject to change.
1-800-522-6752 Product Information Center/ AMP FAX Service
1-800-722-1111 Tooling/Technical Assistance Center

Ring Tongue Terminals, Insulation Support

(Continued)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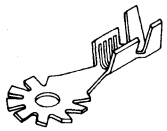
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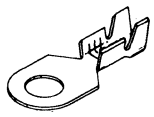
D

Type	Wire Range AWG	Wire Range mm²	Insul. Dia. Range	Stud Size/ Dia.	Stock Thk.	Material and Finish	Part Numbers	Quick Change Applicator Nos. Model K	Model T	Model G
E	18-14	0.8–2.0	**.100–.140** 2.54–3.56	5	**.020** 0.51	Tin-Plated Brass	63518-1	567318-2	567318-1	—
B	18-14	0.8–2.0	**.085–.140** 2.16–3.56	10	**.025** 0.64	Tin-Plated Steel	350080-1	466355-2	466355-1	—
A	18-14	0.8–2.0	**.120–.175** 3.05–4.45	10	**.020** 0.51	Pre-Ni Plated Steel	350199-1	466842-2	466842-1	—
H	18-14	0.8–2.0	**.120–.170** 2.03–4.32	6–10	**.016** 0.41	Pre-Tin-Plated Brass	350981-2	466649-2	466649-1	466649-5
A	18-14	0.8–2.0	**.140–.190** 3.56–4.83	8	**.030** 0.76	Tin-Plated Brass	640102-1	466140-2	—	—
A	16-14	1.4–2.0	**.120–.180** 3.05–4.57	10	**.020** 0.51	Brass	41294	687838-3	687838-1	—
				.257 6.53	**.030** 0.76	Brass	42751-1	687969-3	687969-1	687969-4
				.257 6.53	**.030** 0.76	Tin-Plated Brass	42751-2	687969-3	687969-1	687969-4
				.257 6.53	**.030** 0.76	Phos. Bronze	42751-3	687969-3	687969-1	687969-4
				.323 8.20	**.030** 0.76	Tin-Plated Brass	42752-2	687969-3	687969-1	687969-4
				.281 7.14	**.030** 0.76	Tin-Plated Brass	42938-2	687969-3	687969-1	687969-4
				3/8	**.040** 1.02	Tin-Plated Brass	61336-1	466623-2	466623-1	—
C	16-14	1.25–2.0	**.120–.180** 3.05–4.57	10	**.030** 0.76	Br. Tin-Plated Brass	640007-1	466302-2	466302-1	—
A	16-14	1.25–2.0	**.120–.180** 3.05–4.57	**.257** 6.53	**.030** 0.76	Br. Tin-Plated Brass	640011-1	687969-3	687969-1	687969-4
G	16-12	1.25–3.0	**.130–.170** 3.30–4.32	8	**.025** 0.64	Brass	61624-1	466193-2	466193-1	—
G	16-12	1.25–3.0	**.130–.170** 3.30–4.32	8	**.025** 0.64	Tin-Plated Brass	63698-1	466193-2	466193-1	—
F	16-12	1.25–3.0	(2)**.125** 3.18	5/16	**.030** 0.76	Tin-Plated Steel	640168-1	566212-1[1]	—	—
A	16-12	1.25–3.0	(2)**.125** 3.18	10	**.018** 0.46	Tin-Plated Brass	640253-2	466536-2	466536-1	—
D	14-12	2.0–3.0	**.130–.180** 3.30–4.57	6	**.040** 1.02	Tin-Plated Brass	40604-1	567106-2	567106-1	—
			.130–.180 3.30–4.57	8	**.040** 1.02	Tin-Plated Brass	40605-1	567106-2	567106-1	—
			.130–.180 3.30–4.57	10	**.040** 1.02	Tin-Plated Brass	40960	567106-2	567106-1	—
			.170–.210 4.32–5.33	1/4	**.040** 1.02	Brass	41604	567335-2	567335-1	—
			.170–.210 4.32–5.33	10	**.040** 1.02	Tin-Plated Brass	42639-1	567335-2	567335-1	—
			.150–.210 3.81–5.33	10	**.030** 0.76	Tin-Plated Brass	60485-1	687762-2	687762-1	—

[1]Requires use of AMP-O-LECTRIC Terminating Machine **Part No. 1-471273-2.**

Note: Applicator Part Numbers are for existing machine models. For Applicators for AMP-O-LECTRIC Model "G" Terminating Machine, call the Tooling Assistance Center.

SOURCE: Catalog 82227

Specifications subject to change.
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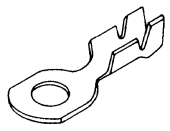
Ring Tongue Terminals, Insulation Support
(Continued)



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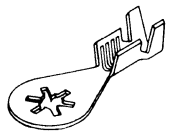

G

H

Type	Wire Range AWG	Wire Range mm²	Insul. Dia. Range	Stud Size/ Dia.	Stock Thk.	Material and Finish	Part Numbers	Quick Change Applicator Nos. Model K	Quick Change Applicator Nos. Model T
C	12-10	3–6	**.170–.210** 4.32–5.33	6	**.040** 1.02	Tin-Plated Brass	61424-1	687727-2	687727-1
A	12-10	3–6	**.150–.210** 3.81–5.33	1/4	**.040** 1.02	Tin-Plated Copper	61844-1	466393-2	466393-1
G	12-10	3–6	**.125–.220** 3.18–5.59	8	**.024** 0.61	Stainless Steel	62612-1	466647-2	466647-1
				8	**.025** 0.64	Tin-Plated Steel	62612-2	466647-2	466647-1
				10	**.025** 0.64	Tin-Plated Steel	62613-2	466647-2	466647-1
A	12-10	3–6	**.150–.210** 3.81–5.33	10	**.030** 0.76	Br. Tin-Plated Brass	640009-1	687832-5	687832-4
				10	**.030** 0.76	Tin-Plated Brass	41124	687832-5	687832-4
				.257 6.53	**.030** 0.76	Tin-Plated Brass	41125	687832-5	687832-4
				.323 8.20	**.030** 0.76	Tin-Plated Brass	41126	687832-5	687832-4
A	12-8	3–8	**.150–.220** 3.81–5.59	3/8	**.040** 1.02	Tin-Plated Brass	61289-1	672247-1[1]	—
C	12-10	3–6	**.150–.210** 3.81–5.33	10	**.030** 0.76	Brass	42722-1	687832-5	687832-4
			.170–.210 4.32–5.33	8	**.040** 1.02	Tin-Plated Brass	42863-2	687727-2	687727-1
				10	**.040** 1.02	Brass	42864-1	687727-2	687727-1
				10	**.040** 1.02	Tin-Plated Brass	42864-2	687727-2	687727-1
A	12-10	3–6	**.150–.210** 3.81–5.33	1/4	**.030** 0.76	Tin-Plated Brass	62691-2	687832-5	687832-4
A	12-8	3–8	**.150–.220** 3.81–5.59	**.344** 8.74	**.040** 1.02	Tin-Plated Brass	42946-2	672247-1[1]	—
				.405 10.29	**.040** 1.02	Br. Tin-Plated Brass	42947-3	672247-1[1]	—
D	10-8	5–8	**.220–.315** 5.59–8.00	10	**.050** 1.27	Tin-Plated Copper	41808	671510-7[1]	—
				1/4	**.050** 1.27	Tin-Plated Copper	41809	671510-7[1]	—
			.190–.230 4.83–5.84	10	**.040** 1.02	Br. Tin-Plated Brass	640249-1	466688-2	—
D	10-6	5–15	**.220–.315** 5.59–8.00	10	**.040** 1.02	Tin-Plated Brass	61352-1	671510-7[1]	—
				1/4	**.040** 1.02	Tin-Plated Brass	42899-2	671510-7[1]	—
				5/16	**.040** 1.02	Tin-Plated Brass	42913-2	671510-7[1]	—
A	10-6	5–15	**.145–.290** 3.68–7.37	1/4	**.040** 1.02	Tin-Plated Brass	61868-1	566263-1[1]	—
				1/4	**.040** 1.02	Br. Tin-Plated Brass	61868-2	566263-1[1]	—
				10	**.040** 1.02	Tin-Plated Brass	61866-1	566263-1[1]	—

[1]Requires use of AMP-O-LECTRIC Terminating Machine **Part No. 1-471273-2.**
Note: Applicator Part Numbers are for existing machine models. For Applicators for AMP-O-LECTRIC Model "G" Terminating Machine, call the Tooling Assistance Center.

SOURCE: Catalog 82227

Specifications subject to change.

1-800-522-6752
Product Information Center/ AMP FAX Service

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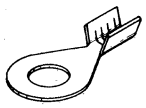
Tooling/Technical Assistance Center

Ring Tongue Terminals, Non-Insulation Support



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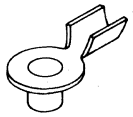

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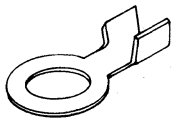

C

Type	Wire Range AWG	Wire Range mm²	Stud Size/ Dia.	Stock Thk.	Material and Finish	Part Numbers	Quick Change Applicator Nos. Model K	Quick Change Applicator Nos. Model T
B	24-20	0.6–0.5	2	**.012** 0.30	Brass	61463-1	466474-4	567331-1
A	22-18	0.3–0.9	6	**.020** 0.51	Tin-Plated Brass	62686-2	466208-2	—
C	22-16	0.3–1.4	**.125** 3.18	**.020** 0.51	Tin-Plated Brass	42185-2	687863-2	687863-1
			5	**.020** 0.51	Brass	34578	687860-2	687860-1
			2	**.020** 0.51	Brass	40668	687861-2	687861-1
			8	**.020** 0.51	Brass	40749	687864-3	687864-1
			4	**.020** 0.51	Brass	40777	687861-2	687861-1
			4	**.020** 0.51	Tin-Plated Brass	40810	687864-3	687864-1
			6	**.020** 0.51	Tin-Plated Brass	40811	687864-3	687864-1
			6	**.020** 0.51	Tin-Plated Steel	40811-1	687864-3	687864-1
A	20-16	0.5–1.4	8	**.020** 0.51	Tin-Plated Brass	40812	687864-3	687864-1
			.096 2.44	**.020** 0.51	Tin-Plated Brass	40816	687861-2	687861-1
			.130 3.30	**.020** 0.51	Tin-Plated Brass	40884	687860-2	687860-1
			6	**.030** 0.76	Tin-Plated Brass	40976	687814-2	687814-1
			.096 2.44	**.020** 0.51	Nickel-Plated Steel	42204-1	687861-2	687861-1
			4	**.020** 0.51	Nickel-Plated Steel	63676-1	687861-2	687861-1
			.131 3.33	**.020** 0.51	Tin-Plated Brass	63243-1	687864-3	687864-1
			.096 2.44	**.020** 0.51	Tin-Plated Brass	63457-1	687860-2	687860-1
A	20-14	0.5–2	6	**.020** 0.51	Brass	40702	687816-2	687816-1
			8	**.020** 0.51	Brass	34812	687813-3	687813-1
			10	**.020** 0.51	Brass	34839	687813-3	687813-1
			6	**.020** 0.51	Brass	34848	687813-3	687813-1
			8	**.030** 0.76	Tin-Plated Brass	40517	687806-3	687806-1
			6	**.020** 0.51	Tin-Plated Brass	40593	687813-3	687813-1
A	18-14	0.8–2	8	**.020** 0.51	Tin-Plated Brass	40594	687813-3	687813-1
			10	**.020** 0.51	Tin-Plated Brass	40595	687813-3	687813-1
			6	**.020** 0.51	Pre-Ni Plated Steel	40979	687813-3	687813-1
			.096 2.44	**.020** 0.51	Brass	41006	687817-2	—
			8	**.020** 0.51	Pre-Ni Plated Steel	41346	687813-3	687813-1
C	18-14	0.8–2	8	**.020** 0.51	Brass	40951	687815-2	687815-1

Note: Applicator Part Numbers are for existing machine models. For Applicators for AMP-O-LECTRIC Model "G" Terminating Machine, call the Tooling Assistance Center.

SOURCE: Catalog 82227

Ring Tongue Terminals, Non-Insulation Support
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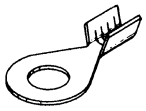

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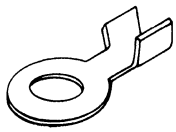

B

Type	Wire Range AWG	Wire Range mm²	Stud Size/ Dia.	Stock Thk.	Material and Finish	Part Numbers	Quick Change Applicator Nos. Model K	Quick Change Applicator Nos. Model T
A	18-14	0.8–2	4	**.025** 0.64	Tin-Plated Brass	42054-2	687820-2	687820-1
			6	**.025** 0.64	Brass	42110-1	687815-5	687815-4
			10	**.025** 0.64	Brass	42110-3	687815-5	687815-4
			6	**.025** 0.64	Tin-Plated Brass	42111-1	687815-5	687815-4
			8	**.025** 0.64	Tin-Plated Brass	42111-2	687815-5	687815-4
			10	**.025** 0.64	Tin-Plated Brass	42111-3	687815-5	687815-4
			10	**.025** 0.64	Stainless Steel	42716-2	687805-3	687805-1
			.130 3.30	**.020** 0.51	Tin-Plated Brass	60250-2	687924-2	—
			10	**.030** 0.76	Brass	40796	687806-3	687806-1
			10	**.030** 0.76	Tin-Plated Brass	40977	687806-3	687806-1
B	18-14	0.8–2	6	**.020** 0.51	Tin-Plated Brass	61142-2	687815-2	687815-1
A	12-10	3–6	8	**.040** 1.02	Tin-Plated Brass	40523	687803-5	687803-4
			10	**.040** 1.02	Tin-Plated Brass	40524	687803-5	687803-4
			10	**.040** 1.02	Tin-Plated Copper	41090[2]	687803-5	687803-4
			1/4	**.040** 1.02	Tin-Plated Copper	41341	671643-1[1]	—
			1/4	**.040** 1.02	Tin-Plated Brass	41356	671643-1[1]	—
			10	**.040** 1.02	Brass	41911	687803-5	687803-4
			8	**.040** 1.02	Brass	42425-1	687803-5	687803-4
			10	**.040** 1.02	Tin-Plated Copper	42555-1[3]	671643-2[1]	—
			5/16	**.040** 1.02	Tin-Plated Copper	42890-1	671643-2[1]	—

[1]Requires use of AMP-O-LECTRIC Terminating Machine **Part No. 1-471273-3.**
[2]Tongue width .343 [8.71]
[3]Tongue width .500 [12.70]
Note: Applicator Part Numbers are for existing machine models. For Applicators for AMP-O-LECTRIC Model "G" Terminating Machine, call the Tooling Assistance Center.

SOURCE: Catalog 82227

Specifications subject to change.

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Ring Tongue Terminals, Non-Insulation Support
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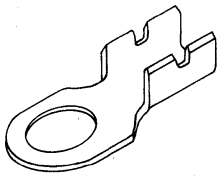
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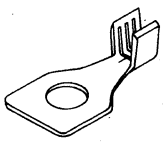
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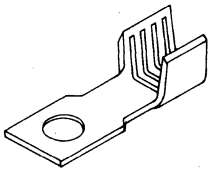
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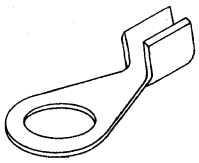
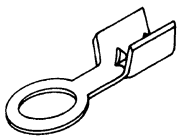

D

Type	Wire Range		Stud Size/ Dia.	Stock Thk.	Material and Finish	Part Numbers	Quick Change Applicator Nos.	
	AWG	mm²					Model K	Model T
C	12-10	3–6	6	.030 0.76	Tin-Plated Brass	640257-1	466130-2	—
B	10-8	5–8	10	.040 1.02	Tin-Plated Brass	42673-2	567059-2	567059-1
D	10-6	5–15	5/16	.050 1.27	Tin-Plated Brass	61546-1	565947-2[1]	—
			10	.050 1.27	Tin-Plated Brass	485015-1	565947-2[1]	—
			10	.050 1.27	Brass	485015-2	565947-2[1]	—
A	8	8	1/4	.040 1.02	Brass	40797	671877-4[2]	—

[1]Requires use of 10 ton Benchmaster Machine **Part No. 459631-1.**
[2]Requires use of 5 ton Benchmaster Machine **Part No. 565433-4.**
Note: Applicator Part Numbers are for existing machine models. For Applicators for AMP-O-LECTRIC Model "G" Terminating Machine, call the Tooling Assistance Center.

SOURCE: Catalog 82227

Ring Tongue Terminals, Insulation Piercing



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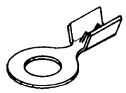

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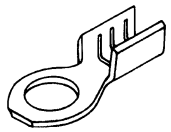
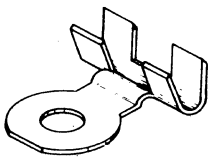


C

Type	Wire Range AWG	Wire Range mm²	Insul. Dia. Range	Stud Size/ Dia.	Stock Thk.	Material and Finish	Part Numbers	Quick Change Applicator Nos. Model K	Quick Change Applicator Nos. Model T
B	22-20	0.3–0.6	**.050–.065** 1.27–1.65	**.096** 2.44	**.013** 0.33	Tin-Plated Brass	41376	466071-2	—
				5	**.013** 0.33	Tin-Plated Brass	41409	466071-2	—
				2	**.013** 0.33	Nickel-Plated Brass	60422-3	466071-2	—
C	Tinsel Wire		**.030–.035** 0.76–0.89	5	**.014** 0.36	Gold-Plated Brass	61505-1[2]	565935-1[1]	—
				5	**.014** 0.36	Tin-Plated Brass	61505-2[2]	565935-1[1]	—
				5	**.014** 0.36	Tin-Plated Brass	640189-1[2]	687687-2	—
A	18-16	0.8–1.4	**.110–.130** 2.79–3.30	10	**.016** 0.41	Brass	61853-1	466285-3	—

[1]Requires use of AMP-O-LECTRIC Terminating Machine **Part No. 1-471273-3.**
[2]Insulation penetrating.
Note: Applicator Part Numbers are for existing machine models. For Applicators for AMP-O-LECTRIC Model "G" Terminating Machine, call the Tooling Assistance Center.

Ring Tongue Terminals, Flag



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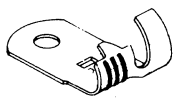


B

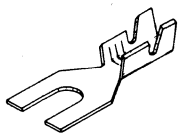
C

Type	Wire Range AWG	Wire Range mm²	Insul. Dia. Range	Stud Size/ Dia.	Stock Thk.	Material and Finish	Part Numbers	Quick Change Applicator Nos. Model K	Quick Change Applicator Nos. Model T
A	18-16	0.8–1.4	—	6	**.020** 0.51	Tin-Plated Brass	41443	686941-4	686941-5
C	18-14	0.8–2	**.100–.140** 2.54–3.56	**.176** 4.47	**.020** 0.51	Tin-Plated Brass	61443-1	687133-2	687133-1
B	18-12	0.8–3	**.110–.210** 2.79–5.33	**.146** 3.71	**.018** 0.46	Tin-Plated Brass	42189-1	687393-5	687393-1
				.172 4.37	**.018** 0.46	Tin-Plated Brass	42190-1	687393-5	687393-1
				.203 5.16	**.018** 0.46	Tin-Plated Brass	42191-1	687393-5	687393-1

Note: Applicator Part Numbers are for existing machine models. For Applicators for AMP-O-LECTRIC Model "G" Terminating Machine, call the Tooling Assistance Center.

SOURCE: Catalog 82227

Spade Tongue Terminals, Insulation Support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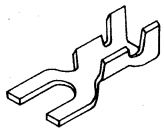
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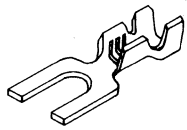
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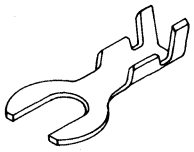
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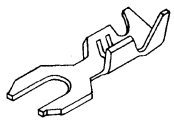
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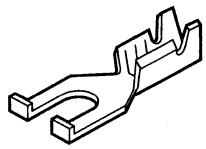
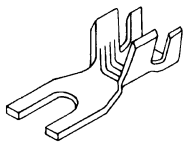

Flanged†

Type	Wire Range AWG	Wire Range mm²	Insul. Dia. Range	Stud Size/ Dia.	Stock Thk.	Material and Finish	Part Numbers	Quick Change Applicator Nos. Model K	Model T	Model G
E	28-22	0.08–0.4	**.035–.045** 0.89–1.14	5	**.016** 0.41	Tin-Plated Brass	350502-1	466200-2	466200-1	466200-4
			.035–.045 0.89–1.14	5	**.016** 0.41	Brass	350502-2	466200-2	466200-1	466200-4
A	26-20	0.12–0.6	**.048–.078** 1.22–1.98	6	**.020** 0.51	Tin-Plated Brass	60124-2	687962-2	687962-1	—
				.185 4.70	**.020** 0.51	Tin-Plated Brass	63374-1	567172-2	567172-1	—
A	24-20	0.2–0.6	**.080–.100** 2.03–2.54	8	**.020** 0.51	Tin-Plated Brass	41589	687881-3 687881-4†	687881-1 —	—
			.080–.100 2.03–2.54	10	**.020** 0.51	Tin-Plated Brass	41590	687881-3 687881-4†	687881-1 —	—
			.048–.078 1.22–1.98	**.115** 2.92	**.020** 0.51	Tin-Plated Brass	42160-2	687960-2	—	—
			.048–.078 1.22–1.98	6	**.014** 0.36	Tin-Plated Brass	60445-2	466019-2 466019-3†	466019-1	—
			.048–.078 1.22–1.98	10	**.014** 0.36	Tin-Plated Brass	60501-1	466019-2 466019-3†	466019-1	—
D	24-20	0.2–0.6	**.075–.100** 1.91–2.54	4	**.020** 0.51	Tin-Plated Brass	61238-1	466272-2	466272-1	—
A	20-16	0.5–1.4	**.090–.130** 2.29–3.30	6	**.020** 0.51	Tin-Plated Brass	40763	687841-2 687841-4†	687841-1 687841-3†	—
				8	**.020** 0.51	Tin-Plated Brass	41343	687841-2 687841-4†	687841-1 687841-3†	—
C	20-16	0.5–1.4	**.100–.140** 2.54–3.56	6	**.020** 0.51	Brass	60389-1	466211-4 466211-2†	466211-3 466211-1†	—
				8	**.020** 0.51	Brass	60390-1	466211-4 466211-2†	466211-3 466211-1†	—
B	18-14	0.8–2	**.100–.140** 2.54–3.56	10	**.030** 0.76	Tin-Plated Brass	40808	687859-2	687859-1	—
			.130–.180 3.30–4.57	8	**.025** 0.64	Tin-Plated Brass	60251-2	687825-3	687825-1	—
A	18-14	0.8–2	**.130–.180** 3.30–4.57	6	**.020** 0.51	Tin-Plated Brass	60725-1	466670-2 466670-4†	466670-1	—
			.100–.140 2.54–3.56	6	**.018** 0.46	Tin-Plated Brass	60773-2	466095-2 466085-2†	466095-1 466085-1†	466095-5
				8	**.018** 0.46	Brass	60774-1	466095-2 466085-2†	466095-1 466085-1†	466095-5
				8	**.018** 0.46	Tin-Plated Brass	60774-2	466095-2 466085-2†	466095-1 466085-1†	466095-5
				10	**.018** 0.46	Brass	60775-1	466095-2 466085-2†	466095-1 466085-1†	466095-5

†Terminals flangeable by designated applicator.
Note: Applicator Part Numbers are for existing machine models. For Applicators for AMP-O-LECTRIC Model "G" Terminating Machine, call the Tooling Assistance Center.

SOURCE: Catalog 82227

Spade Tongue Terminals, Insulation Support
(Continued)



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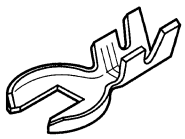

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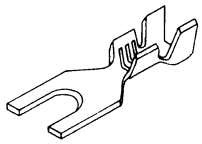


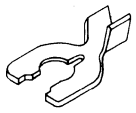
C

Type	Wire Range AWG	Wire Range mm²	Insul. Dia. Range	Stud Size/ Dia.	Stock Thk.	Material and Finish	Part Numbers	Quick Change Applicator Nos. Model K	Model T	Model G
B	18-14	0.8–2	**.120–.180** 3.05–4.57	**.205 × .291** 5.21 × 7.39	**.030** 0.76	Tin-Plated Copper	60998-1	565750-1[1]	—	—
C	18-14	0.8–2	**.080–.150** 2.03–3.81	10	**.025** 0.64	Tin-Plated Brass	61857-2	687784-2	687784-1	687784-3
A	10-6	5–15	**.145–.290** 3.68–7.37	10	**.040** 1.02	Tin-Plated Brass	61855-1	566263-1[1]	—	—

[1]Requires use of AMP-O-LECTRIC Terminating Machine **Part No. 1-471273-2.**
Note: Applicator Part Numbers are for existing machine models. For Applicators for AMP-O-LECTRIC Model "G" Terminating Machine, call the Tooling Assistance Center.

Spring Spade

A
Insulation Support



B
Non-Insulation Support

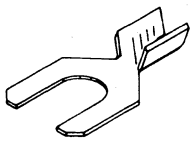
Type	Wire Range AWG	Wire Range mm²	Insul. Dia. Range	Stud Size/ Dia.	Stock Thk.	Material and Finish	Part No.	Quick Change Applicator Nos. Model K	Model T
A	18-14	0.8–2	**.100–.140** 2.54–3.56	8	**.030** 0.76	Tin-Plated Brass	42168-2	687859-2	687859-1
				10	**.030** 0.76	Tin-Plated Brass	42169-2	687859-2	687859-1
				6	**.030** 0.76	Tin-Plated Brass	60187-2	687859-2	687859-1
A	16-12	1.4–3	**.110–.150** 2.79–3.81	8	**.030** 0.76	Tin-Plated Brass	62795-1	466794-2	—
B	20-16	0.5–1.4	—	**.138** 3.51	**.020** 0.51	Tin-Plated Brass	485073-1	687866-3	—
	18-14	0.8–2	—	8	**.020** 0.51	Tin-Plated Brass	350568-1	687921-2	687921-1
B	14-10	2.0–5.0	—	10	**.040** 1.02	Brass	63610-1	567420-2	567420-1
				10	**.040** 1.02	Tin-Plated Brass	63610-2	567420-2	567420-1

Note: Applicator Part Numbers are for existing machine models. For Applicators for AMP-O-LECTRIC Model "G" Terminating Machine, call the Tooling Assistance Center.

SOURCE: Catalog 82227

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

Spade Tongue Terminals, Non-Insulation Support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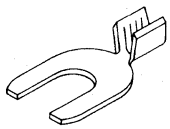
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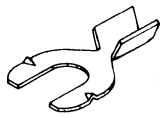
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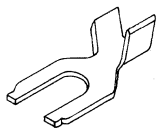
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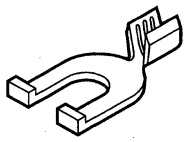
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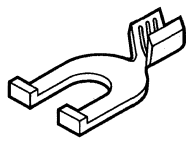

Flanged†

Type	Wire Range AWG	Wire Range mm²	Stud Size/ Dia.	Stock Thk.	Material and Finish	Part Numbers	Quick Change Applicator Nos. Model K	Quick Change Applicator Nos. Model T
D	20-16	0.5–1.4	6	**.020** 0.51	Tin-Plated Brass	42318-2	567225-2	—
B	18-14	0.8–2	10	**.030** 0.76	Tin-Plated Brass	40521	567065-2† 687806-3	567065-1† 687806-1
A	18-14	0.8–2	6	**.025** 0.64	Brass	40577	687810-6 687810-8†	687810-5 687810-7†
C	18-14	0.8–2	**.195** 4.95	**.025** 0.64	Brass	40586[1]	687807-2	—
D	18-14	0.8–2	8	**.025** 0.64	Brass	40705	687810-6 687810-8†	687810-5 687810-7†
			8	**.025** 0.64	Tin-Plated Brass	41473	687810-6 687810-8†	687810-5 687810-7†
B	12-10	3–6	10	**.030** 0.76	Brass	40891	687833-2 687833-3†	687833-1 —
			10	**.030** 0.76	Tin-Plated Brass	41495	687833-2 687833-3†	687833-1 —
			8	**.030** 0.76	Tin-Plated Brass	42113-2	687833-2 687833-3†	687833-1 —
E	12-10	3–6	10	**.040** 1.02	Brass	63526-1	671682-1[2]	—

[1]SPADE-LOK Terminal.
[2]Standard Applicator. Requires use of AMP-O-LECTRIC Terminating Machine **Part No. 1-471273-2**.
†Terminals flangeable by designated applicator.
Note: Applicator Part Numbers are for existing machine models. For Applicators for AMP-O-LECTRIC Model "G" Terminating Machine, call the Tooling Assistance Center.

Spade Hook Terminals

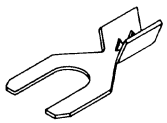
H

Type	Wire Range AWG	Wire Range mm²	Stud Size/ Dia.	Stock Thk.	Material and Finish	Part Numbers	Quick Change Applicator Nos. Model K	Quick Change Applicator Nos. Model T
H	18-14	0.8–2	10	**.020** 0.51	Tin-Plated Brass	41461	687813-3	687813-1

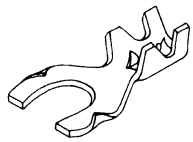
Note: Applicator Part Numbers are for existing machine models. For Applicators for AMP-O-LECTRIC Model "G" Terminating Machine, call the Tooling Assistance Center.

SOURCE: Catalog 82227

Spade Tongue Terminals, Spade Insulation Piercing



A

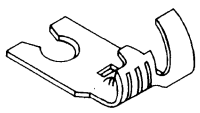


B

Type	Wire Range AWG	Wire Range mm²	Insul. Dia. Range	Stud Size/ Dia.	Stock Thk.	Material and Finish	Part Numbers	Quick Change Applicator Nos. Model K	Quick Change Applicator Nos. Model T
A	28-22	0.08–0.4	**.035–.040** 0.89–1.02	5	**.016** 0.41	Brass	61498-1	466003-2	—
				5	**.016** 0.41	Tin-Plated Brass	61498-2	466003-2	—
				5	**.016** 0.41	Pre-Tin Plated Brass	61498-3	466003-2	—
A	26-22	0.12–0.4	**.058–.062** 1.47–1.58	5	**.020** 0.51	Tin-Plated Brass	41933	466072-2	—
			.045–.050 1.14–1.27	5	**.016** 0.41	Tin-Plated Brass	60234-2	466745-1,-2	—
			.035–.045 0.89–1.14	6	**.016** 0.41	Tin-Plated Brass	61385-2	466149-2	466149-1
			.045–.050 1.14–1.27	5	**.016** 0.41	Brass	61519-1	466774-2	466774-1
			.045–.050 1.14–1.27	5	**.016** 0.41	Tin-Plated Brass	640260-2	466745-1,-2	—
B	20-16	0.5–1.4	**.085–.105** 2.16–2.67	**.195** 4.95	**.020** 0.51	Tin-Plated Brass	40766[2]	466575-2	466575-1
A	20-18	0.5–0.8	**.065–.080** 1.65–2.03	5	**.020** 0.51	Tin-Plated Brass	42339-2	672185-1[1]	—

[1]Requires use of AMP-O-LECTRIC Terminating Machine **Part No. 1-471273-3.**
[2]SPADE-LOK Terminal.
Note: Applicator Part Numbers are for existing machine models. For Applicators for AMP-O-LECTRIC Model "G" Terminating Machine, call the Tooling Assistance Center.

Flag Spade



A

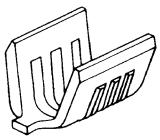
Type	Wire Range AWG	Wire Range mm²	Insul. Dia. Range	Stud Size/ Dia.	Stock Thk.	Material and Finish	Part Number	Quick Change Applicator Nos. Model K	Quick Change Applicator Nos. Model T
A	18-12	0.8–3	**.110–.210** 2.79–5.33	12	**.018** 0.46	Brass	63053-1	565510-1[1]	687393-1

[1]Requires use of AMP-O-LECTRIC Terminating Machine **Part No. 1-471273-3.**
Note: Applicator Part Numbers are for existing machine models. For Applicators for AMP-O-LECTRIC Model "G" Terminating Machine, call the Tooling Assistance Center.

SOURCE: Catalog 82227

Splices,

Non-Insulation Support Side Feed



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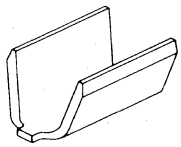
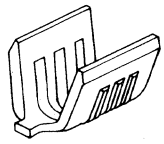


B

Type	Wire Range CMA	Wire Range mm²	Stock Thk.	Material	Part Numbers	Applicator Nos.[1]	Quick Change Applicator Nos. Model K
A	400–1600	0.20–0.81	.016 0.41	Brass	62759-1	566270-2	—
A	1200–2600	0.61–1.32	.020 0.51	Brass	60372-1	672088-2	—
A	1970–4940	1.01–2.52	.020 0.51	Brass	63130-2	566375-1	—
			.020 0.51	Tin-Plated Brass	63130-3	566375-1	—
A	3000–8400	1.52–4.28	.020 0.51	Brass	485043-1	566376-1	—
			.020 0.51	Tin-Plated Brass	485043-2	566376-1	—
B	5000–16000	2.53–8.11	.025 0.64	Brass	63625-1	566372-2	—
A	10000–16000	5.07-8.11	.031 0.79	Brass	61299-3	566347-1	567387-1
			.031 0.79	Tin-Plated Brass	61299-2	566347-1	—
			.031 0.79	Tin-Plated Steel	61299-1	566347-1	—
A	10000–33000	5.07–11.65	.030 0.76	Brass	62754-1	566269-1	—

[1]Requires use of AMP-O-LECTRIC Terminating Machine **Part No. 1-471273-3**.

End Feed



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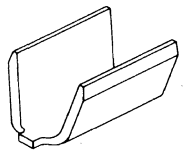


B

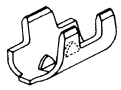
Type	Wire Range CMA	Wire Range mm²	Stock Thk.	Material	Part Numbers	Applicator Nos.[1]	Quick Change Applicator Nos. Model K
B	800–2500	0.41-1.27	.016 0.41	Brass	41459	670953	—
			.016 0.41	Tin-Plated Brass	41313	670953	—
A	1000–2600	0.51-1.32	.020 0.51	Brass	41974	1-671561-3	466606-1
			.020 0.51	Tin-Plated Brass	41975	1-671561-3	466606-1
A	2000–5300	1.01-2.69	.020 0.51	Brass	61492-1	670786-3	687871-1
			.020 0.51	Tin-Plated Brass	40868	670786-3	687871-1
A	3232–8282	1.64-4.2	.020 0.51	Brass	40509	672180-4	466118-2
			.020 0.51	Tin-Plated Brass	40552	672180-4	466118-2
B	4000–10000	2.03-5.07	.025 0.64	Brass	62357-1	670785-1	466735-1
			.025 0.64	Tin-Plated Brass	41996	670785-1	466735-1
B	12000–18000	6.08–9.12	.025 0.64	Brass	60997-1	565724-1	466667-1

[1]Requires use of AMP-O-LECTRIC Terminating Machine **Part No. 1-471273-3**.

SOURCE: Catalog 82227

Splices
(Continued)

Insulation Piercing End Feed (22-16 AWG wire, 7 Strands Min.)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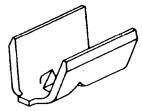

B

Type	Wire Range AWG	Wire Range mm²	Insul. Dia. Range	Stock Thk.	Material	Part Numbers	Applicator Nos.[1]
A	20-16	0.5–1.4	**.070–.090** 1.78–2.29	**.020** 0.51	Tin-Plated Brass	40771	671737-4
B	22	0.3–0.4	**.050–.065** 1.27–1.65	**.012** 0.31	Brass	485064-1	566048-1,-2
					Ni-Plated Brass	485064-4	566048-1,-2

[1]Requires use of AMP-O-LECTRIC Terminating Machine **Part No. 1-471273-2.**

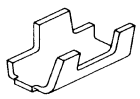
Insulation Support

A

Type	Wire Range CMA	Wire Range mm²	Insul. Dia. Range	Stock Thk.	Material	Part Number	Applicator Nos.[1]
A	1600–4100	0.81–2.08	**.105–.145** 2.67–3.68	**.012** 0.31	Brass	60806-1	565624-1

[1]Requires use of AMP-O-LECTRIC Terminating Machine **Part No. 1-471273-2.**

Identification Bands


A

B

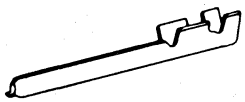
Type	Insul. Dia. Range	Stock Thk.	Material	Part Numbers	Applicator Nos.[2]
A	**.125–.220** 3.18–5.59	**.020** 0.51	Aluminum	41276	671505[1]
B	**.150–.300** 3.81–7.62	**.030** 0.76	Brass	41282	671803[1]

[1]One to three digits stamped on bands in crimping operation.
[2]Requires use of AMP-O-LECTRIC Terminating Machine **Part No. 1-471273-2.**

SOURCE: Catalog 82227

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

Pins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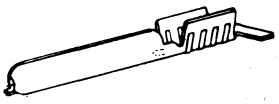
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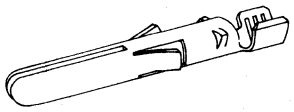
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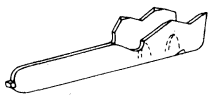
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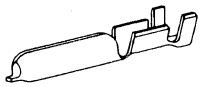
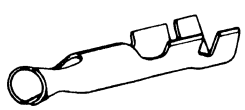

F

Type	Wire Range AWG	Wire Range mm²	Insul. Dia. Range	Pin Dia.	Stock Thk.	Material and Finish	Part Numbers	Quick Change Applicator Nos. Model K	Quick Change Applicator Nos. Model T
A	28-26	0.08–0.12	**.042–.073** 1.07–1.85	**.080** 2.03	**.010** 0.25	Tin-Plated Brass	350053-2	466634-2	—
B	26-22	0.12–0.4	—	**.083** 2.11	**.016** 0.41	Tin-Plated Brass	62328-2[1]	466380-2	466380-1
F	24-20	0.2–0.6	**.060–.103** 1.52–2.62	**.125** 3.18	**.016** 0.41	Brass	62074-1	466182-2	466182-1
E	24-20	0.2–0.6	**.060–.103** 1.52–2.62	**.125** 3.18	**.016** 0.41	Brass	62344-1	466182-2	466182-1
A	24-20	0.2–0.6	**.042–.073** 1.07–1.85	**.080** 2.03	**.010** 0.25	Tin-Plated Brass	62358-1	466399-2	—
				.080 2.03	**.010** 0.25	Br. Tin-Lead Plated Brass	62358-4	466399-2	—
E	22-20	0.4–0.6	**.075–.090** 1.91–2.29	**.125** 3.18	**.016** 0.41	Brass	60115-1[1]	—	567158-1
				.125 3.18	**.016** 0.41	Brass	60115-4[1]	672030[2]	—
C	22-18	0.3–0.9	—	**.130** 3.30	**.016** 0.41	Brass	62505-1	466754-2	466754-1
B	22-16	0.3–1.4	—	**.093** 2.36	**.012** 0.31	Tin-Plated Brass	62820-1[1]	—	—
B	18-14	0.9–2.0	—	**.109** 2.77	**.016** 0.41	Tin-Plated Brass	61013-2[1]	466122-2	466122-1
				.109 2.77	**.016** 0.41	Brass	62616-1	466122-2	466122-1
D	**.085 × .035** 2.16 × 0.89	Flat Wire	**.085** 2.16	**.109** 2.77	**.020** 0.51	Brass	61674-1[3]	—	—

[1]Can be molded.
[2]Requires use of AMP-O-LECTRIC Terminating Machine **Part No. 1-471273-3.**
[3]Insulation Piercing.
Note: Applicator Part Numbers are for existing machine models. For Applicators for AMP-O-LECTRIC Model "G" Terminating Machine, call the Tooling Assistance Center.

SOURCE: Catalog 82227

Receptacles



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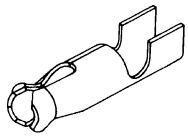

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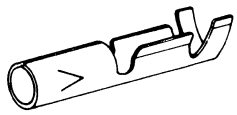

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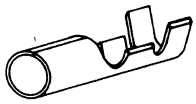

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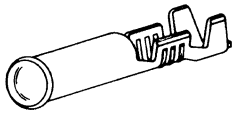
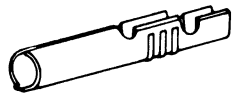


E



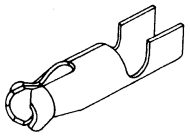
F

Type	Wire Range AWG	Wire Range mm²	Insul. Dia. Range	Pin Dia.	Stock Thk.	Material and Finish	Part Numbers	Quick Change Applicator Nos. Model K	Quick Change Applicator Nos. Model T
D	32-26	0.03–0.15	**.060** 1.52 Max.	**.050** 1.27	**.008** 0.2	Pre Tin-Plated Phos. Br.	61547-2	466475-2	—
C	32-30	0.03–0.05	**.060** 1.52 Max.	**.050** 1.27	**.008** 0.2	Gold-Plated Brass	61582-4	466475-2	—
B	28-26	0.09–0.15	—	**.040** 1.02	**.012** 0.31	Gold-Plated Phos. Br.	62185-1	687489-2	—
				.040 1.02	**.012** 0.31	Tin-Plated Phos. Br.	62185-2	687489-2	—
A	24-20	0.2–0.6	**.048–.071** 1.22–1.8	**.040** 1.02	**.012** 0.31	Tin-Plated Phos. Br.	42428-5[2]	466388-2	466388-1
				.040 1.02	**.012** 0.31	Si Plated Phos. Br.	42428-8	466388-2	466388-1
A	24-20	0.2–0.6	**.048–.071** 1.22–1.8	**.050** 1.27	**.012** 0.31	Tin-Plated Phos. Br.	60348-4	466388-2	466388-1
A	24-20	0.2–0.6	**.048–.071** 1.22–1.8	**.032** 0.81	**.012** 0.31	Tin-Plated Phos. Br.	60373-2	—	—
F	24-20	0.2–0.6	**.090–.130** 2.27–3.3	**.093** 2.36	**.010** 0.25	Brass	60469-1	466089-2	466089-1
A	24-20	0.2–0.6	**.048–.071** 1.22–1.8	**.055** 1.4	**.013** 0.33	Tin-Plated Phos. Br.	60885-2[4]	466388-2	466388-1
E	24-20	0.2–0.6	**.070** 1.78 Max.	**.062** 1.57	**.010** 0.25	Tin-Plated Brass	61622-1	466443-2	466443-1

[2]Reverse reel of **Part No. 42428-2.**
[4]Reverse reel of **Part No. 42429-2.**
Note: Applicator Part Numbers are for existing machine models. For Applicators for AMP-O-LECTRIC Model "G" Terminating Machine, call the Tooling Assistance Center.

SOURCE: Catalog 82227

Receptacles
(Continued)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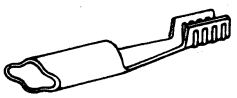
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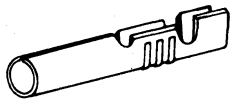
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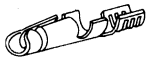
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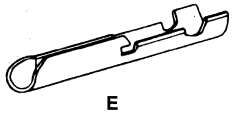
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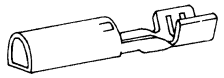
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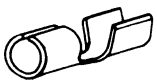
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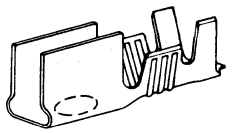

H

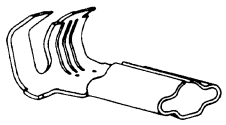
J

Type	Wire Range AWG	Wire Range mm²	Insul. Dia. Range	Pin Dia.	Stock Thk.	Material and Finish	Part Numbers	Quick Change Applicator Nos. Model K	Model T	Model G
A	24-20	0.2–0.6	—	**.040** 1.02	**.012** 0.31	Tin-Plated Phos. Br.	62160-1[5]	—	—	—
			—	**.040** 1.02	**.012** 0.31	Tin-Plated Phos. Br.	62405-2[6]	466374-5	—	—
C	24-18	0.2–0.9	**.045–.085** 1.14–2.16	**.093** 2.36	**.012** 0.31	Tin-Plated Brass	42827-2	687956-3	687956-1	—
E	22-20	0.4–0.6	**.075–.100** 1.91–2.54	**.106** 2.69	**.012** 0.31	Tin-Plated Brass	60908-1	466131-2	466131-1	—
C	22-18	0.4–0.9	**.090–.130** 2.29–3.3	**.093** 2.36	**.012** 0.31	Tin-Plated Brass	41854	687890-3	687890-1	687890-6
			.090–.130 2.29–3.3	**.093** 2.36	**.012** 0.31	Brass	41870	687890-3	687890-1	687890-6
			.090–.130 2.29–3.3	**.093** 2.36	**.012** 0.31	Silver-Plated Brass	41870-1	687890-3	687890-1	687890-6
D	22-18	0.4–0.9	—	**.093** 2.36	**.010** 0.26	Brass	60440-1	687894-2	687894-1	—
H	22-18	0.4–0.9	**.100** Max. 2.54	**.093** 2.36	**.012** 0.31	Tin-Plated Brass	60884-3[2]	466714-2	466714-1	—
E	22-18	0.4–0.9	(2) **.060** Max. 1.52	**.106** 2.69	**.012** 0.31	Tin-Plated Brass	62402-1[3]	466470-2	—	—
F	22-18	0.4–0.9	—	**.109** 2.77	**.014** 0.36	Silver-Plated Brass	62720-2	466710-2	466710-1	—
J	22-18	0.4–0.9	—	**.125** 3.18	**.014** 0.36	Brass	63381-1	466871-2	466871-1	466871-3
G	20-18	0.6–0.9	—	**.119** 3.02	**.016** 0.41	Brass	40652	466574-2	466574-1	—
B	20-16	0.6–1.4	—	**.090** 2.29	**.018** 0.46	Tin-Plated Phos. Br.	60733-1[4]	687973-2	687973-1	—

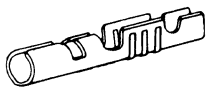
[2]Right-angle pin entry.
[3]Without ears.
[4]Corrugated serrations can be bent 90°.
[5]Tongue diameter .090 [2.29]
[6]Tongue diameter .100 [2.54]
Note: Applicator Part Numbers are for existing machine models. For Applicators for AMP-O-LECTRIC Model "G" Terminating Machine, call the Tooling Assistance Center.

SOURCE: Catalog 82227

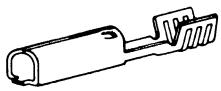
Receptacles
(Continued)



A



B



C

Type	Wire Range AWG	Wire Range mm²	Insul. Dia. Range	Pin Dia.	Stock Thk.	Material and Finish	Part Numbers	Quick Change Applicator Nos. Model K	Quick Change Applicator Nos. Model T
A	20-14	0.6–2.0	**.120–.170** 3.05–4.31	**.090** 2.29	**.018** 0.46	Tin-Plated Phos. Bronze	42745-2	565503-1[1]	687390-1
			.120–.170 3.05–4.31	**.090** 2.29	**.018** 0.46	Tin-Plated Phos. Bronze	60376-1[2]	565503-1[1]	687390-1
			.120–.170 3.05–4.31	**.090** 2.29	**.018** 0.46	Beryllium Copper	60376-2[2]	565503-1[1]	687390-1
B	18-16	0.9–1.4	**.090–.120** 2.29–3.05	**.093** 2.36	**.014** 0.36	Tin-Plated Brass	42101-2[3]	687963-2	687963-1
C	18-14	0.9–2.0	—	**.109** 2.77	**.014** 0.36	Brass	61012-1[4]	466061-2	466061-1
				.109 2.77	**.014** 0.36	Tin-Plated Brass	61012-3[4]	466061-2	466061-1

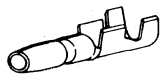
[1]Requires use of AMP-O-LECTRIC Terminating Machine **Part No. 1-471273-3**.
[2]Without locking dimple.
[3]Has locking feature for pin with indent.
[4]Can be molded.
Note: Applicator Part Numbers are for existing machine models. For Applicators for AMP-O-LECTRIC Model "G" Terminating Machine, call the Tooling Assistance Center.

SOURCE: Catalog 82227

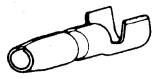
Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

SHUR-PLUG Terminals

.156 [3.96] Diameter



A

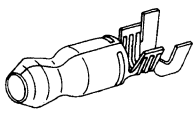


B

Type	Wire Range AWG	Wire Range mm²	Insul. Dia. Range	Stock Thk.	Material and Finish	Part Numbers	Quick Change Applicator Nos. Model K	Model T	Model G
A	20-16	0.6–1.4	**.095–.115** 2.41–2.92	**.018** 0.46	Pre Tin-Plated Brass	61388-1	466120-2	—	—
B	18-14	0.9–2	**.125–.160** 3.18–4.06	**.020** 0.51	Pre Tin-Plated Brass	41698	687423-2	—	—
A	18-14	0.9–2	**.085–.125** 2.16–3.18	**.018** 0.46	Brass	60766-1	466082-2	—	466082-3
			.085–.125 2.16–3.18	**.018** 0.46	Pre Tin-Plated Brass	60766-2	466082-2	—	466082-3
B	18-14	0.9–2	—	**.018** 0.46	Pre Tin-Plated Brass	61802-1	466168-2	466168-1	—
A	18-14	0.9–2	**.085–.210** 2.16–5.33	**.018** 0.46	Brass	61891-2	466153-2	—	—

Note: Applicator Part Numbers are for existing machine models. For Applicators for AMP-O-LECTRIC Model "G" Terminating Machine, call the Tooling Assistance Center.

.180 [4.57] Diameter



A

B

Type	Wire Range AWG	Wire Range mm²	Insul. Dia. Range	Stock Thk.	Material and Finish	Part Numbers	Quick Change Applicator Nos. Model K	Model T
A	24-22	0.2–0.4	**.058–.082** 1.47–2.08	**.018** 0.46	Tin Ni. Plated Brass	62416-1[1]	466527-2	466527-1
	20-16	0.6–1.4	**.090–.125** 2.29–3.18	**.018** 0.46	Brass	505038-1[1]	687975-2	687975-1
A	18-14	0.9–2	**.120–.175** 3.05–4.45	**.018** 0.46	Tin-Plated Brass	60660-1[1]	466088-2	466088-1
			.120–.175 3.05–4.45	**0.18** 0.46	Brass	60660-2[1]	466088-2	466088-1
			.090–.125 2.29–3.18	**.018** 0.46	Tin-Plated Brass	60793-1[1]	466081-2	466081-1
			.090–.125 2.29–3.18	**.018** 0.46	Pre Tin-Plated Brass	62739-1[1]	466081-2	466081-1
B	14-10	2–6	—	**.018** 0.46	Tin-Plated Brass	42865-3[1]	466433-2	466433-1

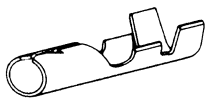
[1]Can be molded.
Note: Applicator Part Numbers are for existing machine models. For Applicators for AMP-O-LECTRIC Model "G" Terminating Machine, call the Tooling Assistance Center.

SOURCE: Catalog 82227

SHUR-PLUG Receptacles

.156 [3.96] Diameter

A

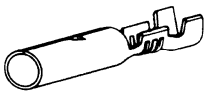


B

Type	Wire Range AWG	Wire Range mm²	Insul. Dia. Range	Stock Thk.	Material and Finish	Part Numbers	Quick Change Applicator Nos. Model K	Quick Change Applicator Nos. Model T
B	22-18	0.4–0.9	**.085–.125** 2.16–3.18	**.016** 0.41	Tin-Plated Brass	42581-2	687959-2	—
A	20-16	0.6–1.4	**.100–.140** 2.54–3.56	**.016** 0.41	Brass	60017-3	466436-2	466436-1
B	18-14	0.9–2	**.130–.175** 3.3–4.45	**.016** 0.41	Tin-Plated Brass	42142-1	687914-3	687914-1
				.016 0.41	Brass	42142-2	687914-3	687914-1

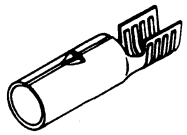
Note: Applicator Part Numbers are for existing machine models. For Applicators for AMP-O-LECTRIC Model "G" Terminating Machine, call the Tooling Assistance Center.

.180 [4.57] Diameter



A

B



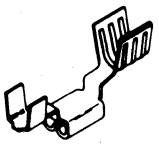
C

Type	Wire Range AWG	Wire Range mm²	Insul. Dia. Range	Stock Thk.	Material and Finish	Part Numbers	Quick Change Applicator Nos. Model K	Quick Change Applicator Nos. Model T	Quick Change Applicator Nos. Model G
A	20-16	0.6–1.4	**.090–.120** 2.29–3.05	**.016** 0.41	Brass	42531-1	687934-2	687934-1	—
			.090–.120 2.29–3.05	**.016** 0.41	Tin-Plated Brass	42531-2	687934-2	687934-1	—
B	20-16	0.6–1.4	**.100–.140** 2.54–3.56	**.016** 0.41	Brass	42700-1 42700-3[3]	566303-1[1] 466436-2	— 466436-1	—
			.100–.140 2.54–3.56	**.016** 0.41	Brass	42749-1 42749-4[4]	566303-1[1] 466436-2	— 466436-1	—
A	18-14	0.9–2	**.090–.125** 2.29–3.18	**.016** 0.41	Brass	60798-2	466093-2	466093-1	466093-3
			.090–.125 2.29–3.18	**.016** 0.41	Tin-Plated Brass	60798-4	466093-2	466093-1	466093-3
			.090–.125 2.29–3.18	**.016** 0.41	Brass	60799-2[2]	466093-2	466093-1	466093-3
			.090–.125 2.29–3.18	**.016** 0.41	Tin Ni-Plated Brass	60799-4[2]	466093-2	466093-1	466093-3
			.120–.175 3.05–4.45	**.016** 0.41	Brass	61412-1	466175-3	466175-1	—
			.120–.175 3.05–4.45	**.016** 0.41	Tin-Plated Brass	61412-2	466175-3	466175-1	—
C	14-10	2–6	—	**.016** 0.41	Brass	42868-1	466643-2	466643-1	—
			—	**.016** 0.41	Tin-Plated Brass	42868-2	466643-2	466643-1	—
			—	**.016** 0.41	Brass	42891-1[2]	466643-2	466643-1	—
			—	**.016** 0.41	Tin-Plated Brass	42891-2[2]	466643-2	466643-1	—

[1]Requires use of AMP-O-LECTRIC Terminating Machine **Part No. 1-471273-2.**
[2]No indent.
[3]Reverse reel of **Part No. 42700-1.**
[4]Reverse reel of **Part No. 42749-1.**
Note: Applicator Part Numbers are for existing machine models. For Applicators for AMP-O-LECTRIC Model "G" Terminating Machine, call the Tooling Assistance Center.

SOURCE: Catalog 82227

Tab Receptacles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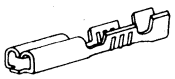
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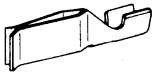
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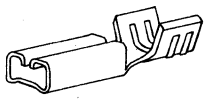
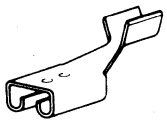

D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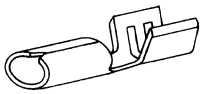
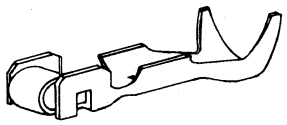

F


G

Type	Wire Range AWG	Wire Range mm²	Insul. Dia. Range	Stock Thk.	Material and Finish	Fits Tab	Part Numbers	Hand Tool Nos.	Quick Change Applicator Nos. Model K	Quick Change Applicator Nos. Model T
B	26-22	0.12–0.4	**.035–.065** 0.89–1.65	**.010** 0.25	Pre Tin Brass	**.031 × .093** 0.79 × 2.36	61813-1[6]	90204-5	466187-2	466187-1
			.035–.065 0.89–1.65	**.010** 0.25	Pre Tin Brass	**.014 × .093** 0.36 × 2.36	62041-1[7]	90204-5	466187-2	466187-1
G	26-22	0.12–0.4	**.035–.060** 0.89–1.52	**.008** 0.2	Gold-Plated Beryllium Copper	**.025 × .025** 0.64 × 0.64	61941-1	—	466487-2	466187-1
A	24-20	0.2–0.6	**.040–.080** 1.02–2.03	**.010** 0.25	Brass	**.045 × .045** 1.14 × 1.14	60524-1	90084	686169-2	686169-1
			.040–.080 1.02–2.03	**.010** 0.25	Gold-Plated Brass	**.045 × .045** 1.14 × 1.14	60524-3	90084	686169-2	686169-1
			.040–.080 1.02–2.03	**.010** 0.25	Tin-Plated Beryllium Copper	**.045 × .045** 1.14 × 1.14	60524-5	90084	686169-2	686169-1
			.040–.080 1.02–2.03	**.010** 0.25	Gold-Plated Brass	**.031 × .062** 0.79 × 1.57	60477-1	90084	686169-2	686169-1
			.040–.080 1.02–2.03	**.010** 0.25	Tin-Plated Brass	**.023 × .062** 0.58 × 1.57	60436-2	90084	686169-2	686169-1
B	24-20	0.2–0.6	**.040–.080** 1.02–2.03	**.010** 0.25	Tin-Plated Brass	**.031 × .062** 0.79 × 1.57	60900-1[1]	—	466449-2	466449-1
			.040–.080 1.02–2.03	**.010** 0.25	Gold-Plated Brass	**.031 × .062** 0.79 × 1.57	60900-2	—	466449-2	466449-1
			.040–.080 1.02–2.03	**.010** 0.25	Tin-Plated Brass	**.031 × .062** 0.79 × 1.57	60900-4[2]	—	466449-2	466449-1
			.040–.080 1.02–2.03	**.010** 0.25	Gold-Plated Brass	**.031 × .062** 0.79 × 1.57	60900-5[8]	—	466449-2	466449-1
			.040–.080 1.02–2.03	**.010** 0.25	Tin-Plated Brass	**.031 × .062** 0.79 × 1.57	61454-1[3]	—	—	—
F	24-20	0.2–0.6	—	**.010** 0.25	Tin-Plated Brass	**.015 × .050** 0.38 × 1.27	62352-1	—	466408-2	466408-1
E	22-20	0.3–0.6	—	**.010** 0.25	Tin-Plated Brass	**.037 × .125** 0.94 × 3.18	41989	—	466129-2	—
A	22-18	0.3–0.9	**.060–.110** 1.52–2.79	**.010** 0.25	Tin-Plated Brass	**.031 × .062** 0.79 × 1.57	61489-1	—	687122-2	—
			.060–.110 1.52–2.79	**.010** 0.25	Gold-Plated Brass	**.031 × .062** 0.79 × 1.57	61616-1	—	687122-2	—
B	22-18	0.3–0.9	**.050–.085** 1.27–2.16	**.010** 0.25	Pre Tin Brass	**.010 × .093** 0.25 × 2.36	63391-1[4,5]	—	—	—
			.050–.085 1.27–2.16	**.010** 0.25	Pre Tin Brass	**.010 × .093** 0.25 × 2.36	63391-2[5]	—	466100-2	—
B	22-18	0.3–0.9	**.080–.120** 2.03–3.05	**.010** 0.25	Pre Tin Brass	**.032 × .103** 0.81 × 2.62	60252-1[7]	46564	466005-2	466005-1
B	20-18	0.5–0.9	**.080–.120** 2.03–3.05	**.010** 0.25	Pre Tin Brass	**.020 × .103** 0.51 × 2.62	60432-1[7]	46564	466005-2	466005-1
				.010 0.25	Tin-Plated Brass	**.020 × .156** 0.51 × 3.96	62399-1	—	466005-2	466005-1
D	20-18	0.5–0.9	—	**.010** 0.25	Brass	**.010 × .110** 0.25 × 2.79	62589-1	—	466183-2	466183-1
E	20-16	0.5–1.3	—	**.010** 0.25	Tin-Plated Brass	**.032 × .125** 0.81 × 3.18	63615-1	—	—	—
C	18-14	0.8–2.0	—	**.025** 0.64	Brass	**.060 × .250** 1.52 × 6.35	60312-1	—	—	—

[1]Available in Loose piece form, order **Part No. 61454-1.**
[2]Reverse reel of **Part No. 60900-1.**
[3]Loose piece form of **Part No. 60900-1.**
[4]Loose piece form of **Part No. 63391-2.**
[5]Compliant base.
[6]No dimple.
[7]Dimple.
[8]Reverse reel of **Part No. 60900-2.**

Note: Applicator Part Numbers are for existing machine models. For Applicators for AMP-O-LECTRIC Model "G" Terminating Machine, call the Tooling Assistance Center.

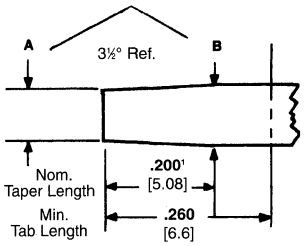
SOURCE: Catalog 82227

Taper Tab Receptacles

Precision formed taper tab receptacles are available to mate with tabs having front end dimensions of .078 [1.98] and .098 [2.49]. These receptacles are available in strip form, reel fed for high speed automatic machine termination.

Taper Tab Specifications

Difference between these two dimensions must be held from .0115 to .0125 [0.29 to 0.32]



¹Intersection must be clean, no offset and no increase in taper (both sides) over this length.

78 Series

A = .078 ± .001
[1.98 ± 0.03]

B = .090 ± .001
[2.29 ± 0.03]

Tab Thickness—.023/.016
[0.58/0.41]

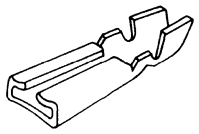
98 Series

A = .098 ± .001
[2.49 ± 0.03]

B = .110 ± .001
[2.79 ± 0.03]

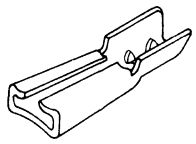
Tab Thickness—.025/.016
[0.64/0.41]

78 Series— Insulation Support



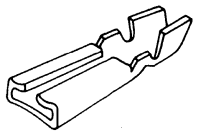
Wire Range AWG	Wire Range mm²	Insul. Dia. Range	Finish	Strip Form Part No. For Use With Standard Appl.	Strip Form Part No. For Use With Miniature Appl.	Hand Tool Part No.	Insertion Tool Part No.	Quick Change Applicator Nos. Model K	Quick Change Applicator Nos. Model T
24-22	0.2–0.4	.030–.050 0.76–1.27	Tin	—	42765-1	90072-2	380306-5	466386-2	466386-1

78 Series— Insulation Piercing



Wire Range AWG	Wire Range mm²	Insul. Dia. Range	Finish	Strip Form Part Nos. For Use With Standard Appl.	Strip Form Part Nos. For Use With Miniature Appl.	Hand Tool Part Nos.	Insertion Tool Part Nos.	Applicator Nos.
Tinsel	—	.065–.075 1.65–1.91	Gold	60442-1	—	47150	811034-3	670875-1
Tinsel	—	.065–.075 1.65–1.91	Nickel	60442-2	—	47150	811034-3	670875-1
Tinsel	—	.065–.075 1.65–1.91	Tin	42519-1	—	—	811034-3	672334-1

98 Series— Insulation Support

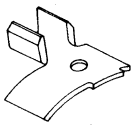


Wire Range AWG	Wire Range mm²	Insul. Dia. Range	Finish	Strip Form Part No. For Use With Standard Appl.	Strip Form Part No. For Use With Miniature Appl.	Hand Tool Part No.	Insertion Tool Part No.	Quick Change Applicator No.
24-22	0.2–0.4	.040–.060 1.02–1.52	Tin	—	60891-1	46564	380306-5	466447-2

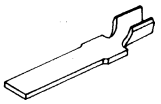
SOURCE: Catalog 82227

Contacts and Welding Tabs

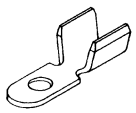
Non-Insulation Support



A



B

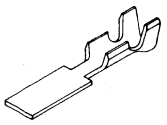


C

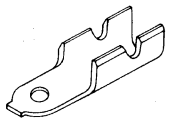
Type	Wire Range AWG	Wire Range mm²	Stock Thk.	Material	Part Numbers	Quick Change Applicator Nos. Model K	Quick Change Applicator Nos. Model T
A	18-14	0.8–2	.020 0.51	Phosphor Bronze	42920-4	670647-1	—
B	18-14 or (2)18	0.8–2 or (2)0.8–0.9	.016 0.41	Brass	42349-1[1]	672163-2	—
C	20-16	0.5–1.4	.020 0.51	Tin-Plated Steel	62153-1[2]	687797-2	—

[1]Tab bent up 60° in applicator.
[2]Dimple up.
Note: Applicator Part Numbers are for existing machine models. For Applicators for AMP-O-LECTRIC Model "G" Terminating Machine, call the Tooling Assistance Center.

Insulation Support



A

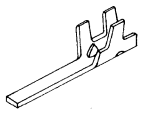


B

Type	Wire Range AWG	Wire Range mm²	Insul. Dia. Range	Stock Thk.	Material	Part Numbers	Quick Change Applicator Nos. Model K	Quick Change Applicator Nos. Model T
A	26-22	0.12–0.4	.080 Max. 2.3	.012 0.3	Pre Nickel-Plated Steel	62062-1	466613-2	—
B	20-16	0.3–0.9	.090–.130 2.29–3.30	.020 0.51	Tin-Plated Steel	40990-1	466160-2	466160-1

Note: Applicator Part Numbers are for existing machine models. For Applicators for AMP-O-LECTRIC Model "G" Terminating Machine, call the Tooling Assistance Center.

Insulation Piercing



A

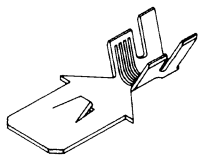
Type	Wire Range AWG	Wire Range mm²	Insul. Dia. Range	Stock Thk.	Material	Part Numbers	Quick Change Applicator Nos. Model K	Quick Change Applicator Nos. Model T
A	20-18	0.5–0.9	.065–.080 1.52–2.03	.020 0.51	Tin-Plated Brass	61248-1[1]	466288-2	—

[1]Applicator cuts to length.
Note: Applicator Part Numbers are for existing machine models. For Applicators for AMP-O-LECTRIC Model "G" Terminating Machine, call the Tooling Assistance Center.

SOURCE: Catalog 82227

Contacts—Brush

Insulation Support

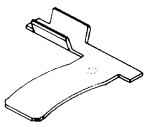


A

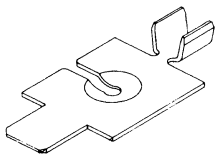
Type	Wire Range		Insul. Dia. Range	Stock Thk.	Material	Part Number	Quick Change Applicator Nos.	
	AWG	mm²					Model K	Model T
A	18-14	0.8–2	**.110–.160** 2.79–4.06	**.016** 0.41	Brass	61390-1	466127-3	—

Note: Applicator Part Numbers are for existing machine models. For Applicators for AMP-O-LECTRIC Model "G" Terminating Machine, call the Tooling Assistance Center.

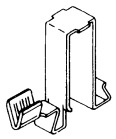
Non-Insulation Support



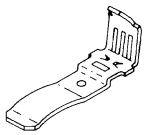
A



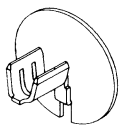
B



C



D



E

Type	Wire Range		Stock Thk.	Material	Part Numbers	Quick Change Applicator Nos.	
	AWG	mm²				Model K	Model T
A	18-14	0.8–2	**.020** 0.51	Phosphor Bronze	60812-1[1]	687327-2	687327-1
B	22-18	0.3–0.9	**.020** 0.51	Brass	62371-1[2]	466400-1	—
C	22-18	0.3–0.9	**.020** 0.51	Brass	62485-1[6]	565978-4	—
D	20-14	0.5–2.0	**.018** 0.46	Phosphor Bronze	62008-1[3,4]	687604-5	—
			.018 0.46	Phosphor Bronze	62009-1[3,4]	687603-5	—
E	24-20	0.2–0.6	**.018** 0.46	Brass	61933-1[2]	687425-2[5]	—
			.016 0.41	Brass	63020-1[2]	687425-2[5]	—

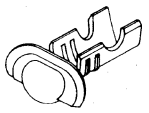
[1]Right-handed.
[2]For automatic brush machine.
[3]Dash number designates direction terminals come off the reel depending on equipment used.
[4]Tab lock.
[5]Carbon Brush Machine.
[6]Requires use of AMP-O-LECTRIC Terminating Machine **Part No. 1-471273-2.**
Note: Applicator Part Numbers are for existing machine models. For Applicators for AMP-O-LECTRIC Model "G" Terminating Machine, call the Tooling Assistance Center.

SOURCE: Catalog 82227

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

Contacts

Button Insulation Support



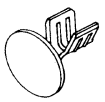
A

B

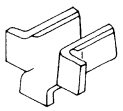
Type	Wire Range AWG	Wire Range mm²	Insul. Dia. Range	Stock Thk.	Material	Part Numbers	Quick Change Applicator Nos. Model K	Quick Change Applicator Nos. Model T
A	20-16	0.5–1.4	**.090–.120** 2.29–3.05	**.016** 0.41	Brass	42218-1[1]	466430-2	—
B	20-16	0.5–1.4	**.090–.125** 2.29–3.18	**.016** 0.41	Tin-Plated Brass	61165-1	687925-2	687925-1

[1]Fits .150 [3.81] hole diameter.
Note: Applicator Part Numbers are for existing machine models. For Applicators for AMP-O-LECTRIC Model "G" Terminating Machine, call the Tooling Assistance Center.

Non-Insulation Support



A

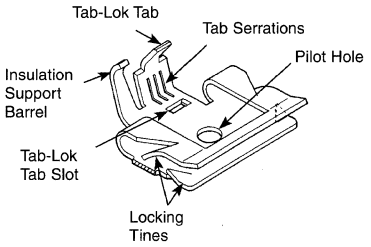


B

Type	Wire Range AWG	Wire Range mm²	Stock Thk.	Material	Part Numbers	Quick Change Applicator Nos. Model K	Quick Change Applicator Nos. Model T
A	20-16	0.5–1.4	**.016** 0.41	Brass	61280-1	466466-4	—
B	20-16	0.5–1.4	**.020** 0.51	Brass	40662[1]	686183-3	686183-4

[1]Tab bent down in applicator.
Note: Applicator Part Numbers are for existing machine models. For Applicators for AMP-O-LECTRIC Model "G" Terminating Machine, call the Tooling Assistance Center.

Grounding Clip Terminal, Insulation Support



Wire Range AWG	Wire Range mm²	Insul. Dia. Range	Stock Thk.	Material	Part Number
18-14	0.8–2.0	**.100–.140** 2.54–3.56	**.020** 0.51	Stainless Steel	63575-1*†

*CSA approved for 18 AWG only.
†Panel thickness range—from .019 [0.48] to .060 [1.52]. Panel thickness outside of this range may be used with AMP Engineering approval.

Application Tooling

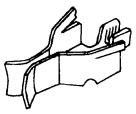
Wire Range AWG	Wire Range mm²	Insul. Dia. Range	Application Type	Applicators	Terminating Machine	Machine Type
18-14	0.8–2.0	**.100–.140** 2.54–3.56	Center-Strip (Middle of Wire)	680080-1	467004-4	Bench T
			End-of-Wire	680080-2	**	Automatic
				680080-3	□-354500-□	Bench G
				680080-4	565435-5	Bench K
				853100-2	**	Automatic

**Depends on which model AMPOMATOR Lead Making Machine used: 3D, 4A, 4B, CLS II, CLS III, CLS IIIG or CLS IV.
Note: Applicator Part Numbers are for existing machine models. For Applicators for AMP-O-LECTRIC Model "G" Terminating Machine, call the Tooling Assistance Center.

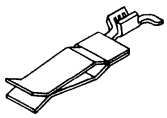
SOURCE: Catalog 82227

Miscellaneous Strain Relief Terminals

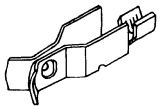
Receptacles



A
Twist Lock Receptacle



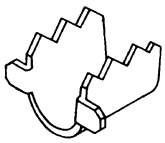
B
Receptacle, 250 Series



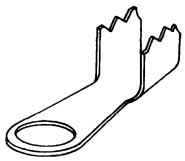
C
Receptacle

Type	Wire Range AWG	Wire Range mm²	Stock Thk.	Material and Finish	Part Numbers
A	20-16	0.5–1.4	.025 0.64	Tin-Plated Phos. Bronze	63035-1
B	20-16	0.5–1.4	.025 0.64	Brass	62281-1
C	20-16	0.5–1.4	.024 0.61	Tin-Plated Steel	62727-1

Strain Reliefs



A



B

Type	Insul. Dia. Range	Stock Thk.	Material and Finish	Part Numbers
A	.180–.230 4.57–5.84	.025 0.64	Aluminum	42412-5[1]
	.180 4.57	.028 0.71	Tin-Plated Steel	61830-1[1]
	.150 3.81	.028 0.71	Tin-Plated Steel	61831-1[1]
	.300 7.62	.028 0.71	Tin-Plated Steel	61987-1[1]
B	.180–.230 4.57–5.84	.025 0.64	Aluminum	61520-1[2]

[1]Wing type.
[2]Ring .200 [5.08] hole diameter.

SOURCE: Catalog 82227

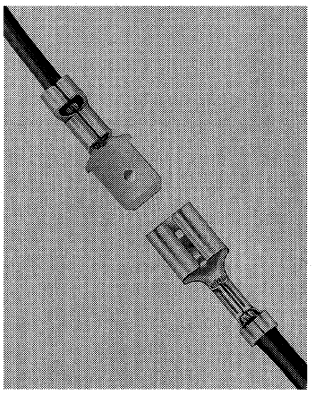
FASTON Terminals (Insulated and Uninsulated)

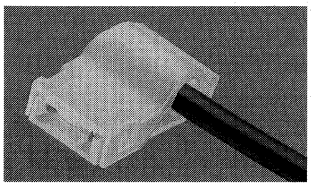
Product Facts

- **FASTON Terminal Products meet or exceed Industry Standards. UL Listed, UL 310 (where indicated)**
- **Recognized (where indicated) under the Component Program of Underwriters Laboratories Inc., Electrical UL File No. E66717, E28476 and E13288**
- **Certified (where indicated) by Canadian Standards Association, File No. LR 7189A-509**
- **Produced under a Quality Management System certified to ISO 9001**

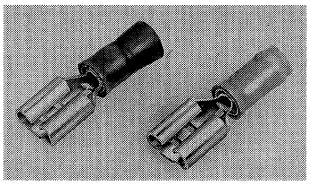
A copy of the certificate is available upon request.

FASTON Tab and Receptacle



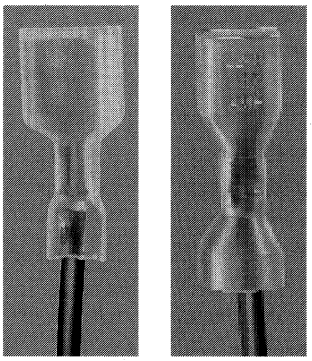


Insulating Sleeves for Flag FASTON Receptacles



PIDG FASTON Receptacles (Loose Piece, Tape Mounted and Strip Form)

Ultra-Fast Plus Fully Insulated FASTON Receptacles and Tabs



The AMP FASTON Terminals product line, including Ultra-Fast and Ultra-Fast Plus fully insulated terminals, as well as Positive Lock receptacles consists of receptacles, tabs and splices specifically designed for quick connections. FASTON terminal products are grouped according to tab width dimensions in series "312", "250", "205", "187", "125" and "110". This product line offers speed of application, uniform reliability and low per line cost. These advantages have made FASTON terminal products the number one choice of leaders in the appliance and automotive industries.

Other industries for FASTON terminal products are computer and peripheral equipment, industrial controllers, test equipment and telecommunications equipment manufacturers.

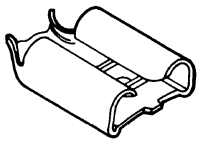
Speed of application is achieved through the use of a complete line of application tools, which has been developed specifically for these terminals. Depending on the machine selected, terminations can be made at a rate up to 11,400 per hour using an AMPOMATOR machine or an AMP-O-LECTRIC machine capable of terminating up to 4,000 terminals per hour. A Stripper-Crimper Machine combines stripping and crimping to achieve rates up to 1,200 per hour on selected terminals.

Over 30 years of history has proven the reliability of this product line. Built-in features also add to the reliability of FASTON terminal products which include: crimping dimensions for each terminal which are precisely controlled providing all connections with excellent performance; low per line cost derived from low initial product cost, high application speeds, and plug-in assemblies of the finished termination as well. The combination of these features brings the user lower overall costs for quick connect/disconnect terminations.

SOURCE: Catalog 82004

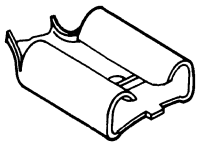
FASTON Receptacle Lines

The AMP family of quick connects provides the right product for virtually every application. All styles provide the necessary features for quality and reliable interconnections. All lines meet the applicable requirements of UL 310.



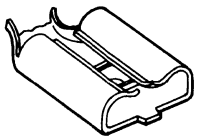
Premier

The receptacle configuration of the Premier, with its resilient rolls and double slot bottom, allows maximum compliancy while retaining the high normal forces necessary to provide good wiping action and a highly reliable interface. The secret to the resiliency of the Premier receptacle is in the thermal stress relieving each terminal receives. This extra processing step relieves the residual stresses the stamping process imparts and allows the receptacle to resist the effects of over-stressing, while retaining the normal forces which provide good cleaning action and low, stable resistance under a variety of operating conditions. In addition, each Premier receptacle receives further processing to clean and lubricate the surface prior to shipping.



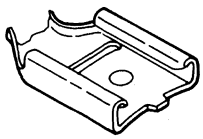
Budget

The Budget line of receptacles has receptacle construction similar to the Premier and is easily distinguished by the single slot. The single most important difference between the Budget and Premier line is that the Budget does not receive the special processing of the Premier. In addition, in the .250 series, the Budget receptacles are constructed of lighter .016 [0.41] brass.



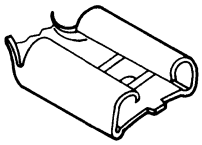
Economy

The Economy receptacle is separated from its counterparts by the large lead-in provided by its flared, relatively low, roll construction. This roll construction and lead-in, with tab contact coming on the mill finish of the brass instead of a profiled edge, makes for lower average insertion forces at relatively high normal forces.



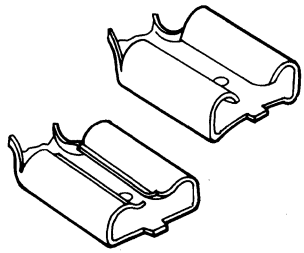
Commercial

The Commercial receptacles, with their abbreviated roll construction, conserve stock, have generally higher insertion forces and somewhat lower tolerance for abuse.



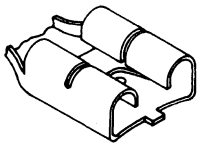
Hermetic

The Hermetic receptacle is a Premier receptacle which has been designed to mate with the posted header tabs in hermetic motor applications. This receptacle provides all the features and benefits of the Premier line.



Moldable

The Moldable receptacle is available in many of the same configurations shown and is produced without slots or openings in the floor of the receptacle to facilitate over-molding.



Low Insertion Force

The Low Insertion Force receptacle offers lower insertion forces than the other receptacle styles through the unique design features of a two-stage receptacle and a cantilever mounted locking dimple.

SOURCE: Catalog 82004

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

FASTON Receptacle and Tab Styles

The Products

The FASTON Terminal Line consists of two mating parts—the receptacle and the tab. Receptacles are available in both straight and flag configurations and come in a variety of sizes. They are designated numerically by a series number which corresponds to the width of the mating tab. There are five series of both straight-on and flag receptacles: "250", "205", "187", "125" and "110".

Finishes

FASTON Terminals are made available in brass and phosphor bronze which can be plated with tin or silver. The line also includes a selection of nickel plated steel tabs and receptacles.

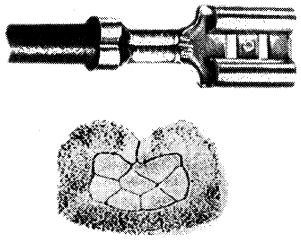
Certain products are available in either pre-tin or tin plated. Tin plate is the electro-depositing of tin on base metal over the entire surface of the terminal following the fabrication of the terminal.

Pre-tin plate is the plating of tin on base metal prior to fabrication which produces exposed base metal in the terminal edge areas after stamping.

Wire Range

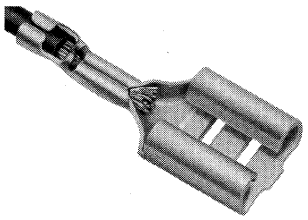
FASTON Receptacles are available in various wire ranges from 26-10 AWG, depending on series size.

The "F" Crimp



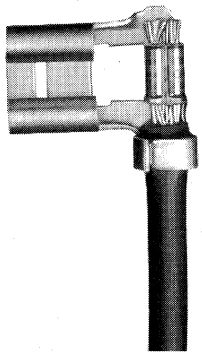
The standard crimp on all straight and certain flag type FASTON Terminals is the "F" crimp. Experience over widespread segments of the industry has proved this crimp the most effective way of providing stable electrical and mechanical performance. Applied with match-mated tooling, the "F" crimp offers the optimum combination of mechanical strength and electrical conductivity. This method of termination also offers maximum resistance to vibration and corrosion.

Straight Receptacles



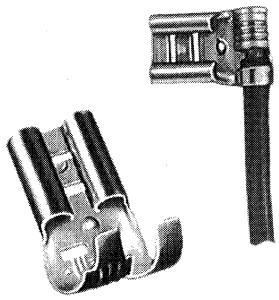
Straight Receptacles are made with or without insulation support. Insulation diameters of .040–.230 [1.02-5.84] are accommodated by the insulation support receptacle. Another feature of this type is a step-down insulation support barrel to compensate for insulation thickness to maintain axial alignment of the conductor strands. Over-insertion of shoulderless tabs is prevented by tapering walls at the rear of the receptacle.

Flag Receptacles



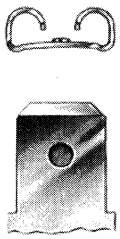
The Flag Receptacle is an extremely reliable termination for those applications where space is a critical factor. Connection with mating tab is at right angle to axis of conductor. Typical installations include bussing switches in back-splashes of ranges or in similar heavy duty applications.

Tab-Lok Crimp for FASTON Flag Terminals



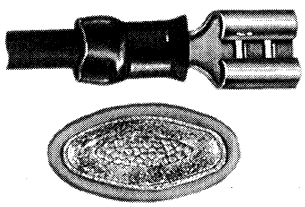
In making this crimp, a feature of the FASTON Flag Terminal, a tab on the wire barrel is inserted through a slot in the terminal itself. The crimping action is continued by flattening the tab between two lances which, in turn, are locked over the tab. The wire connection is locked in to offer reliable electrical and mechanical performance. This receptacle design includes a lance-tab stop at its rear to avoid over-insertion of shoulderless tabs.

Locking Action and Contact Area



Since corrosion and oxidation tend to affect performance by cutting down contact areas and increasing the constriction resistance of connections, maximum contact areas are incorporated in the design of FASTON receptacles and tabs. The design also includes a dimple detent and web section which not only increases contact surfaces but also locks in the tab and receptacles at proper insertion depth for firm retention.

TETRA-CRIMP Tooling

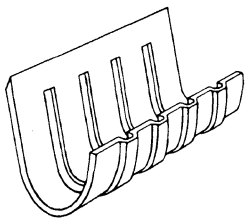


This exceptionally reliable crimp is used on PIDG FASTON Receptacles. The terminals feature nylon insulation fitted over a copper support sleeve. PIDG FASTON Receptacles are of the straight variety only, and are available in strip form or tape mounted for high-speed application with automatic crimping machines, or in loose piece form for application with hand tools.

SOURCE: Catalog 82004

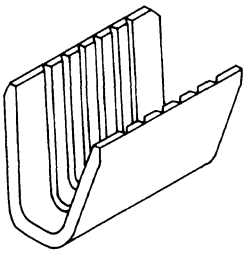
FASTON Receptacle and Tab Styles
(Continued)

Corrugated Keystone Barrel Serrations



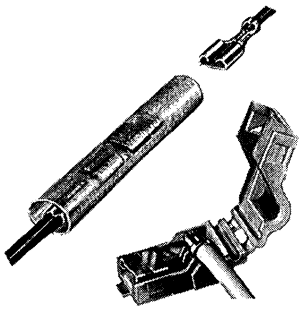
This special terminal wire barrel design maximizes contact area between terminal and bare conductor. During the crimping process, bulk deformation forces the conductor into these serration channels creating a scrubbing action on oxide film on the wire. The termination is also extremely resistant to vibration and shock.

AMPLIVAR Terminal Crimp



This crimp is designed for reliable, high-speed connection of magnet wire. The conductor(s) is automatically multiple-ring stripped and forced into sharp serrations with a single precision-controlled solderless crimp. This operation produces a strong, air-tight termination that is as resistant to corrosion and other environmental effects as the insulated conductor itself.

Insulating Sleeves and Line Splice Connections

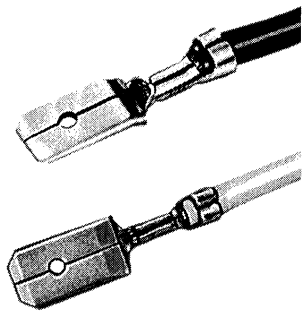


Translucent plastic insulating sleeves are available for use with FASTON Receptacles to connect to tabs built in as component parts of switches, solenoids, timers and other electrical accessories. A second type is used with line splices. The insulation resists impact and distortion and adds high dielectric strength to the connection. Attachment rates of 1500 per hour can be attained with AMP semiautomatic machinery.

Line splices can be easily accomplished by attaching receptacles to two tabs contained end-to-end in a springlocked plastic insulation sleeve.

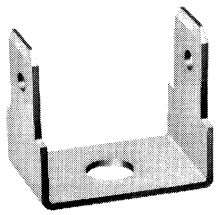
- **Recognized under the Component Program of Underwriters Laboratories Inc., File No. E13288**

Tabs



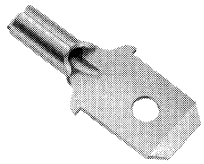
The wire crimp tabs are designed for line splices and other special applications. They can be applied to 22-14 AWG wire with "F" crimp termination and include insulation support. The wire crimp tab is also available with AMPLIVAR serrations for magnet wire applications.

Board Mount Tabs



Board mount tabs are available in all the series. These tabs are mounted using rivets or screws through stud holes. They are available in single 90° configurations, straight and angled versions, dual versions (90°, 45° and straight), weld tab versions and special configurations.

Printed Circuit Board Tabs



These tabs are designed to be inserted into holes in pc boards, then attached permanently during the soldering operation. They can be hand inserted or machine inserted using AMP application equipment.

SOURCE: Catalog 82004

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

FASTON Terminal Specifications

Operating Temperatures of Materials and Finishes

Brass, phosphor bronze and steel are the normal materials for AMP FASTON receptacles. Various finishes are available.

Brass

Plain

Allowable Connection Temperature: 90°C.

Plain brass is used frequently, where applications have optimal environmental conditions.

Tin Plated

Allowable Connection Temperature: 110°C.

Tin plating of receptacle and tab creates satisfactory operation at higher temperatures, and in addition protects the connection against corrosion.

Silver Plated

Allowable Connection Temperature: 130°C.

Silver plated connections allow the highest operating temperature for brass and a higher current-carrying capacity.

Phosphor Bronze

Plain

Allowable Connection Temperature: 90°C.

Phosphor bronze is used in applications where brass would normally be corroded (for example, the various freezing mixtures and ammonias).

Tin Plated

Allowable Connection Temperature: 110°C.

Tin plated phosphor bronze is for higher temperatures; provides additional corrosion protection.

Silver Plated

Allowable Connection Temperature: 130°C.

Silver plated connections allow the highest operating temperature for phosphor bronze and higher current-carrying capacity.

Steel

Nickel Plated

Allowable Connection Temperature: 250°C.

This combination allows a reliable connection at high temperatures (for example, in stoves, cooking appliances, etc.). For optimum performance, these nickel-plated receptacles are used with compatible lead wires and tabs that can be welded to heating units.

The following list shows various plastics and their application temperatures.

Plastics (Insulation)

Material Temperature Rating:

Polyamide	125°C
Polypropylene	90°C
Polyester	105°C
Polyethylene	75°C
A.B.S.	70°C
PVC	60°C

Test Specifications

The following information and related graphs are the result of tests conducted in the AMP Testing and Standards Laboratory. Where the term "termination temperature" is used it has reference to the ambient temperature plus the temperature rise of the terminal during normal or overload conditions.

Temperature Rise and Millivolt Drop

The temperature rise and millivolt drop characteristics are the lowest in the industry. They exceed all safety requirements and exhibit extreme stability during extended time tests.

An initial temperature rise test of a "250" series straight FASTON terminal indicated a terminal temperature rise of less than 30°C when using a test current of 15 amps carried by 16 AWG plain copper wire.

This same terminal, in an accelerated 44-hour stability test, showed a 10 millivolt drop after 2 hours and an 11 millivolt drop at the end of the test. The wire used in this test was 16 AWG plain copper wire; the current was 30 amps.

Resistance to Oxidation and Corrosion

Intimate contact between the inner barrel walls and conductor surfaces results in inhibition of corrosion and oxidation. This close contact becomes an almost homogeneous mass when subjected to the controlled dimensions of the matched crimping tool. Long life operation with low temperature and low millivolt drop is further enhanced by the quality of the plating used on the terminal itself.

Tensile Strength

Maximum tensile strength of the wire-to-terminal connection does not insure reliable electrical performance. An acceptable compromise between maximum tensile strength and electrical stability is recommended. Normally the tensile strength is much greater than the force required to disconnect the tab from the receptacle; therefore, no difficulties or hazards are encountered.

Vibration Resistance

In applications where conductors are subjected to flexing at termination points, circuit failure is avoided because extreme resistance to vibration is provided through AMP insulation support, even on conductors with oversize insulation.

Recommended Two-Wire Combinations

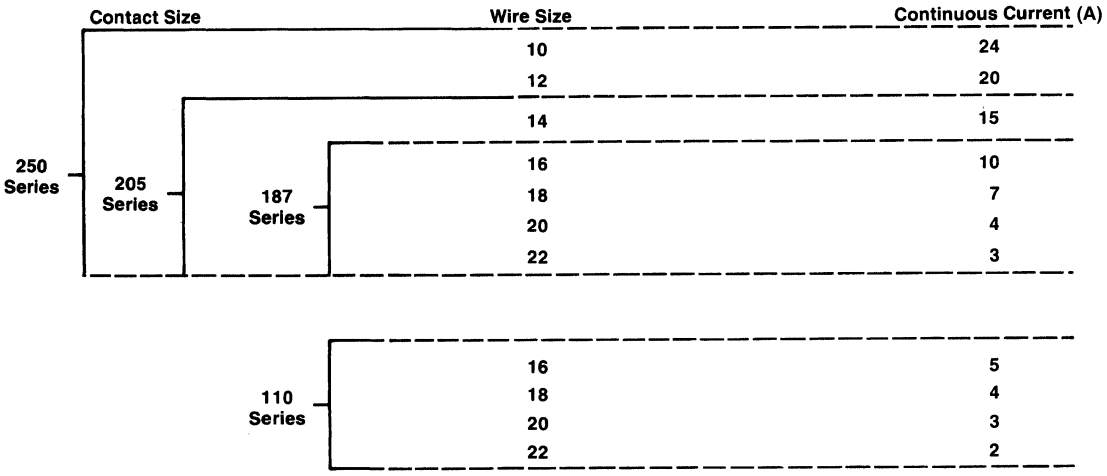
Wire Ranges (AWG)																	
8-10	12-10	14-10	14-12	16-12	16-14	18-12	18-14 (2) 16	(2) 18 (2) 16	18-14	18-16	20-14	20-16 (2) 18	20-16	20-18	22-16	22-18
Two-Wire Combinations																
10-22[1]	12-22[1]	14-14	18-16	16-22	18-18	18-18	16-16	16-16	22-18	18-22[1]	20-22	18-18	20-18	20-20	18-22[1]	22-20[1]
10-20	12-20	14-16	18-14	16-20	18-20	18-16	16-22[1]	18-18	20-18	18-20	20-20	18-20	20-20	20-22[1]	18-20	22-22
10-18	12-18	14-18	16-16	16-18	16-22[1]	18-14	16-20	16-18[1]	18-18	18-18	20-18	20-20	22-18[1]	22-22	20-20	
10-16	12-16	14-20	14-22[1]	16-16	16-20	18-20	16-18		20-20	20-20	20-16	22-20	22-22		20-22	
10-14	14-16	14-22	14-20	18-18		18-22	18-18		20-16	18-22	18-22[1]	22-20				
12-14	14-14	16-16		18-20		16-22	18-20		22-16[1]		18-18					
	14-12	16-18		18-14		16-20	18-22				18-16					
		16-12		20-14		16-16	20-20				16-22[1]					
		18-12				14-22[1]	20-22									
		20-12		22-14[1]		14-20										
		22-12[1]														

[1]Min./Max. Wire Size Combinations

SOURCE: Catalog 82004

FASTON Terminal Specifications (Continued)

Suggested Operating Parameters for FASTON Terminals (Based on UL 310)

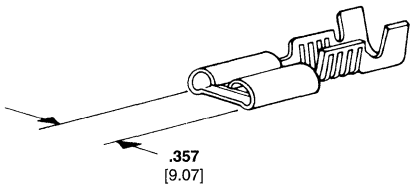


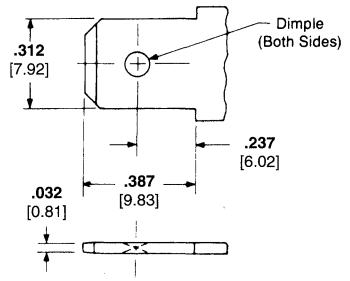
The table can be used as a guide for selecting one of the characteristics (Contact Size, Wire Size, Continuous Operating Current) when the other two are known. This table also identifies the possible receptacle sizes available for a given wire size. The continuous current column highlights the maximum current that should be applied to a given receptacle and wire combination to meet a 30°C maximum temperature rise.

312 Series Receptacles Straight Insulation Support

Premier Line

(.312 x .032 [7.92 x 0.81] tab fit)





Mating 312 Series Tab Dimensions

Wire Range AWG	Insulation Diameter	Material and Finish	Terminal Part No.	Quick-Change Applicator No. ■
18-14	**.090–.120** [2.29-3.05]	Brass	62092-1	466157-2
16-12	**.160** [4.06] or (2) **.110** [2.79] Max.	Tin Plated Brass	61399-1	687944-2
16-12	**.160** [4.06] or (2) **.110** [2.79] Max.	Silver Plated Brass	63225-2	687944-2
14-10	**.150–.200** [3.81-5.08]	Silver Plated Brass	63820-1	—

Low Insertion Force Line

(.312 x .032 [7.92 x 0.81] tab fit)

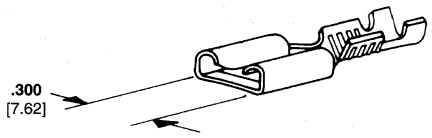
Wire Range AWG	Insulation Diameter	Material and Finish	Terminal Part No.	Quick-Change Applicator No. ■
16-12	**.160** [4.06] or (2) **.110** [2.79] Max.	Tin Plated Brass	63677-1[1]	687944-2

[1]Stress relieved.

■ Quick-Change Applicator for AMP-O-LECTRIC Machine **Part No. 565435-5.**
For AMPOMATOR Machine and other machines, contact AMP.

SOURCE: Catalog 82004

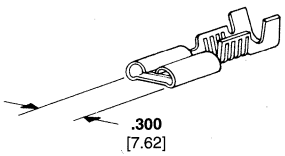
250 Series Receptacles
Straight Insulation Support
Premier Line
(.250 x .032 [6.35 x 0.81] tab fit)



Wire Range AWG	Insulation Diameter	Stock Thickness	Material and Finish	Terminal Part No. Strip	Terminal Part No. Loose Piece	UL	CSA	SP	Tooling Part No. Quick-Change Applicator No. ■	Tooling Part No. Hand Tool
24-20	**.030–.070** [0.76-1.78]	**.016** [0.41]	Tin Plated Brass	61368-1	—	X[1]	—	X[1]	466145-2	—
22-18	**.060–.100** [1.52-2.54]	**.016** [0.41]	Brass	42640-1	—	X	—	X	687931-2	—
			Tin Plated Brass	42640-2	60878-2	X	—	X	687931-2	90166-1
	.090–.130 [2.29-3.30]	**.016** [0.41]	Brass	41771	—	X	—	X	687875-2	—
			Tin Plated Brass	41772	60878-2	X	—	X	687875-2	90166-1
18-14	**.060–.110** [1.52-2.79]	**.018** [0.46]	Tin Plated Brass	61375-1	—	X	—	X	466133-3	—
		.016 [0.41]	Nickel Plated Steel	63688-1	—	—	—	—	—	—
	.120–.170 [3.05-4.32]	**.016** [0.41]	Nickel Plated Steel	42219-1	60705-1	—	X	X	466649-2	—
	.120–.170 [3.05-4.32]	**.018** [0.46]	Brass	41202	41729	X	—	X	687823-2	90165-1
			Tin Plated Brass	41274	41729	X	—	X	687823-2	90165-1
			Brass	63655-1[2]	—	X	—	X	687823-2	—
			Silver Plated Plated	41678	—	X	—	X	687823-2	—
16-12 or (2) 18	**.210–.265** [5.33-6.73] or (2) **.120** [3.05] Max.	**.018** [0.46]	Brass	41727	—	X	—	X	466284-7	—
			Tin Plated Brass	41728	42021	X	—	X	466284-7	47094
	.210–.265 [5.33-6.73]	**.016** [0.41]	Nickel Plated Steel	42579-1	—	—	X	X	466284-7	—
14-10	**.150–.200** [3.81-5.08]	**.018** [0.46]	Brass	41449[3]	61227-1	X	—	X	687857-3	90120
			Tin Plated Brass	41450[3]	61227-1	X	—	X	687857-3	90120
	.150-.200 [3.81-5.08]	**.018** [0.46]	Tin Plated Phos. Brz.	41679-4[3]	—	X	—	X	687857-1	—
14-10 or (2) 14	**.225–.275** [5.72-6.98] or (2) **.140** [3.56] Max.	**.018** [0.46]	Tin Plated Brass	60635-1[3]	—	X	—	X	466018-3	—
			Silver Plated Brass	60635-2[3]	—	X	—	X	466018-3	—
			Brass	60635-3[3]	—	X	—	X	466018-3	—
12-10	**.150–.200** [3.81-5.08]	**.018** [0.46]	Tin Plated Brass	62428-2	—	X	—	X	466532-1	—
			Tin Plated Phos. Brz.	62428-3	—	X	—	X	466532-1	—
10-8 or (2) 12	**.230–.280** [5.84-7.11] or (2) **.160** [4.06] Max.	**.018** [0.46]	Brass	62998-1	—	X	—	X	466896-2	—
			Tin Plated Brass	62998-2	—	X	—	X	466896-2	—

[1]UL Listed and CSA Certified for 22-20 AWG.
[2]Fits .020 [0.51] thick tab.
[3]39,600 CMA Max..

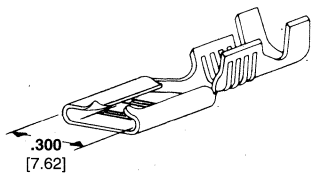
Budget Line
(.250 x .032 [6.35 x 0.81] tab fit)



Wire Range AWG	Insulation Diameter	Material and Finish	Terminal Part No.	UL	CSA	SP	Quick-Change Applicator No. ■
22-18	**.090–.130** [2.29-3.30]	Brass	42510-1	X	—	X	687875-2
		Tin Plated Brass	42510-2	X	—	X	687875-2
20-14	**.085–.135** [2.16-3.43]	Brass	63648-1[2]	—	—	—	680109-3
		Tin Plated Brass	63648-2[2]	—	—	—	680109-2
18-14	**.120–.170** [3.05-4.32]	Brass	42400-1	X	—	X	466649-2
		Tin Plated Brass	42400-2	X	—	X	466649-2
		Silver Plated Brass[3]	61107-1	X	—	X	687823-2
	.120–.160 [3.05-4.06]	Brass	63089-1[2,4]	X	—	X	687932-1
14-10	**.150-.200** [3.81-5.08]	Brass	61095-1[1]	X	—	X	687857-1

[1].018 [0.46] stock.
[2].012 [2.59] stock (multiple circuit housings).
[3]Silver flash.
[4]Stress relieved.

Economy Line
(.250 x .032 [6.35 x 0.81] tab fit)



Wire Range AWG	Insulation Diameter	Material and Finish	Terminal Part No.	UL	CSA	SP	Quick-Change Applicator No. ■
26-22	**.040–.060** [1.02-1.52]	Brass	61202-1	X[1]	—	X[1]	466106-2
22-18	**.090–.130** [2.29-3.30]	Brass	42743-1	X	—	X	466653-2
		Tin Plated Brass	42743-2	X	—	X	466653-2
18-14	**.120–.170** [3.05-4.32]	Brass	42660-1	X	—	X	466649-2
		Tin Plated Brass	42660-2	X	—	X	466649-2
	.150–.218 [3.81-5.54]	Brass	42692-1	X	—	X	687941-2
		Tin Plated Brass	42692-2	X	—	X	687941-2

[1]UL Listed and CSA Certified for 22 AWG.

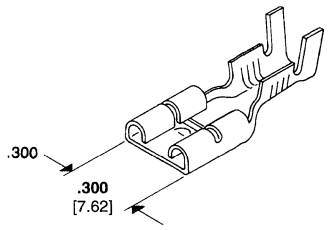
■ Quick-Change Applicator for AMP-O-LECTRIC Machine **Part No. 565435-5**. For AMPOMATOR Machine and other machines, contact AMP.

SOURCE: Catalog 82004

250 Series Receptacles Straight Insulation Support (Continued)

Low Insertion Force Line

(.250 x .032 [6.35 x 0.81] tab fit)

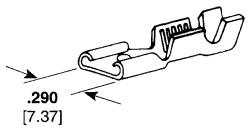


Wire Range AWG	Insulation Diameter	Stock Thickness	Material and Finish	Terminal Part No.	UL	CSA	Quick-Change Applicator No. ■
22-18	**.090–.130** [2.29-3.30]	**.016** [0.41]	Brass	63693-1[1]	X	X	687875-2
	.090–.130 [2.29-3.30]	**.016** [0.41]	Brass	63609-1[1]	X	X	687875-2
			Tin Plated Brass	63609-2[1]	X	X	687875-2
18-14	**.120–.170** [3.05-4.32]	**.018** [0.46]	Brass	63537-1[1]	X	X	567687-2
			Tin Plated Brass	63537-2[1]	X	X	567687-2
	.120–.170 [3.05-4.32]	**.016** [0.41]	Nickel Plated Steel	63674-1[1]	—	—	466649-2
	.120–.170 [3.05-4.32]	**.016** [0.41]	Brass	63306-1	X	X	466649-2
			Tin Plated Brass	63306-2	X	X	466649-2
16-12 or (2) 18	**.210–.265** [5.33-6.73] or (2) **.220** [5.59] Max.	**.018** [0.46]	Brass	63757-1	X	X	680051-2
14-10	**.150–.200** [3.81-5.08]	**.018** [0.46]	Silver Plated Brass	63435-1[1]	X	X	687857-3
	.225–.275 [5.72-6.98] or (2) **.190** [4.83] Max.	**.018** [0.46]	Tin Plated Brass	63539-1[1]	X	X	466018-3
	.150–.200 [3.81-5.08]	**.018** [0.46]	Brass	63365-1	X	X	687857-3
	.150–.200 [3.81-5.08]	**.018** [0.46]	Tin Plated Brass	63365-2	X	X	687857-3

[1]Stress relieved.

AMPLIVAR FASTON Receptacles (for use with magnet wire)

(.250 x .032 [6.35 x 0.81] tab fit)

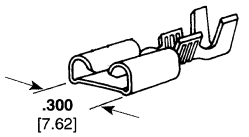


Wire Range AWG	Insulation Diameter	Material and Finish	Terminal Part No.	Quick-Change Applicator No. ■
23-19 or (2) 24 or (2) 26	**.050-.100** [1.27-2.54]	Brass	62069-1	567303-1
20-16 or (2) 23 or (2) 20	**.100–.140** [2.54-3.56] or (2) **.060** [1.52] Max.	Brass	60384-1	466010-1
		Tin Plated Brass	60384-2	466010-1
20-16	**.100–.140** [2.54-3.56]	Brass	62080-1[1,2]	466010-1
18-14 or (2) 17	**.120–.170** [3.05-4.32] or (2) **.060** [1.52] Max.	Tin Plated Brass	60385-2	466816-1
18-14	**.120–.170** [3.05-4.32]	Brass	63622-1[1,2]	—
18-14 or (2) 18	**.120–.170** [3.05-4.32]	Brass	63329-1	466816-1
24-19	**.050–.080** [1.27-2.03]	Brass	63623-1[1,2]	—

[1]Mates with .020 [0.51] thick tab.
[2]Low insertion force.

Moldable Line

(.250 x .032 [6.35 x 0.81] tab fit)



Wire Range AWG	Insulation Diameter	Material and Finish	Terminal Part No.	UL		CSA	Quick-Change Applicator No. ■
22-18	**.090–.130** [2.29-3.30]	Brass	63127-1	—	—	—	687875-2
18-14	**.120–.170** [3.05-4.32]	Brass	60650-1	X	—	X	466649-2
		Tin Plated Brass	60650-2	X	—	X	466649-2
			63500-1[1,2]	X	—	X	687823-2
14-10	**.150-.200** [3.81-5.08]	Tin Plated Brass	63412-1[1]	X	—	X	466589-2

[1].018 stock.
[2].Stress relieved.
■ Quick-Change Applicator for AMP-O-LECTRIC Machine **Part Number 565435-5**. For AMPOMATOR Machine and other machines, contact AMP.

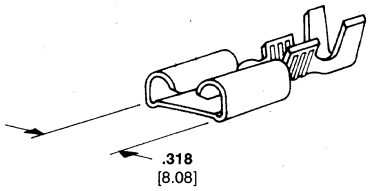
SOURCE: Catalog 82004

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

250 Series Receptacles Straight Insulation Support (Continued)

Premier Line Receptacles for Hermetic Header Tabs

(.250 x .032 [6.35 x 0.81] tab fit)

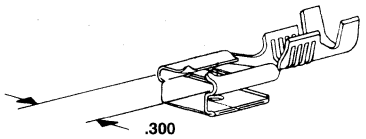


Wire Range AWG	Insulation Diameter	Material and Finish	Terminal Part No.	UL		CSA	Quick-Change Applicator No. ■
18-14	**.120–.170** [3.05-4.32]	Brass[1]	62500-1	X	—	X	567584-2
		Tin Plated Brass[1]	62500-2	X	—	X	567584-2
		Tin Plated Brass[1]	41832[3]	X	—	X	687823-2
		Tin Plated Phos. Brz.[2]	41774[4]	X	—	X	687823-2
14-10	**.150–.200** [3.81-5.08]	Tin Plated Brass[1]	42437-2	X	—	X	687857-3
		Tin Plated Phos. Brz.[2]	42437-5	X	—	X	687857-3

[1]Recommended for external use only.
[2]For internal or external use.
[3]Loose Piece **Part No. 42025-1** and matching Hand Tool **Part No. 91065-1**.
[4]Loose Piece **Part No. 42025-1** and matching Hand Tool **Part No. 91065-1**.

Economy Line (Receptacle and Tab Combination)

(.250 x .032 [6.35 x 0.81] tab fit)



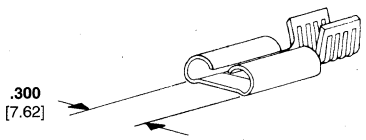
Wire Range AWG	Insulation Diameter	Stock Thickness	Material and Finish	Terminal Part No.	UL		CSA	Quick-Change Applicator No. ■
22-18	**.060–.100** [1.52-2.54]	**.015** [0.38]	Brass	61988-1	X	—	X	466500-2
			Tin Plated Brass	61988-2[3]	X	—	X	466500-2
18-14	**.120–.170** [3.05-4.32]	**.015** [0.38]	Brass	61944-1[4]	X	—	X	466502-2
			Tin Plated Brass	61944-2[5]	X	—	X	466502-2
	.120–.170 [3.05-4.32]	**.032-.016**[1] [0.81-0.41]	Brass	62109-1	X	—	X	466502-2
			Tin Plated Brass	62109-2	X	—	X	466502-2
	.120–.170 [3.05-4.32]	**.015** [0.38]	Brass	62223-1[2]	X	—	X	466502-1
			Tin Plated Brass	62223-2[2]	X	—	X	466502-1
14-10	**.150–.200** [3.81-5.08]	**.015** [0.38]	Brass	62253-1	X	—	X	466017-2
			Tin Plated Brass	62253-2	X	—	X	466017-2
			Pre-Tin Brass	62049-2[6]	X	—	X	466017-2

[1]Dual thickness.
[2]Stress relieved.
[3]Loose Piece **Part Number 62274-1**
[4]Loose Piece **Part No. 60279-1**.
[5]Loose Piece **Part No. 60279-2**.
[6]Loose Piece **Part No. 62090-1**.

250 Series Receptacles Straight Non-Insulation Support

Premier Line

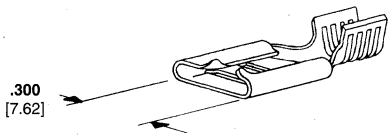
(.250 x .032 [6.35 x 0.81] tab fit)



Wire Range AWG	Material and Finish	Terminal Part No.	UL		CSA	Quick-Change Applicator No. ■
18-14	Tin Plated Brass	41194	X	—	X	687844-2
	Nickel Plated Steel	41143-1	—	X	X	687844-2

Economy Line

(.250 x .032 [6.35 x 0.81] tab fit)



Wire Range AWG	Material and Finish	Terminal Part No.	UL		CSA	Quick-Change Applicator No. ■
18-14	Brass	42845-1	X	—	X	687942-2
	Tin Plated Brass	42845-2	X	—	X	687942-2

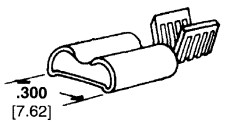
■ Quick-Change Applicator for AMP-O-LECTRIC Machine **Part No. 565435-5.**
For AMPOMATOR Machine and other machines, contact AMP.

SOURCE: Catalog 82004

250 Series Receptacles Straight Non-Insulation Support

Moldable Line

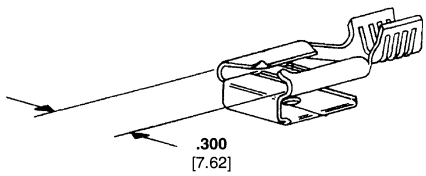
(.250 x .032 [6.35 x 0.81] tab fit)



Wire Range AWG	Material and Finish	Terminal Part No.	UL	CSA	Quick-Change Applicator No. ■
18-14	Brass	60938-1	X	—	X	687943-2
	Tin Plated Brass	60938-2	X	—	X	687943-2

Receptacle and Tab Combination

(.250 x .032 [6.35 x 0.81] tab fit)



Wire Range AWG	Material and Finish	Terminal Part No.	UL	CSA	Quick-Change Applicator No. ■
18-14	Pre-Tin Brass	62276-1	X	—	X	466116-2
14-10[1]	Pre-Tin Brass	62068-1	X	—	X	466512-2

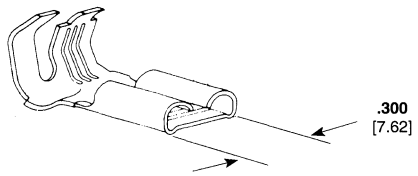
[1]9,600 CMA max.

250 Series Receptacles Flag Tab-Lok Insulation Support

Premier Line Flag

(.250 x .032 [6.35 x 0.81] tab fit)

Insulation Diameter:
.110–.210 [2.79-5.33]



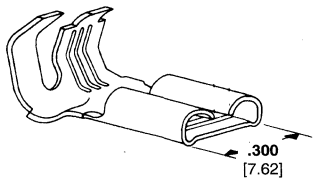
Wire Range AWG	Stock Thickness	Material and Finish	Terminal Part No.[1]	UL	CSA
18-12	**.018** [0.46]	Brass	41531	X	—	X
		Tin Plated Brass	41532[3]	X	—	X
		Silver Plated Brass	61156-1	X	—	X
		Nickel Plated Steel	41531-1	—	X	X
		Tin Plated Brass	63517-1[2]	X	—	X
	.016 [0.41]	Nickel Plated Steel	42404-1	—	X	X

[1]Contact Tooling/Technical Assistance Center for Tooling Application.
[2]Swage bottom of receptacle.
[3]Loose Piece **Part No. 41898.**

Budget Line Flag

(.250 x .032 [6.35 x 0.81] tab fit)

Insulation Diameter:
.110–.210 [2.79-5.33]



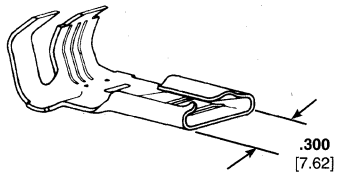
Wire Range AWG	Material and Finish	Terminal Part No.[1]	UL	CSA
18-12	Brass	42511-1	X	—	X
	Tin Plated Brass	42511-2	X	—	X

[1]Contact Tooling/Technical Assistance Center for Tooling Application.

■ Quick-Change Applicator for AMP-O-LECTRIC Machine **Part No. 565435-5.**
For AMPOMATOR Machine and other machines, contact AMP.

SOURCE: Catalog 82004

250 Series Receptacles Flag Tab-Lok Insulation Support
(Continued)

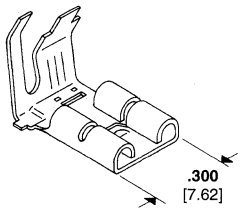


Economy Line Flag
(.250 x .032 [6.35 x 0.81] tab fit)

Wire Range AWG	Insulation Diameter	Material and Finish	Terminal Part No.[1]	UL	CSA	SP
22-18	**.070–.130** [1.78-3.30]	Brass	63577-1	X	—	X
18-12	**.110–.210** [2.79-5.33]	Brass	42742-1[2]	X	—	X
		Tin Plated Brass	42742-2	X	—	X

[1]Contact Tooling/Technical Assistance Center for Tooling Application.
[2]Loose Piece **Part No. 60102-1.**

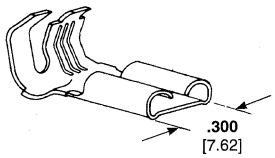
Low Insertion Force Line Flag
(.250 x .032 [6.35 x 0.81] tab fit)



Wire Range AWG	Insulation Diameter	Stock Thickness	Material and Finish	Terminal Part No.[1]	UL	SP
18-12	**.110–.210** [2.79-5.33]	**.016** [0.41]	Brass	63445-1	X	X
			Tin Plated Brass	63445-2	X	X
		.016 [0.41]	Nickel Plated Silver	63604-1[3]	—	—
		.016 [0.41]	Brass	63576-1[2]	X	X
			Tin Plated Brass	63576-2[2]	X	X
		.018 [0.46]	Brass	63555-1[3]	X	X
			Tin Plated Brass	63555-2[3]	X	X

[1]Contact Tooling/Technical Assistance Center for Application Tooling.
[2]Fits .020 [0.51] tab.
[3]Stress relieved.

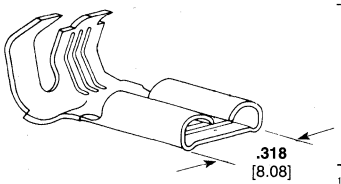
Moldable Line Flag
(.250 x .032 [6.35 x 0.81] tab fit)
Insulation Diameter:
.110–.210 [2.79-5.33]



Wire Range AWG	Stock Thickness	Material and Finish	Terminal Part No.[1]	UL	CSA	SP
18-12	**.018** [0.46]	Brass	60645-1[2]	X	—	X
	.016 [0.41]	Brass	60641-1	X	—	X

[1]Contact Tooling/Technical Assistance Center for Application Tooling.
[2]Stress relieved.

Flag Receptacles for Hermetic Header Tabs
Insulation Diameter:
.110–.210 [2.79-5.33]



Wire Range AWG	Wire Range CMA	Material and Finish	Terminal Part No.[4]	UL	CSA	SP
18-12	—	Tin Plated Phos. Brz.	41800[2]	X	—	X
		Brass	41801[1]	X	—	X
		Tin Plated Brass	41802[1]	X	—	X
		Silver Plated Phos. Brz.	42041[2]	X	—	X
		Tin Plated Phos. Brz.	60274-2[3]	X	—	X
			63651-1	X	—	X
12-10	6,000–10,600	Tin Plated Brass	60851-1[1,5]	X	—	X
		Silver Plated Brass	60851-2[1]	X	—	X
		Silver Plated Phos. Brz.	42563-6[2]	X	—	X
		Nickel Plated Steel	42563-9	—	—	—
		Tin Plated Phos. Brz.	42563-8[2]	X	—	X
		Brass	63617-1	X	—	X

[1]Recommended for external use only.
[2]For internal or external use.
[3]Left-hand for internal or external use.
[4]Contact Tooling/Technical Assistance Center for Application Tooling.
[5]Loose Piece **Part No. 60851-3.**

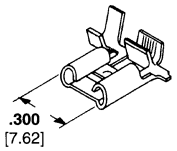
SOURCE: Catalog 82004

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

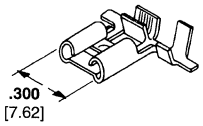
250 Series Receptacles Flag "F-Crimp" Insulation Support

Premier Line Flag Insulation Support

(.250 x .032 [6.35 x 0.81] tab fit)



Right-Handed Flag



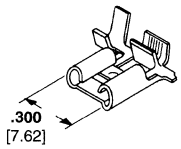
Left-Handed Flag

Wire Range AWG	Insulation Diameter	Material and Finish	Terminal Part No.	UL	CSA	Quick-Change Applicator No. ■
22-18	.060–.100 [1.52-2.54]	Brass	62813-1[1]	X	—	X	466725-2
		Tin Plated Brass	62813-2[1]	X	—	X	466725-2
		Brass	62814-1[2]	X	—	X	466725-2
		Tin Plated Brass	62814-2[2]	X	—	X	466725-2
18-14	.110–.160 [2.79-4.06]	Brass	63011-1[1]	X	—	X	567006-2
		Tin Plated Brass	63011-2[1]	X	—	X	567006-2
		Brass	63012-1[2]	X	—	X	567006-2
		Tin Plated Brass	63012-1[2]	X	—	X	567006-2
		Brass	63538-1[1,3]	X	—	X	466678-1
		Tin Plated Brass	63538-2[1,3]	X	—	X	466678-1

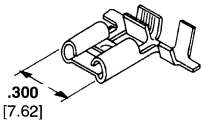
[1]Left-handed flag.
[2]Right-handed flag.
[3]Low insertion

Budget Line Flag Insulation Support

(.250 x .032 [6.35 x 0.81] tab fit)



Right-Handed Flag



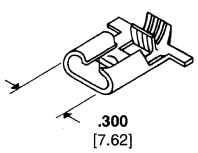
Left-Handed Flag

Wire Range AWG	Insulation Diameter	Material and Finish	Terminal Part No.	UL	CSA	Quick-Change Applicator No. ■
22-18	.060–.100 [1.52-2.54]	Brass	62718-1[2]	X	—	X	466725-2
		Tin Plated Brass	62718-2[2]	X	—	X	466725-2
18-14	.110–.160 [2.79-4.06]	Brass	63009-1[1]	X	—	X	567006-2
		Tin Plated Brass	63009-2[1]	X	—	X	567006-2
		Brass	63010-1[2]	X	—	X	567006-2
		Tin Plated Brass	63010-2[2]	X	—	X	567006-2
		Brass	63687-1[1,3]	—	—	—	567006-2

[1]Left-handed flag.
[2]Right-handed flag.
[3]Fits **.024** [0.61] tab.

Economy Line Flag Insulation Support

(.250 x .032 [6.35 x 0.81] tab fit)



Wire Range AWG	Insulation Diameter	Material and Finish	Terminal Part No.	UL	CSA	Quick-Change Applicator No. ■
18-14	.110–.160 [2.79-4.06]	Brass	63096-1	X	—	X	567006-2

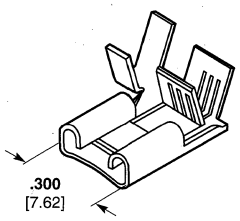
■ Quick-Change Applicator for AMP-O-LECTRIC Machine **Part No. 565435-5.** For AMPOMATOR Machine and other machines, contact AMP.

SOURCE: Catalog 82004

250 Series Receptacles Flag "F-Crimp" Insulation Support (Continued)

Center Strip Flag Insulation Support

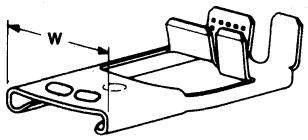
(.250 x .032 [6.35 x 0.81] tab fit)



Wire Range AWG	Insulation Diameter	Material and Finish	Terminal Part No.	UL	CSA	SEMKO	Quick-Change Applicator No. ■
18-14	**.110–.160** [2.79-4.06]	Brass	63314-1	X	—	X	819528-2
		Tin Plated Brass	63314-2	X	—	X	819528-2

Commercial Line Flag Insulation Support

(.250 x .032 [6.35 x 0.81] tab fit)

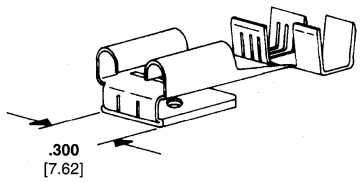


Wire Range AWG	Insulation Diameter	Dimension W	Material and Finish	Part No. Strip	Part No. Loose Piece	UL	CSA	SEMKO	Quick-Change Applicator No. ■
24-20	**.048–.078** [1.22-1.98]	**.293** [7.44]	Tin Plated Brass	60736-2	—	X[1]	—	X[1]	687009-5
22-16	**.090–.140** [2.29-3.56]	**.293** [7.44]	Brass	62418-1	—	X	—	X	466529-2
			Tin Plated Brass	62418-2	—	X	—	X	466529-2
18-14	**.090–.140** [2.29-3.56]	**.300** [7.62]	Brass	60290-1	60419-2[2]	X	—	X	686327-2
			Tin Plated Brass	60290-2	60419-2[2]	X	—	X	686327-2

[1]UL Listed and CSA Certified for 22-20 AWG wire range only.
[2]Hand Tool **Part No. 90045**.

Premier Line Piggyback Flag Insulation Support

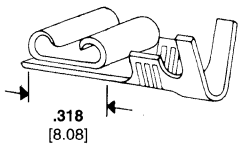
(.250 x .032 [6.35 x 0.81] tab fit)



Wire Range AWG	Insulation Diameter	Material and Finish	Terminal Part No.	UL	CSA	SEMKO	Quick-Change Applicator No. ■
18-14	**.120–.170** [3.05-4.32]	Tin Plated Brass	151321-2	—	—	—	575143

Reversible Flag Receptacles, Insulation Support—Straight End Feed

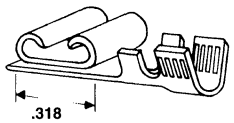
(.250 x .032 [6.35 x 0.81] tab fit)



Wire Range AWG	Insulation Diameter	Material and Finish	Terminal Part No.	UL	CSA	SEMKO	Quick-Change Applicator No. ■
18-14	**.090–.130** [2.29-3.30]	Brass	62048-1	X	—	X	466154-6
		Tin Plated Brass	62048-2	X	—	X	466154-6
	.170–.220 [4.32-5.59]	Tin Plated Brass	60764-2	X	—	X	466083-5

■ Quick-Change Applicator for AMP-O-LECTRIC Machine **Part No. 565435-5.** For AMPOMATOR Machine and other machines, contact AMP.

250 Series Receptacles Flag "F-Crimp" Insulation Support (Continued)



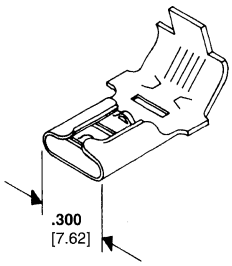
Reversible Flag Receptacles for Hermetic Header Tabs, Insulation Support—Side Feed

(.250 x .032 [6.35 x 0.081] tab fit)

Wire Range AWG	Insulation Diameter	Material and Finish	Terminal Part No.	UL	CSA	SEMKO	Quick-Change Applicator No. ■
20-28	.085-.150 [2.16-3.81]	Tin Plated Phos. Brz.	63137-1	X	—	X	—
16-12	.130-.170 [3.30-4.32]	Tin Plated Phos. Brz.[1]	61188-1[2]	X	—	X	687412-2[2]
	.130-.170 [3.30-4.32]	Tin Plated Phos. Brz.	63647-1[3]	X	—	X	—

[1]For internal or external use.
[2]Bends terminal 90°. For 180° bend use Applicator **Part Number 687616-2** with Machine **Part No. 694234-7**.
[3]No slots.

250 Series Receptacles Flag Tab-Lok Non-Insulation Support



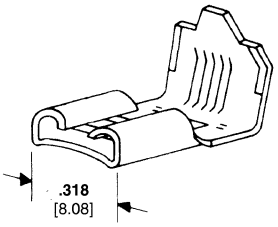
Economy Line Flag Non-Insulation Support

(.250 x .032 [6.35 x 0.81] tab fit)

Wire Range AWG	Material and Finish	Terminal Part No.[3]	UL	CSA	SEMKO
18-12	Pre-Tin Brass	61177-2[1]	X	—	X
	Pre-Tin Brass	61177-3[4]	X	—	X
	Brass	62091-1[2]	X	—	X
	Pre-Tin Brass	62091-2[2]	X	—	X
12-10 or (2) 14	Brass	62011-1[2]	X	—	X
	Tin Plated Brass	62011-2[2]	X	—	X

[1]Right-handed flag.
[2]Right- or left-handed. Carrier out front for thru splicing.
[3]Contact Tooling/Technical Assistance Center for Tooling Application.
[4]Left-handed flag.

Flag Receptacles for Hermetic Header Tabs Non-Insulation Support



Wire Range AWG	Material and Finish	Terminal Part No.[7]	UL	CSA	SEMKO
18-12	Silver Plated Phos. Brz.	62021-1[1]	X	—	X
	Tin Plated Brass	62021-3[1]	X	—	X
	Silver Plated Phos. Brz.	62056-1[2]	X	—	X
	Silver Plated Phos. Brz.	62056-2[6]	X	—	X
	Tin Plated Phos. Brz.	62056-6[3]	X	—	X
	Tin Plated Phos. Brz.	62056-7[6]	X	—	X
	Tin Plated Brass	62056-3[3]	X	—	X
	Tin Plated Brass	62056-4[5]	X	—	X
12-10	Silver Plated Phos. Brz.	62057-1[2]	X	—	X
	Tin Plated Brass	62057-3[4]	X	—	X
	Tin Plated Brass	62057-4[5]	X	—	X
	Tin Plated Phos. Brz.	62057-5[2]	X	—	X
	Silver Plated Phos. Brz.	62057-7[5]	X	—	X
	Silver Plated Phos. Brz.	62022-1[1]	X	—	X
	Tin Plated Brass	62022-2[1]	X	—	X

[1]Right- or left-handed. Carrier is in front to facilitate thru splicing.
[2]Right-hand for external or internal use.
[3]Right-hand. Reverse reel.
[4]Right-hand.
[5]Left-hand.
[6]Left-hand for external or internal use. Reverse reel.
[7]Contact Tooling/Technical Assistance Center for Tooling Application.

■ Quick-Change Applicator for AMP-O-LECTRIC Machine **Part No. 565435-5**. For AMPOMATOR Machine and other machines not listed, contact AMP.

SOURCE: Catalog 82004

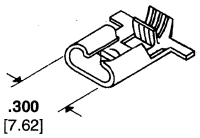
Specifications subject to change.

1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

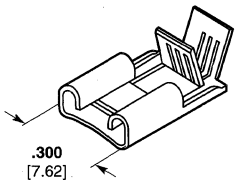
250 Series Receptacles
Flag "F-Crimp"
Non-Insulation Support

Economy Line
Flag Non-Insulation Support
(.250 x .032 [6.35 x 0.81] tab fit)



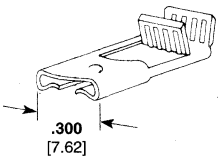
Wire Range AWG	Material and Finish	Terminal Part No.	UL		CSA	Quick-Change Applicator No. ■
18-14	Brass	63508-1	X	—	X	567300-1
	Tin Plated Brass	63508-2	X	—	X	567300-1

Center Strip
Flag Non-Insulation Support
(.250 x .032 [6.35 x 0.81] tab fit)



Wire Range AWG	Material and Finish	Terminal Part No.	UL		CSA	Quick-Change Applicator No. ■
18-14	Brass	63315-1	X	—	X	567288-2
	Tin Plated Brass	63315-2	X	—	X	567288-2

Commercial Line
Flag Non-Insulation Support
(.250 x .032 [6.35 x 0.81] tab fit)



Wire Range AWG	Material and Finish	Terminal Part No.	UL		CSA	Quick-Change Applicator No. ■
12-10[1] (2) 12[2] (2) 14	Brass	60960-2	X	—	X	687060-4
	Tin Plated Brass	60960-3	X	—	X	687060-4

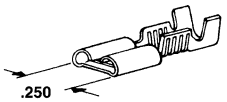
[1]Stranded or solid.
[2]Stranded only.

■ Quick-Change Applicator for AMP-O-LECTRIC Machine **Part No. 565435-5.** For AMPOMATOR Machine and other machines, contact AMP.

SOURCE: Catalog 82004

205 Series Receptacles Straight Insulation Support

Premier Line

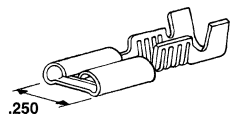


Wire Range AWG	Mating Tab Conf.[1]	Fits Tab	Insulation Diameter	Stock Thickness	Material and Finish	Terminal Part No.	UL	CSA	SEMKO	Quick-Change Applicator No. ■
26-22	1	**.020** [0.51]	**.050–.070** [1.27-1.78]	**.012** [0.30]	Tin Plated Brass	60674-1	X[2]	—	X[2]	466091-3
22-18	1	**.032** [0.81]	**.085–.125** [2.16-3.18]	**.012** [0.30]	Tin Plated Brass	42299-2	X	—	X	687927-3
		.020 [0.51]	**.085–.125** [2.16-3.18]	**.012** [0.30]	Brass	42198-1	X	—	X	687927-3
					Tin Plated Brass	42198-2	X	—	X	687927-3
18-14	1	**.032** [0.81]	**.130–.180** [3.30-4.57]	**.016** [0.41]	Tin Plated Brass	42233-2	X	—	X	687949-2
					Tin Plated Phos. Brz.	42233-7	X	—	X	687949-2

[1]For mating tab configurations, see Page 1094
[2]UL Listed and CSA Certified for 22 AWG.

Economy Line

Stock Thickness: .012 [0.30]

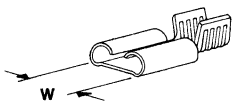


Wire Range AWG	Mating Tab Conf.[1]	Fits Tab	Insulation Diameter	Material and Finish	Terminal Part No.	UL	CSA	SEMKO	Quick-Change Applicator No. ■
22-18	1	**.020** [0.51]	**.085–.125** [2.16-3.18]	Brass	42710-1	X	—	X	687927-3
				Tin Plated Brass	42710-2	X	—	X	687927-3
		.032 [0.81]	**.085–.125** [2.16-3.18]	Tin Plated Brass	60904-2	X	—	X	687927-3
18-14	1	**.020** [0.51]	**.130–.180** [3.30-4.57]	Tin Plated Brass	42713-2	X	—	X	687948-3
				Tin Plated Brass	42781-2	X	—	X	687949-2

[1]For mating tab configuration, see Page 1094

205 Series Receptacles Straight Non-Insulation Support

Premier Line

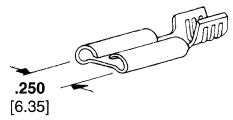


Wire Range AWG	Mating Tab Conf.[2]	Fits Tab	Stock Thickness	Dimension W	Material and Finish	Terminal Part No.	UL	CSA	SEMKO	Quick-Change Applicator No. ■
22-18	1	**.020** [0.51]	**.012** [0.30]	**.250** [6.35]	Tin Plated Brass	42197-2[1]	X	—	X	687935-2
18-14	2	**.032** [0.81]	**.016** [0.41]	**.255** [6.48]	Tin Plated Brass	41509	—	—	—	687865-2
	1	**.032** [0.81]	**.016** [0.41]	**.255** [6.48]	Phos. Brz.	42239-4	X	—	X	687865-2

[1]No slots.
[2]For mating tab configurations, see Page 1094

Economy Line

Stock Thickness: .012 [0.30]



Wire Range AWG	Mating Tab Conf.[2]	Fits Tab	Material and Finish	Terminal Part No.	UL	CSA	SEMKO	Quick-Change Applicator No. ■
18-14	1	**.020** [0.51]	Tin Plated Brass	42712-2[1]	X	—	X	687947-3

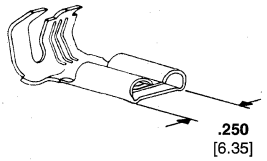
[1]No slot.
[2]For mating tab configuration, see Page 1094

■ Quick-Change Applicator for AMP-O-LECTRIC Machine **Part No. 565435-5**. For AMPOMATOR Machine and other machines, contact AMP.

SOURCE: Catalog 82004

Specifications subject to change.
1-800-522-6752 Product Information Center/ AMP FAX Service
1-800-722-1111 Tooling/Technical Assistance Center

205 Series Receptacles Flag Tab-Lok Insulation Support



Premier Line Flag Insulation Support

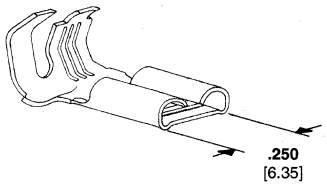
Insulation Diameter: .110-.170 [2.79-4.32]

Wire Range AWG	Mating Tab Conf.[1]	Fits Tab	Stock Thickness	Material and Finish	Terminal Part No.[2]	UL		CSA
20-16	1	**.020** [0.51]	**.012** [0.30]	Brass	42199-1	X	—	X
				Tin Plated Brass	42199-2	X	—	X
20-14	1	**.032** [0.81]	**.016** [0.41]	Brass	42234-1	X	—	X
				Tin Plated Brass	42234-2	X	—	X
				Tin Plated Phoz. Brz.	42234-4	X	—	X
		.020 [0.51]	**.016** [0.41]	Tin Plated Brass	62354-1	X	—	X

[1]For mating tab configurations, below.
[2]Contact Tooling/Technical Assistance Center for Application Tooling.

Economy Line Flag Insulation Support

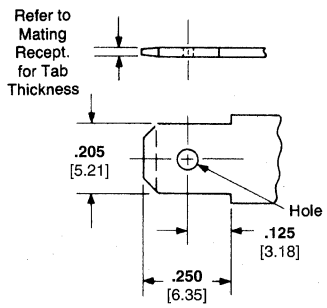
Insulation Diameter: .100-.170 [2.54-4.32]



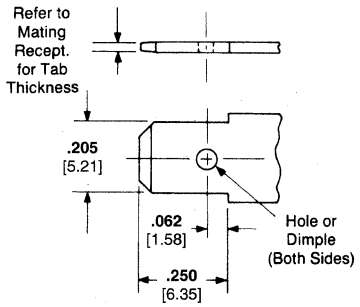
Wire Range AWG	Mating Tab Conf.[1]	Fits Tab	Stock Thickness	Material and Finish	Terminal Part No.[2]	UL		CSA
20-16	1	**.032** [0.81]	**.012** [0.30]	Brass	42809-1	X	—	X
20-14	1	**.032** [0.81]	**.016** [0.41]	Brass	60195-1[3]	X	—	X
				Tin Plated Brass	60195-2[3]	X	—	X
14-12	1	**.032** [0.81]	**.016** [0.41]	Brass	63779-1	X	—	X

[1]For mating tab configuration, see below.
[2]Contact Tooling/Technical Assistance Center for Application Tooling.
[3]Moldable.

Tab Configurations/ Dimensions—Mates with all "205" Series Receptacles



Configuration 1

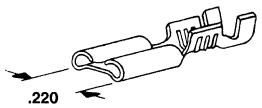


Configuration 2

SOURCE: Catalog 82004

187 Series Receptacles
Straight Insulation Support

Premier Line

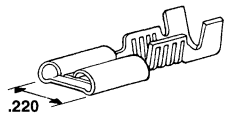


Wire Range AWG	Fits Tab	Insulation Diameter	Material and Finish	Terminal Part No.	UL		CSA	Quick-Change Applicator No. ■
24-20	**.020** [0.51]	**.040–.070** [1.02-1.78]	Tin Plated Brass	60573-1	X[1]	—	X[1]	687852-2
			Brass	60573-2	X[1]	—	X[1]	687852-2
			Tin Plated Phos. Brz.	62187-2	X	—	X	687852-2
	.020 [0.51]	**.060–.110** [1.52-2.79]	Tin Plated Brass	62138-1	X[1]	—	X[1]	687938-2
			Brass	62138-2	X[1]	—	X[1]	687938-2
	.032 [0.81]	**.040–.070** [1.02-1.78]	Tin Plated Brass	62181-1	X[1]	—	X[1]	687852-2
	.020 [0.51]	**.040–.070** [1.02-1.78]	Tin Plated Brass	62187-1	X[1]	—	X[1]	687852-2
20-16	**.020** [0.51]	**.090–.130** [2.29-3.30]	Brass	42452-1[2]	X	—	X	687928-2
			Tin Plated Brass	42452-2[3]	X	—	X	687928-2
			Silver Plated Brass	42452-3	X	—	X	687928-2
			Tin Plated Phos. Brz.	42452-5	X	—	X	687928-2
			Nickel Plated Steel	60621-1	X	—	X	687928-2
	.015 [0.38]	**.090–.130** [2.29-3.30]	Tin Plated Brass	42453-2	—	—	X	687928-2
	.017 [0.43]	**.090–.130** [2.29-3.30]	Silver Plated Phos. Brz.	61084-1	—	—	X	687928-2
	.032 [0.81]	**.090–.130** [2.29-3.30]	Brass	61758-1	X	—	X	687928-2
	.020 [0.51]	**.060–.110** [1.52-2.79]	Brass	62137-1	X	—	X	687928-2
			Tin Plated Brass	62137-2	X	—	X	687928-2
20-16 (2) 24	**.020** [0.51]	(2) **.105** [2.67] Max.	Tin Plated Brass	63029-1	X	—	X	567027-2
18-16 or (2) 18	**.020** [0.51]	(2) **.105** [2.67] Max.	Brass	60487-1	X	—	X	687870-2
			Tin Plated Brass	60487-2	X	—	X	687870-2
	.032 [0.81]	(2) **.105** [2.67] Max.	Tin Plated Brass	61945-1	X	—	X	687870-2

[1]UL Listed and CSA Certified for 22-20 AWG.
[2]Loose Piece **Part No. 42566-1** and matching Hand Tool **Part No. 90180-2**.
[3]Loose Piece **Part No. 42566-2** and matching Hand Tool **Part No. 90180-2.**

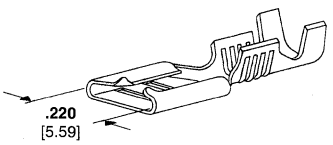
Budget Line

Insulation Diameter:
.090–.130 [2.29-3.30]



Wire Range AWG	Fits Tab	Material and Finish	Terminal Part No.	UL		CSA	Quick-Change Applicator No. ■
20-16	**.020** [0.51]	Brass	42617-1	X	—	X	687928-2
		Tin Plated Brass	42617-2	X	—	X	687928-2
	.032 [0.81]	Brass	61919-1	X	—	X	687928-2
18-16 or (2) 18	**.032** [0.81]	Brass	63769-1	X	—	X	687870-2

Economy Line



Wire Range AWG	Fits Tab	Insulation Diameter	Material and Finish	Terminal Part No.	UL		CSA	Quick-Change Applicator No. ■
22-18	**.020** [0.51]	**.090–.130** [2.29-3.30]	Brass	63347-1	X	—	X	—
20-16	**.020** [0.51]	**.090–.130** [2.29-3.30]	Brass	42801-1	X	—	X	687928-2
			Tin Plated Brass	42801-2	X	—	X	687928-2
	.024 [0.51]	**.090–.130** [2.29-3.30]	Tin Plated Brass	63752-1	—	—	—	687928-2
	.032 [0.81]	**.090–.130** [2.29-3.30]	Brass	60196-1	X	—	X	687928-2
			Tin Plated Brass	60196-2	X	—	X	687928-2
	.039 [0.51]	**.090–.130** [2.29-3.30]	Tin Plated Brass	63751-1	—	—	—	687928-2
	.020 [0.51]	**.090–.130** [2.29-3.30] or (2) **.090** [2.29] Max.	Brass	61892-1[1]	X	—	X	466066-2

[1]Also capable of accepting (2) 20 AWG wires.

■ Quick-Change Applicator for AMP-O-LECTRIC Machine **Part No. 565435-5**. For AMPOMATOR Machine and other machines, contact AMP.

SOURCE: Catalog 82004

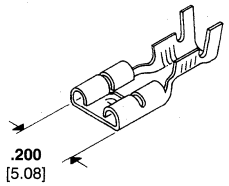
Specifications subject to change.

1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

187 Series Receptacles Straight Insulation Support (Continued)

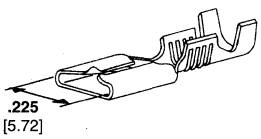
Low Insertion Force Line



Wire Range AWG	Insulation Diameter	Fits Tab	Material and Finish	Terminal Part No.	UL	CSA	Quick-Change Applicator No. ■
20-16	.090–.130 [2.29-3.30]	.020 [0.51]	Brass	63475-1	X	X	687928-2
			Tin Plated Brass	63475-2	X	X	687928-2
		.032 [0.81]	Brass	63477-1	X	X	687928-2
			Brass	63608-1[1]	X	X	687928-2
			Tin Plated Brass	63608-2[1]	X	X	687928-2
			Tin Plated Brass	63477-2	X	X	687928-2
		.020 [0.51]	Brass	63556-1[1]	X	X	567617-2
			Tin Plated Brass	63556-2[1]	X	X	567617-2

[1]Stress relieved.

Commercial Line

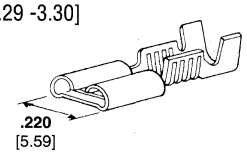


Wire Range AWG	Fits Tab	Insulation Diameter	Material and Finish	Terminal Part No.	UL	VDE	CSA	Quick-Change Applicator No. ■
18-14	.020 [0.51]	.150–.190 [3.81-4.83]	Brass	62016-1	X	—	X	466300-2
			Tin Plated Brass	62016-2	X	—	X	466300-2
18-14	.032 [0.81]	.150–.190 [3.81-4.83]	Brass	63697-1	X	—	X	466300-2
18-14 or 2 (16)	.020 [0.51]	.180–.230 [4.57-5.84] or (2) .110 [2.79] Max.	Brass	60742-1	X	—	X	466409-2
			Tin Plated Brass	60742-2	X	—	X	466409-2
			Tin Plated Brass	63749-2[1]	X	—	X	466409-2
18-14 or 2 (16)	.032 [0.81]	.180–.230 [4.57-5.84] or (2) .110 [2.79] Max.	Brass	63596-1	X	—	X	466409-2
			Pre-tin Brass	63596-2	X	—	X	466409-2

[1]Stress relieved.

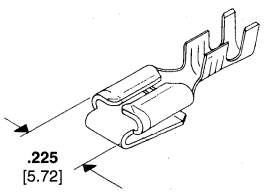
Moldable Line

Insulation Diameter: .090–.130 [2.29 -3.30]



Wire Range AWG	Fits Tab	Material and Finish	Terminal Part No.	UL	VDE	CSA	Quick-Change Applicator No. ■
20-16	.020 [0.51]	Brass	60214-1	X	—	X	687928-2
		Tin Plated Brass	60214-2	X	—	X	687928-2
18-16 or (2) 18	.020 [0.51]	Brass	63470-1	X	—	X	—

Commercial Line (Receptacle and Tab Combination)



Wire Range AWG	Fits Tab	Insulation Diameter	Material and Finish	Terminal Part No.	UL	VDE	CSA	Quick-Change Applicator No. ■
20-16	.016 [0.51]	.090–.130 [2.29-3.30]	Tin Plated Brass	63579-3	—	X	X	466503-4
	.020 [0.51]	.090–.130 [2.29-3.30]	Tin Plated Brass	62026-1	X	—	X	466503-4
			Brass	62026-2[4]	X	—	X	466503-4
	.032 [0.81]	.090–.130 [2.29-3.30]	Brass	63646-1	X	—	X	466503-4
	.020 [0.51]	.090–.130 [2.20-3.30]	Brass	61350-1[1]	X	—	X	466026-1
			Tin Plated Brass	61350-2[1]	X	—	X	466026-1
			Brass	61350-4[1,2]	X	—	X	687397-2
	.020 [0.51]	.060–.110 [1.52-2.79]	Tin Plated Brass	62139-1	X	—	X	687966-2

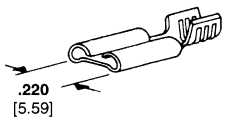
[1]Flag series.
[2]Reversed reeled.
[3]Stress relieved.
[4]Loose Piece **Part No. 62228-1.**

■ Quick-Change Applicator for AMP-O-LECTRIC Machine **Part No. 565435-5.** For AMPOMATOR Machine and other machines, contact AMP.

SOURCE: Catalog 82004

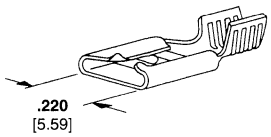
187 Series Receptacles Straight Non-Insulation Support

Premier Line



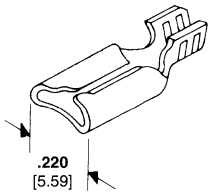
Wire Range AWG	Fits Tab	Material and Finish	Terminal Part No.		UL		CSA	Quick-Change Applicator No. ■
			Strip	Loose Piece				
20-16	**.020** [0.51]	Tin Plated Brass	42373-2	42638-2	X	—	X	687933-2
		Nickel Plated Steel	42373-3	—	—	X	X	687933-2
	.015 [0.38]	Tin Plated Brass	42374-2	60217-2	—	X	X	687933-2

Economy Line



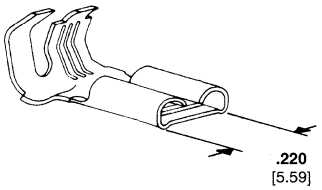
Wire Range AWG	Fits Tab	Material and Finish	Terminal Part No.	UL		CSA	Quick-Change Applicator No. ■
20-16	**.020** [0.51]	Brass	42799-1	X	—	X	687933-2
		Tin Plated Brass	42799-2	X	—	X	687933-2

Moldable Line



Wire Range AWG	Fits Tab	Material and Finish	Terminal Part No.	UL		CSA	Quick-Change Applicator No. ■
20-16	**.032** [0.81]	Tin Plated Brass	61969-1	X	—	X	687933-2

187 Series Receptacles Flag Tab-Lok Insulation Support



Premier Line
Flag Insulation Support

Wire Range AWG	Fits Tab	Insulation Diameter	Material and Finish	Terminal Part No.[1]	UL		CSA
20-16	**.020** [0.51]	**.110–.170** [2.79-4.32]	Brass	42486-1	X	—	X
			Tin Plated Brass	42486-2	X	—	X
			Nickel Plated Steel	42486-3	—	—	—
			Silver Plated Brass	42486-4	X	—	X
	.032 [0.81]	**.110–.170** [2.79-4.32]	Tin Plated Brass	62591-1	X	—	X
	.020 [0.51]	**.170–.225** [4.32-5.72]	Brass	62817-1	X	—	X

[1]Contact Tooling/Technical Assistance Center for Tooling Application.

■ Quick-Change Applicator for AMP-O-LECTRIC Machine **Part No. 565435-5.**
For AMPOMATOR Machine and other machines, contact AMP.

SOURCE: Catalog 82004

Specifications subject to change.

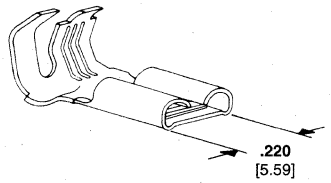
1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

187 Series Receptacles Flag Tab-Lok Insulation Support (Continued)

Budget Line Flag Insulation Support

Insulation Diameter: .110–.170 [2.79-4.32]

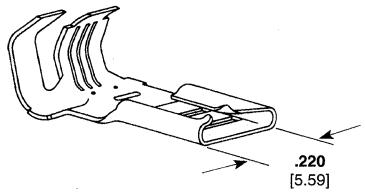


Wire Range AWG	Fits Tab	Material and Finish	Terminal Part No.[1]	UL		CSA
20-16	**.020** [0.51]	Brass	42618-1	X	—	X
		Tin Plated Brass	42618-2	X	—	X

[1]Contact Tooling/Technical Assistance Center for Tooling Application.

Economy Line Flag Insulation Support

Insulation Diameter: .110–.170 [2.79-4.32]

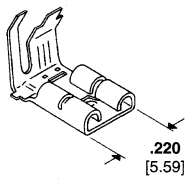


Wire Range AWG	Fits Tab	Material and Finish	Terminal Part No.[1]	UL		CSA
20-16	**.020** [0.51]	Brass	42800-1	X	—	X
		Tin Plated Brass	42800-2	X	—	X
	.032 [0.81]	Brass	60529-1	X	—	X
		Tin Plated Brass	60529-2	X	—	X

[1]Contact Tooling/Technical Assistance Center for Tooling Application.

Low Insertion Force Flag Insulation Support

Insulation Diameter: .110–.170 [2.79-4.32]

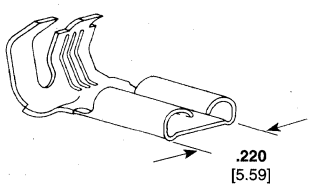


Wire Range AWG	Fits Tab	Material and Finish	Terminal Part No.[1]	UL	CSA
20-16	**.020** [0.51]	Brass	63476-1	X	X
		Tin Plated Brass	63476-2	X	X
	.020 [0.51]	Brass	63557-1[2]	X	X
		Tin Plated Brass	63557-2[2]	X	X
	.032 [0.81]	Brass	63748-1	X	X

[1]Contact Tooling/Technical Assistance Center for Tooling Application.
[2]Stress relieved.

Moldable Line Flag Insulation Support

Insulation Diameter: .110–.170 [2.79-4.32]

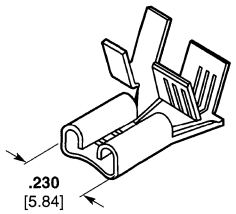


Wire Range AWG	Fits Tab	Material and Finish	Terminal Part No.[2]	UL		CSA
20-16	**.020** [0.51]	Brass	61029-1[1]	X	—	X
		Tin Plated Brass	61029-2[1]	X	—	X

[1]Economy receptacle.
[2]Contact Tooling/Technical Assistance Center for Tooling Application..

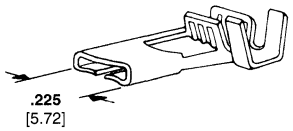
187 Series Receptacles Flag "F-Crimp" Insulation Support

Center Strip Flag Insulation Support



Wire Range AWG	Fits Tab	Insulation Diameter	Material and Finish	Terminal Part No.	UL	CSA	Quick-Change Applicator No. ■
18-14	**.032** [0.81]	**.060–.150** [1.52-3.81]	Brass	63316-1	X	—	X	567288-2
	.020 [0.51]	**.060–.150** [1.52-3.81]	Brass	63512-1	X	—	X	819528-1

Commercial Line Flag Insulation Support

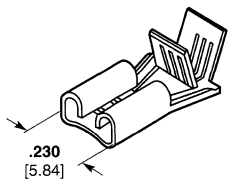


Wire Range AWG	Fits Tab	Insulation Diameter	Material and Finish	Terminal Part No.	UL	CSA	Quick-Change Applicator No. ■
20-16	**.020** [0.51]	**.090–.130** [2.29-3.30]	Brass	60755-1	X	—	X	686262-5
			Tin Plated Brass	60755-2	X	—	X	686262-5
22-18	**.020** [0.51]	**.060–.070** [1.52-1.78]	Brass	62085-1	X	—	X	687801-3
			Tin Plated Brass	62085-2	X	—	X	687801-3

187 Series Receptacles Flag "F-Crimp" Non-Insulation Support

Center Strip Flag Non-Insulation Support

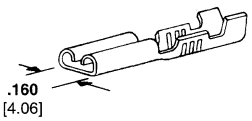
(.187 x .032 [4.75 x 0.81] tab fit)



Wire Range AWG	Material and Finish	Terminal Part No.	UL	CSA	Quick-Change Applicator No. ■
18-14	Brass	63317-1	X	—	X	567288-2

125 Series Receptacles Straight Insulation Support

Receptacles



Wire Range AWG	Fits Tab Type[1]	Fits Tab	Insulation Diameter	Material and Finish	Terminal Part No.	UL	CSA	Quick-Change Applicator No. ■
22-18	1	**.020** [0.51]	**.090–.110** [2.29-2.79]	Brass	63705-1	—	—	—	567499-1

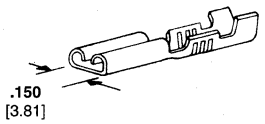
[1]See Page No. 1102.

■ Quick-Change Applicator for AMP-O-LECTRIC Machine **Part No. 565435-5**. For AMPOMATOR Machine and other machines, contact AMP.

SOURCE: Catalog 82004

110 Series Receptacles
Straight Insulation Support

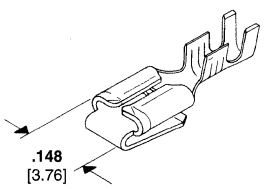
Receptacles



Wire Range AWG	Fits Tab Type[2]	Fits Tab	Insulation Diameter	Material and Finish	Terminal Part No.	UL	CSA	SP	Quick-Change Applicator No. ■
30-28	2	**.020** [0.51]	**.020–.040** [0.51-1.02]	Pre-Tin Brass	62585-1	—	—	—	466361-1
24-22	1	**.032** [0.81]	**.040–.060** [1.02-1.52]	Pre-Tin Brass	63634-1	X	—	X	687896-2
		.020 [0.51]	**.040–.060** [1.02-1.52]	Pre-Tin Brass	42067-1	X[1]	—	X	687896-2
		.016 [0.41]	**.040–.060** [1.02-1.52]	Pre-Tin Brass	42415-1	—	—	—	687896-2
		.020 [0.51]	**.040–.060** [1.02-1.52]	Pre-Tin Brass	60089-2	X[1]	—	X	466020-2
	—	**.025** [0.64]	**.040–.060** [1.02-1.52]	Pre-Tin Brass	61410-1	—	—	—	567653-3
22-20	2	**.020** [0.51]	**.060–.100** [1.52-2.54]	Pre-Tin Brass	42236-1	X	—	X	687892-3
22-18	1	**.020** [0.51]	**.060–.100** [1.52-2.54]	Brass	42068-0	X	—	X	687892-3
				Pre-Tin Brass	42068-1[3]	X	—	X	687892-3
	1	**.012** [0.30]	**.060–.100** [1.52-2.54]	Pre-Tin Brass	60415-1	—	—	—	687892-3
		.016 [0.41]	**.060–.100** [1.52-2.54]	Pre-Tin Brass	60118-1	—	—	—	687892-3
		.032 [0.81]	**.060–.100** [1.52-2.54]	Pre-Tin Brass	60197-1	X	—	X	687892-3
	3	**.032** [0.81]	**.060–.100** [1.52-2.54]	Pre-Tin Brass	60577-1	—	—	X	687892-3
	2	**.020** [0.51]	**.120–.140** [3.05-3.56]	Pre-Tin Brass	60729-1	—	—	X	687967-3
		.025 [0.64]	**.120–.140** [3.05-3.56]	Pre-Tin Brass	63568-1	—	—	—	687967-3
	1	**.025** [0.64]	**.120–.140** [3.05-3.56]	Pre-Tin Brass	61158-1	—	—	—	687967-3
	1	**.020** [0.51]	**.090–.130** [2.29-3.30]	Pre-Tin Brass	62094-1	X	—	X	466178-2
	—	**.016** [0.41]	**.090–.130** [2.29-3.30]	Pre-Tin Brass	62523-1	—	—	—	466767-1
20-16	1	**.020** [0.51]	**.120–.140** [3.05-3.56]	Pre-Tin Brass	61400-1	X	—	X	466060-3
			.060–.100 [1.52-2.54]	Pre-Tin Brass	61408-1	X	—	X	466141-2
		.032 [0.81]	**.120–.140** [3.05-3.56]	Pre-Tin Brass	62050-1	X	—	X	466060-3
		.020 [0.51]	**.150–.170** [3.81-4.32]	Tin Plated Brass	62191-1	X	—	X	466049-2
	—	**.010** [0.25]	**.060–.100** [1.52-2.54]	Pre-Tin Brass	62968-1	—	—	—	466141-2
	2	**.032** [0.81]	**.120–.140** [3.05-3.56]	Pre-Tin Brass	63703-1	X	—	X	466060-3
18-14	3	**.032** [0.81]	**.110–.190** [2.79-4.83]	Tin Plated Brass	63092-1	X	—	X	567044-4
	1, 2, 3	**.032** [0.81]	**.110–.190** [2.79-4.83]	Tin Plated Brass	63093-1	X	—	X	466881-4

[1]UL Listed 22 AWG wire only.
[2]See page 1102.
[3]Loose Piece **Part No. 42470-1** and matching Hand Tool **Part No. 59528-1**.

Commercial Line (Receptacle and Tab Combination)



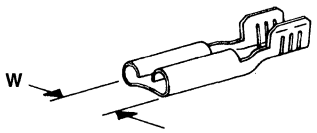
Wire Range AWG	Fits Tab	Insulation Diameter	Material and Finish	Terminal Part No. Strip	Terminal Part No. Loose Piece	UL	CSA	SP	Quick-Change Applicator No. ■
22-18	**.020** [0.51]	**.080–.120** [2.03-3.05]	Brass	63242-1	—	X	—	X	466501-2
		.060–.100 [1.52-2.54]	Brass	62003-1	—	X	—	X	466501-2
		.060–.100 [1.52-2.54]	Tin Plated Brass	62003-2	62112-2	X	—	X	466501-2

■ Quick-Change Applicator for AMP-O-LECTRIC Machine **Part No. 565435-5**.
For AMPOMATOR Machine and other machines, contact AMP.

SOURCE: Catalog 82004

110 Series Receptacles Straight Non-Insulation Support

Receptacles

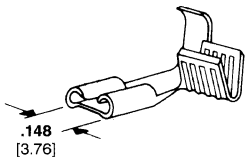


Wire Range AWG	Fits Tab Type[2]	Fits Tab	Dimension W	Material and Finish	Terminal Part No.	UL	CSA	Quick-Change Applicator No. ■
24-22	1	**.016** [0.41]	**.138** [3.50]	Brass	61818-1	—	—	466090-2
20-18 or (2) 20	1	**.016** [0.41]	**.148** [3.76]	Pre-Tin Brass	42398-1	—	—	687954-2
		.020 [0.51]	**.148** [3.76]	Pre-Tin Brass	42399-1	X	X	687954-2
				Brass	42399-2	X	X	687954-2
	1, 2, 3	**.020** [0.51]	**.148** [3.76]	Pre-Tin Brass	42604-1[1]	—	—	687954-2
	1	**.032** [0.81]	**.148** [3.76]	Pre-Tin Brass	60601-1	X	X	687954-2
	1	**.025** [0.64]	**.150** [3.81]	Pre-Tin Brass	62345-1	—	—	687954-2
	1	**.016** [0.41]	**.148** [3.76]	Tin Plated Brass	63534-1	—	—	687954-2
	2	**.020** [0.51]	**.148** [3.76]	Pre-Tin Brass	60967-1	X	X	687954-2
20-18	1, 2, 3	**.020** [0.51]	**.148** [3.76]	Pre-Tin Brass	62850-1[1]	X	X	466183-2
				Tin Plated Brass	62850-2[1]	X	X	687954-2
	—	**.020** [0.51]	**.148** [3.76]	Pre-Tin Brass	63017-1[1]	X	X	687954-2
20-16	1	**.016** [0.41]	**.150** [3.81]	Pre-Tin Brass	61457-1	—	—	687891-2
	1	**.032** [0.81]	**.148** [3.76]	Pre-Tin Brass	63560-1	X	X	567350-2
	2	**.020** [0.51]	**.148** [3.76]	Pre-Tin Brass	63471-1	X	X	687891-2
18-14 or (2) 18	—	**.020** [0.51]	**.148** [3.76]	Beryllium Cu	63202-1[3,4]	—	—	567100-2
		.020 [0.51]	**.148** [3.76]	Pre-Tin Brass	63202-2[3,4]	X	X	567100-2
18-14	1	**.020** [0.51]	**.148** [3.76]	Pre-Tin Brass	62852-1[4]	X	X	466573-1
	—	**.020** [0.51]	**.148** [3.76]	Tin Plated Brass	62474-1[3,4]	X	X	466573-1

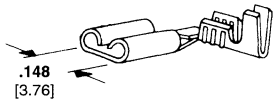
[1]No dimple.
[2]See Page No. 1102.
[3]Dimple at special location.
[4]Side feed.

110 Series Receptacles Flag "F-Crimp" Insulation Support

Flag Insulation Support



Style A



Style B

Wire Range AWG	Style	Fits Tab Type[1]	Fits Tab	Insulation Diameter	Stock Thickness	Material and Finish	Terminal Part No.	UL	CSA	Quick-Change Applicator No. ■
22-18	A	1	**.016** [0.41]	**.065–.100** [1.65-2.54]	**.010** [0.25]	Pre-Tin Brass	61459-1	—	—	466299-4
			.020 [0.51]	**.065–.100** [1.65-2.54]	**.010** [0.25]	Pre-Tin Brass	61372-1	X	X	466299-4
	A	1	**.020** [0.51]	**.065–.100** [1.65-2.54]	**.012** [0.30]	Tin Plated Brass	60605-1	X	X	466299-4
	A	1	**.025** [0.64]	**.065–.100** [1.65-2.54]	**.010** [0.25]	Pre-Tin Brass	61530-1	—	—	466299-4
			.025 [0.64]	**.065–.100** [1.65-2.54]	**.012** [0.30]	Tin Plated Brass	63592-1	—	—	466299-4
			.032 [0.81]	**.065–.100** [1.65-2.54]	**.010** [0.25]	Pre-Tin Brass	61971-1	X	X	466299-4
			.032 [0.81]	**.065–.100** [1.65-2.54]	**.012** [0.30]	Pre-Tin Phos. Brz.	61971-2	X	X	466299-4
	B	1	**.020** [0.51]	**.060–.100** [1.52-2.54]	**.010** [0.25]	Pre-Tin Brass	61481-1	X	X	466415-2
	B	1	**.020** [0.51]	**.060–.100** [1.52-2.54]	**.012** [0.30]	Tin Plated Brass	61070-1	X	X	687113-3
						Brass	61070-2	X	X	687113-3
	B	1	**.032** [0.81]	**.060–.100** [1.52-2.54]	**.010** [0.25]	Pre-Tin Brass	62336-1	X	X	466415-2

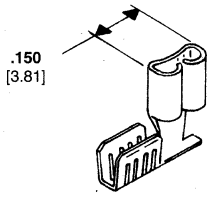
[1]See Page No. 1102.

■ Quick-Change Applicator for AMP-O-LECTRIC Machine **Part No. 565435-5.**
For AMPOMATOR Machine and other machines, contact AMP.

SOURCE: Catalog 82004

110 Series Receptacles Flag "F-Crimp" Non-Insulation Support

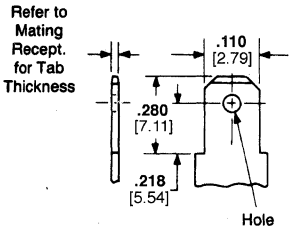
Flag Non-Insulation Support



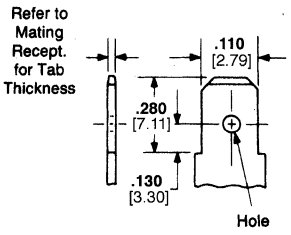
Wire Range AWG	Fits Tab Type[2]	Fits Tab	Stock Thickness	Material and Finish	Terminal Part No.	UL		CSA	Quick-Change Applicator No. ■
22-16	1	.020 [0.51]	.012 [0.30]	Brass	60991-1	X[1]	—	X	687790-2
	2		.010 [0.25]	Pre-Tin Brass	61549-1	X[1]	—	X	466377-2
	1	.020 [0.51]	.010 [0.25]	Pre-Tin Brass	62321-1	X[1]	—	X	466377-2

[1]UL Listed and CSA Certified for 22-18 AWG wire range.
[2]See below.

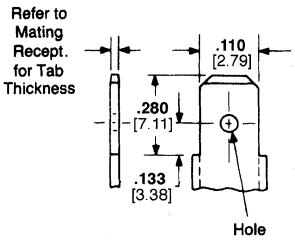
Mating 110 Series Tab Designs/Dimensions



Mating 110 Series Tab Dimensions Type 1



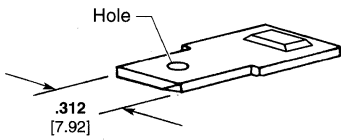
Mating 110 Series Tab Dimensions Type 2



Mating 110 Series Tab Dimensions Type 3

312 Series FASTON Tabs (Mate with All "312" Series FASTON Receptacles

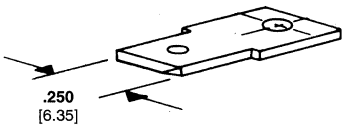
Weld Type Tabs



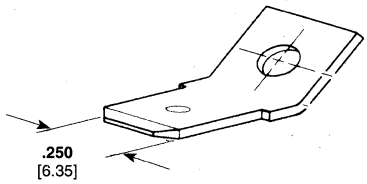
Material and Finish	Terminal Part No.
Nickel Plated Steel	63770-1

250 Series FASTON Tabs (Mate with All "250" Series FASTON Receptacles)

Stud Mount Type Tabs (Dimple, both sides)



Style A



Style B

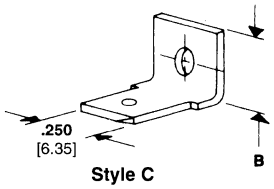
Style	Stud Hole Diameter	Material and Finish	Terminal Part No.	UL		CSA
A	.177 [4.50]	Brass	63038-2	—	X	—
	—	Nickel Plated Steel	42559-1	—	X	X
B	.130 [3.30]	Tin Plated Brass	42822-2	—	X	X
	.145 [3.68]	Tin Plated Brass	42822-4	—	X	X
	.171 [4.34]	Brass	60465-1	—	X	X
		Tin Plated Brass	60465-2	—	X	X
	.203 [5.16]	Tin Plated Brass	61365-1	—	X	X
	.197 [5.00]	Tin Plated Brass	61499-1	—	X	X

■ Quick-Change Applicator for AMP-O-LECTRIC Machine **Part No. 565435-5**. For AMPOMATOR Machine and other machines, contact AMP.

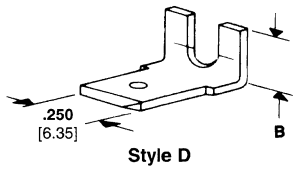
SOURCE: Catalog 82004

250 Series FASTON Tabs (Mate with All "250" Series FASTON Receptacles)
(Continued)

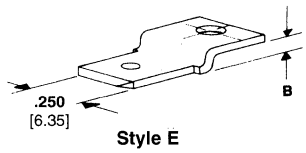
Stud Mount Type Tabs (Dimple, both sides)
(Continued)



Style C



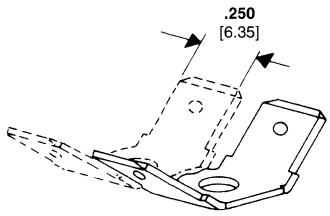
Style D



Style E

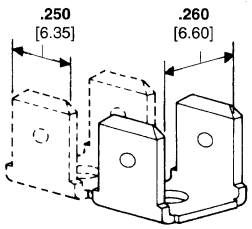
Style	Stud Hole Diameter	Dimension B	Material and Finish	Terminal Part No.	UL		CSA
C	**.097** [2.46]	**.250** [6.35]	Brass	41339	—	X	X
	.130 [3.30]	**.330** [8.38]	Tin Plated Brass	42095-1	—	X	X
		.270 [6.86]	Tin Plated Brass	42117-2	—	X	X
	.171 [4.34]	**.330** [8.38]	Brass	42214-1	—	X	X
			Tin Plated Brass	42214-2	—	X	X
D	**.125** [3.18]	**.235** [5.97]	Brass	41398	—	X	X
E	**.130** [3.30]	**.068** [1.73]	Tin Plated Brass	42506-2	—	X	X

Stud Mount Type Tabs (Dimple, both sides)



Style F

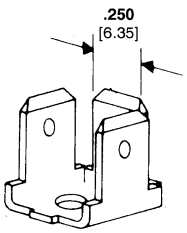
Style	Pairs	Stud Hole Diameter	Material and Finish	Terminal Part No.	UL		CSA
F	2	**.130** [3.30]	Tin Plated Brass	41478	—	X	X
	2	**.171** [4.34]	Brass	41617	—	X	X
	4	**.130** [3.30]	Tin Plated Brass	41484	—	X	X
	1	**.171** [4.34]	Nickel Plated Steel	42194-1	—	—	—



Style G

Style	Pairs	Stud Diameter	Material and Finish	Terminal Part No.	UL		CSA
G	1	**.130** [3.30]	Brass	41290	—	X	X
	2	**.130** [3.30]	Brass	41291	—	X	X
	3	**.130** [3.30]	Brass	41292	—	X	X
	4	**.130** [3.30]	Brass	41370	—	X	X
	1	**.130** [3.30]	Tin Plated Brass	41480	—	X	X
	2	**.130** [3.30]	Tin Plated Brass	41481	—	X	X
	3	**.130** [3.30]	Tin Plated Brass	41482	—	X	X
	—	**.130** [3.30]	Tin Plated Brass	42115-4[1]	—	X	X
	—	**.130** [3.30]	Brass	42115-6[1]	—	X	X
	1	**.163** [3.30]	Tin Plated Brass	63214-1	—	X	X
	1	**.171** [4.34]	Brass	41619	—	X	X
	1	**.171** [4.34]	Tin Plated Brass	42802-1	—	X	X
	1	**.097** [2.46]	Tin Plated Brass	60080-2	—	X	X

[1]In continuous strip-form.



Style H

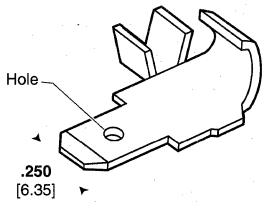
Style	Stud Diameter	Material and Finish	Terminal Part No.	UL		CSA
H	**.130** [3.30]	Brass	62261-1	—	X	X

SOURCE: Catalog 82004

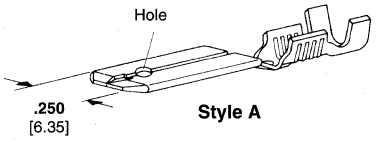
Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

250 Series FASTON Tabs
(Continued)

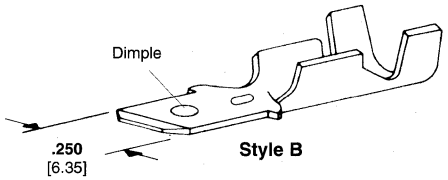
Wire Crimp Type Tabs



Wire Range AWG	Insulation Diameter	Material and Finish	Terminal Part No.	UL	CSA	Quick-Change Applicator No. ■
18-14	**.080–.120** [2.03-3.05]	Tin Plated Brass	42770-2	X	—	X	672250-2



Style A

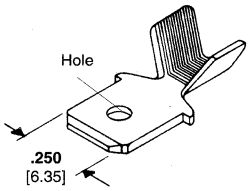


Style B

Wire Range AWG	Style	Insulation Diameter	Stock Thickness	Material and Finish	Terminal Part No.	UL	CSA	Quick-Change Applicator No. ■
22-18	A	**.080–.120** [2.03-3.05]	**.016** [0.41]	Brass	42475-3	—	X	X	466432-2
				Tin Plated Brass	42475-4	—	X	X	466432-2
18-14	A	**.110–.150** [2.79-3.81]	**.016** [0.41]	Brass	42474-3	—	X	X	466431-2
				Tin Plated Brass	42474-4	—	X	X	466431-2
	B	**.120–.170** [3.05-4.32]	**.032** [0.81]	Brass	41411	X	—	X	687804-2
				Tin Plated Brass	41412*	X	—	X	687804-2
				Brass	63761-1	X	—	X	687804-2
14-12	A	**.110–.170** [2.79-4.32]	**.016** [0.41]	Tin Plated Brass	61281-3	—	X	X	466467-4
				Silver Plated Brass	61362-2	—	X	X	466467-4

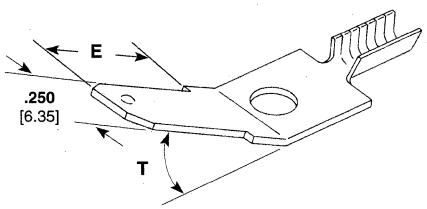
*Loose Piece **Part No. 41778.**

Magnet Wire Type Tabs



Wire Range AWG	Material and Finish	Terminal Part No.	Quick-Change Applicator No. ■
18-14	Tin Plated Brass	63421-1	567161-1
	Tin Plated Brass	63349-1[2]	567161-1
	Tin Plated Brass	61367-3[1]	466147-1
14-12	Tin Plated Brass	62922-1	466510-1

[1]No serrations.
[2]Varnish resist.



Magnet Wire Range	Material and Finish	Angle T	Stud Hole Dia.	Terminal Part No.
28-23½ AWG	Tin Plated Brass	45°	**.127** [3.23]	63136-1[1]
25-19½ AWG	Tin Plated Brass	30°	—	63140-1[1]
23-19 AWG	Tin Plated Brass	15°	—	63165-1[3]
			—	63165-2[2,4]
200-566 CMA	Tin Plated Brass	45°	**.127** [3.23]	63611-1[1]
		0°	**.127** [3.23]	63483-1

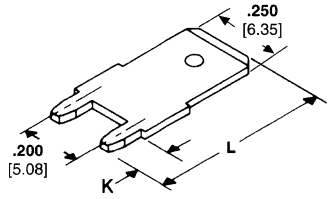
[1]Varnish resist.
[2]Reverse reeled.
[3]Dim. E = **.583** [14.81]
[4]Dim. E = **.503** [12.78]

■ Quick-Change Applicator for AMP-O-LECTRIC Machine **Part No. 565435-5.**
For AMPOMATOR Machine and other machines, contact AMP.

SOURCE: Catalog 82004

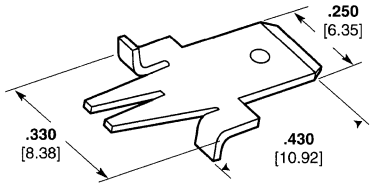
250 Series FASTON Tabs (Continued)

Printed Circuit Board Tabs



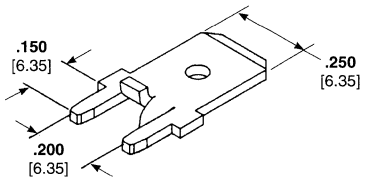
Material and Finish	Dimensions K	Dimensions L	Terminal Part No.	UL	CSA	SEV
Tin Plated Brass	**.125** [3.18]	**.622** [15.80]	62409-1[1]	—	X	X
	.125 [3.18]	**.487** [12.37]	62650-1[2]	—	X	X
	.175 [4.44]	**.532** [13.51]	63650-1[2]	—	X	X
	.125 [3.18]	**.622** [15.80]	63755-1[2]	—	—	—

[1]Loose piece only.
[2]Insertion equipment available.



Material and Finish	Terminal Part No. Strip	Terminal Part No. Loose Piece
Tin Plated Brass	63066-1[1]	63067-1

[1]Insertion equipment available.

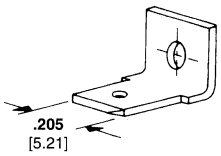


Material and Finish	Terminal Part Number
Tin Plated Brass	63824-1[1]

[1]Insertion equipment available.

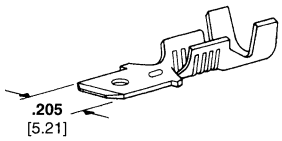
205 Series FASTON Tabs (Mate with All "205" Series FASTON Receptacles)

Stud Mount Type Tabs



Stud Hole Diameter	Material and Finish	Terminal Part No.	UL	CSA	SEV
.145 [3.68]	Brass	62168-1	—	X	X
.130 [3.30]	Brass	61836-1	—	X	X

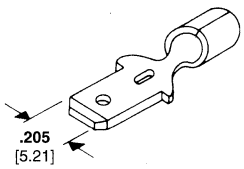
Wire Crimp Type Tabs



Wire Range AWG	Tab Thickness	Insulation Diameter	Material and Finish	Terminal Part No.	UL	CSA	SEV	Quick-Change Applicator No. ■
18–14	**.020** [0.51]	**.120–.150** [3.05-3.81]	Tin Plated Brass	62531-1	X	—	X	567069-2
				63223-1[1]	X	—	X	567069-2

[1]No hole.

Printed Circuit Board Only (Tab Configuration 1)



Board Hole Size	Material and Finish	Terminal Part No.	UL	CSA	SEV
.100–.095 Dia. [2.54-2.41]	Brass	62411-1[1]	—	X	X
	Tin Plated Brass	60284-2[1]	—	X	X

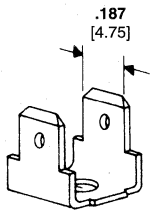
[1]Loose piece only.

■ Quick-Change Applicator for AMP-O-LECTRIC Machine **Part No. 565435-5.** For AMPOMATOR Machine and other machines, contact AMP.

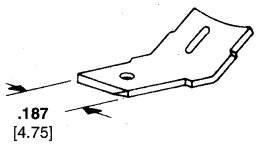
SOURCE: Catalog 82004

187 Series FASTON Tabs (Mate with All "187" Series FASTON Receptacles)

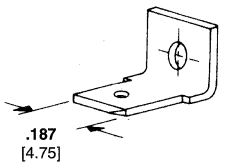
Stud Mount Type Tabs (Hole in Tab)



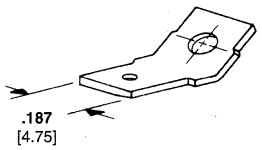
Style A



Style B



Style C

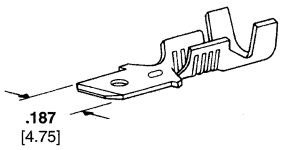


Style D

Style	Stud Hole Diameter	Stock Thickness	Material and Finish	Terminal Part No.	UL	CSA	SEMKO
A	**.130** [3.30]	**.020** [0.51]	Tin Plated Brass	61951-1	—	X	X
B	—	**.020** [0.51]	Nickel Plated Steel	61960-1[1,3]	—	X	X
	—	**.032** [0.81]	Nickel Plated Steel	63771-1[1]	—	—	—
C	**.145** [3.68]	**.020** [0.51]	Tin Plated Brass	61407-3	—	X	X
D	**.130** [3.30]	**.020** [0.51]	Tin Plated Brass	61761-2[2]	—	X	X
	.145 [3.68]	**.020** [0.51]	Brass	62576-1[3]	—	X	X
	.171 [4.34]	**.020** [0.51]	Tin Plated Brass	61664-1[2]	—	X	X

[1]Weld tab.
[2]Bent 90°.
[3]Bent 45°.

Wire Crimp Type Tabs



Wire Range AWG	Tab Thickness	Insulation Diameter	Material and Finish	Terminal Part No.	UL	CSA	SEMKO	Quick-Change Applicator No. ■
22-18	**.020** [0.51]	**.080–.120** [2.03-3.05]	Tin Plated Brass	42490-3	X	—	X	466441-5
			Brass	42490-4	X	—	X	466441-5
18-14	**.020** [0.51]	**.120–.150** [3.05-3.81]	Brass	60850-1	X	—	X	466444-2
			Tin Plated Brass	60850-2	X	—	X	466444-2
	.032 [0.81]	**.120–.150** [3.05-3.81]	Tin Plated Brass	61687-2[1]	X	—	X	466444-2

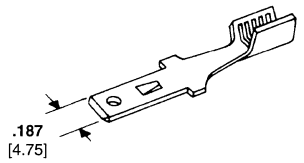
[1]Premilled dual stock thickness.

■ Quick-Change Applicator for AMP-O-LECTRIC Machine **Part No. 565435-5**. For AMPOMATOR Machine and other machines, contact AMP.

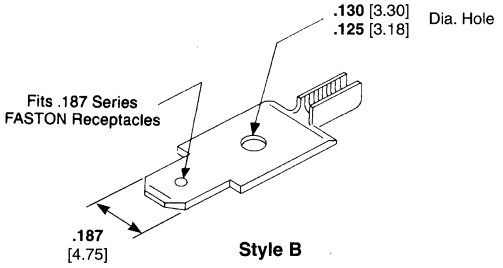
Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

187 Series FASTON Tabs
(Continued)

AMPLIVAR FASTON Tabs
(with Locking Lance for use with magnet wire)



Style A

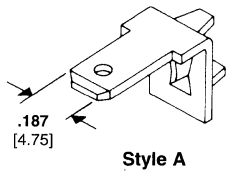


Style B

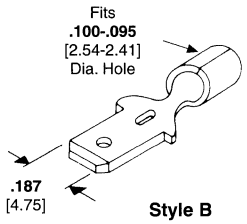
Wire Range	Type	Material and Finish	Terminal Part No.	Quick-Change Applicator No. ■
24-21 AWG	A	Tin Plated Brass	61440-3	687489-2
22-16 AWG	A	Tin Plated Brass	62447-1	567469-2
15-13 AWG	A	Tin Plated Brass	61442-3	687901-2
15-12 AWG	A	Tin Plated Brass	62445-1	566223-2
200-640 CMA	A	Tin Plated Brass	63573-1[1,2]	567076-1
12-10 AWG	A	Tin Plated Brass	62443-1	567604-2
		Tin Plated Brass	62443-2	567604-2
27-23 AWG	B	Tin Plated Brass	63484-1[1]	567076-1

[1]Varnish resist coating.
[2]Bent 30°.

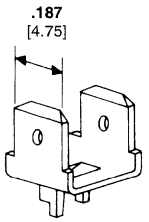
Printed Circuit Board Only



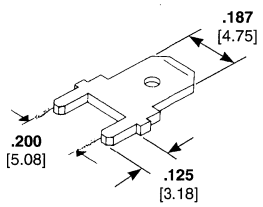
Style A



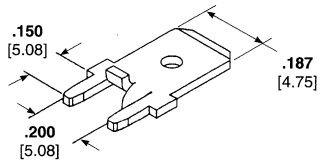
Style B



Style C



Style D



Style E

Type	Board Thickness	Material and Finish	Terminal Part No.	UL	CSA	SP
A	.055 [1.40]	Pre-Tin Brass	61543-1[3]	—	X	X
	.062 [1.58]	Pre-Tin Brass	62403-1[3]	—	X	X
B	.062 [1.58]	Tin Plated Brass	61907-1[1]	—	X	X
C	.062 [1.58]	Pre-Tin Brass	62221-1[3]	—	X	X
D	.125 [3.18] Max.	Tin Plated Brass	63525-1[2]	—	X	X
		Tin Plated Brass	63603-1[3]	—	X	X
E	.062 [1.58]	Tin Plated Brass	63823-1[3]	—	—	—

[1]Loose piece only.
[2].032 [0.81] stock thickness.
[3]Insertion equipment available.

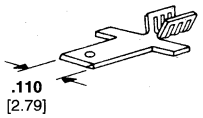
■ Quick-Change Applicator for AMP-O-LECTRIC Machine **Part No. 565435-5.**
For AMPOMATOR Machine and other machines, contact AMP.

SOURCE: Catalog 82004

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

110 Series FASTON Tabs (Mate with All "110" Series FASTON Receptacles)

Wire Crimp Type Tabs

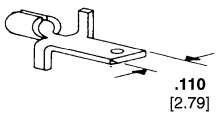


Wire Range AWG	Material and Finish	Terminal Part No.	UL	CSA	Quick-Change Applicator No. ■
26-22	Tin Plated Brass	62887-1	X	—	X	466843-2
	Tin Over Copper	62887-2	X	—	X	466843-2
23-19	Tin Plated Brass	63497-1[1]	X	—	X	567604-2
22-18	Pre-Tin Brass	62122-1	X	—	X	466508-2
	Pre-Tin Brass	62384-1	X	—	X	466508-2
	Tin Plated Brass	63138-1[2]	X	—	X	567072-2
22-16	Tin Plated Brass	63753-1[1]	X	—	X	566378-1

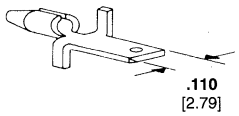
[1]AMPLIVAR terminal.
[2]Insulation support.

■ Quick-Change Applicator for AMP-O-LECTRIC Machine **Part No. 565435-5.** For AMPOMATOR Machine and other machines, contact AMP.

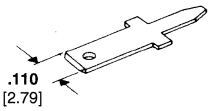
Printed Circuit Board Only



Style A



Style B



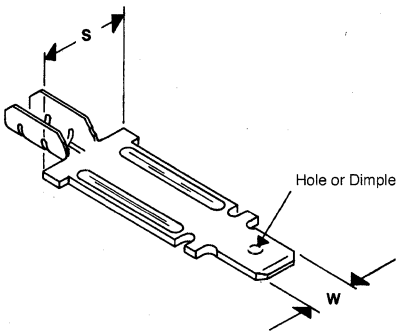
Style C

Style	Mating Hole Diameter	Material and Finish	Terminal Part No.	UL	CSA
A	**.060-.055** [1.52-1.40]	Tin Brass	61134-3[1]	—	X	X
B	**.067-.063** [1.70-1.60]	Tin Brass	61968-1[2,3]	—	X	X
	.067-.063 [1.70-1.60]	Tin Brass	62437-1[1]	—	X	X
C	**.044-.048** [1.12-1.22]	Tin Brass	62395-1[2,4]	—	X	X
	.044-.048 [1.12-1.22]	Tin Brass	63756-1[2]	—	X	X
	.067-.073 [1.70-1.85]	Pre-tin/Pre-copper	62669-1[2]	—	X	X

[1]Loose piece only.
[2]Insertion machine available.
[3]Loose Piece **Part Number 62437-1**.
[4]Loose Piece **Part Number 62836-1**.

312 and 250 Series FASTON Tabs (High Temperature [343°C to 371°C])

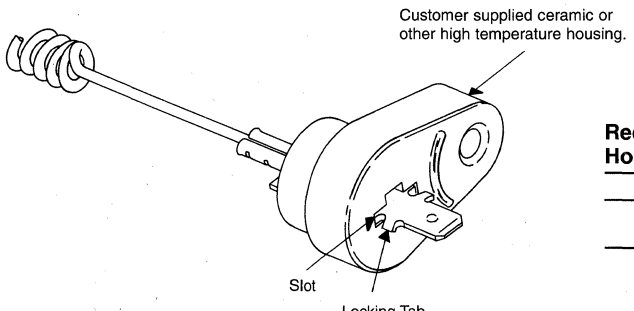
AMP high-temperature tabs are designed to crimp to heating element wire. The tab end protrudes through a ceramic/ high-temperature housing for mating with either a standard 250 or 312 FASTON receptacle.



Series	Solid Wire Range AWG	Dimensions W	Dimensions S	Tab Feature	Material and Finish	Terminal Part No.[1]
312	20-15	**.312** [7.92]	**.500** [12.7]	Hole	Nickel Plated Steel	63300-1
			.375 [9.52]	Hole	Nickel Plated	63390-1
250	20-15	**.250** [6.35]	**.500** [12.7]	Dimple	Nickel Plated Steel	63301-1
			.500 [12.7]	Hole	Nickel Plated	63522-1

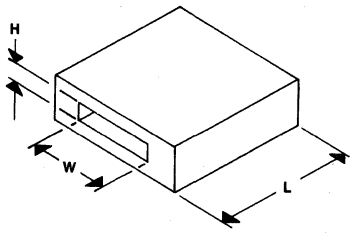
[1]Contact Tooling/Technical Assistance Center for Tooling Application.

Typical Application



Recommended Housing Dimensions

Slot = H × W	L
.070 x .390 [1.78-9.91]	**.640** [16.26]

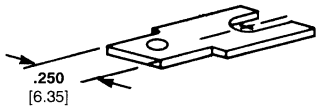


SOURCE: Catalog 82004

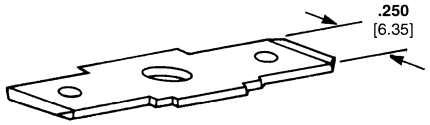
250 Series Test Tabs (Mate with All "250" Series FASTON Receptacles)

Test Tabs

The mechanical tab is mounted onto AMP gauge 100505 for testing of receptacle insertion/ extraction requirements. Double-ended test tabs are also available for electrical and temperature rise testing. AMP has readily available a variety of NEMA DC2 constructed tabs for mechanical testing of FASTON, Ultra-Fast and Positive Lock receptacles. These tabs are designed for electrical test setups as outlined in UL 310.



Mechanical Style A

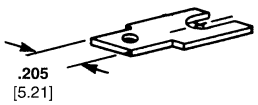


Mechanical Style B

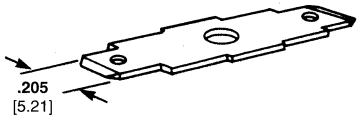
Style	Stud Hole Diameter	Material and Finish	Terminal Part No.
A	**.125** [3.18]	Brass	60447-1[1]
		Brass	63633-1[2,3]
		Steel	60447-2[1]
		Brass	63274-1[2]
		Steel	63274-2[2]
B	**.145** [3.68]	Tin Plated Steel	62627-1
		Brass	62627-2
		Brass	62627-3[2]

[1]Mechanical test tab for use with AMP gauge number 100505.
[2]Test tab with hole for Positive Lock receptacle.
[3]**.020** [0.51] thick.

205 Series Test Tabs



Mechanical Style A



Mechanical Style B

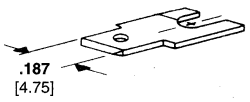
Style	Stud Hole Diameter	Stock Thickness	Material and Finish	Terminal Part No.
A	**.125** [3.18]	**.020** [0.51]	Brass	60613-1[1]
	.125 [3.18]	**.032** [0.81]	Brass	60613-2[1]
B	**.145** [3.68]	**.020** [0.51]	Tin Plated Steel	60921-4
	.145 [3.68]	**.032** [0.81]	Brass	60922-1
	.145 [3.68]	**.020** [0.51]	Brass	60921-1
	.145 [3.68]	**.032** [0.81]	Tin Plated Steel	60922-5

[1]Mechanical test tab for use with AMP gauge number 100505.

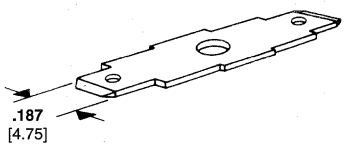
SOURCE: Catalog 82004

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

187 Series Test Tabs (Mate with All "187" Series Receptacles)



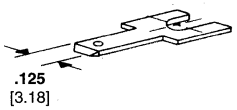
Mechanical
Style A



Electrical
Style B

Style	Pairs	Stud Hole Diameter	Stock Thickness	Material and Finish	Terminal Part No.
A	—	**.125** [3.18]	**.020** [0.51]	Brass	60443-1
				Tin Plated Brass	60443-5
			.032 [0.81]	Brass	60443-2
				Tin Plated Brass	60443-6
B	1	**.145** [3.68]	**.020** [0.51]	Tin Plated Steel	60920-4
				Tin Plated Brass	60920-5
			.032 [0.81]	Brass	62298-1
				Tin Plated Steel	62298-2

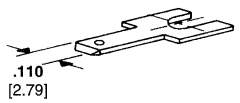
125 Series Test Tabs (Mate with All "125" Series Receptacles)



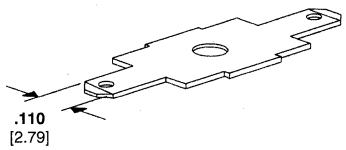
Mechanical
Style A

Style	Pairs	Stud Hole Diameter	Stock Thickness	Material and Finish	Terminal Part No.
A	—	**.125** [3.18]	**.020** [0.51]	Brass	63747-1

110 Series Test Tabs Mate with All "110" Series Receptacles



Mechanical
Style A



Electrical
Style B

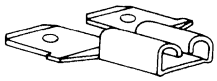
Style	Stud Hole Diameter	Stock Thickness	Material and Finish	Terminal Part No.
A	**.125** [3.18]	**.020** [0.51]	Brass	62061-1
		.032 [0.81]	Brass	62061-2
		.016 [0.41]	Brass	62061-3
B	**.145** [3.68]	**.020** [0.51]	Tin Plated Steel	62628-1
			Brass	62628-2
		.032 [0.81]	Brass	62629-1
			Tin Plated Steel	62629-2

SOURCE: Catalog 82004

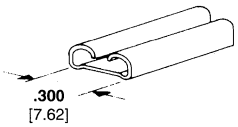
FASTON Tab Adapters

250 Series

Fits Tab: .032 [0.81]



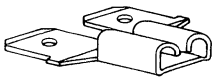
Style A



Style B

Style	Dual Thickness	Material and Finish	Terminal Part No.	UL	CSA	VDE
A	**0.18–.032** [4.57-0.81]	Brass	61765-1	—	X	—
		Tin Plated Brass	61765-2	—	X	—
B	—	Tin Plated Brass	61810-2	—	X	—

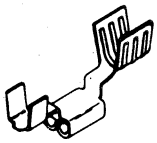
187 Series

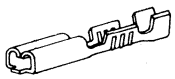


Stock Thickness	Receptacle Fits Tab	Material and Finish	Terminal Part No.	UL	CSA	VDE
.013 x .020 [0.33-0.51]	**.020** [0.51]	Tin Plated Brass	610452	—	X	X
.013 x .032 [0.33-0.81]	**.032** [0.81]	Brass	63686-1	—	X	—
		Tin Plated Brass	63699-1	—	X	—

SOURCE: Catalog 82004

Tab Receptacles


Style A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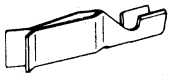
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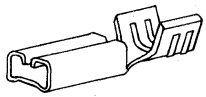
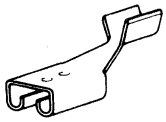

Style D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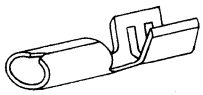
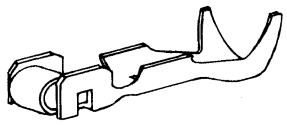

Style F

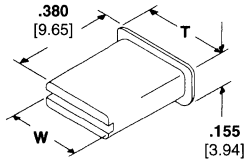

Style G

Style	Wire Range AWG	Wire Range mm²	Insul. Dia. Range	Stock Thk.	Material and Finish	Fits Tab	Part No.	Tooling Part No. Hand Tool	Tooling Part No. Applicator
B	26-22	0.12–0.4	**.035–.065** 0.89–1.65	**.010** .025	Pre Tin Brass	**.031 × .093** 0.79 × 2.36	61813-1[6]	90204-5	466187-2
			.035–.065 0.89–1.65	**.010** 0.25	Pre Tin Brass	**.014 × .093** 0.36 × 2.36	62041-1[7]	90204-5	466187-2
G	26-22	0.12–0.4	**.035–.060** 0.89–1.52	**.008** 0.2	Gold Plated Beryllium Copper	**.025 × .025** 0.64 × 0.64	61941-1	—	466487-2
A	24-20	0.2–0.6	**.040–.080** 1.02–2.03	**.010** 0.25	Brass	**.045 × .045** 1.14 × 1.14	60524-1	90084	686169-2
			.040–.080 1.02–2.03	**.010** 0.25	Gold Plated Brass	**.045 × .045** 1.14 × 1.14	60524-3	90084	686169-2
			.040–.080 1.02–2.03	**.010** 0.25	Tin Plated Beryllium Copper	**.045 × .045** 1.14 × 1.14	60524-5	90084	686169-2
			.040–.080 1.02–2.03	**.010** 0.25	Tin Plated Brass	**.025 × .062** 0.64 × 1.57	60436-2	90084	686169-2
			.040–.080 1.02–2.03	**.010** 0.25	Gold Plated Brass	**.031 × .062** 0.79 × 1.57	60477-1	90064	686169-2
B	24-20	0.2–0.6	**.040–.080** 1.02–2.03	**.010** 0.25	Tin Plated Brass	**.031 × .062** 0.79 × 1.57	60900-1[1] 60900-4[2] 61454-1[3]	— —	466449-2 —
			.040–.080 1.02–2.03	**.010** 0.25	Gold Plated Brass	**.031 × .062** 0.79 × 1.57	60900-2 60900-5[8]	—	466449-2
F	24-20	0.2–0.6	—	**.010** 0.25	Tin Plated Brass	**.015 × .050** 0.38 × 1.27	62352-1	—	466048-2
E	22-20	0.3–0.6	—	**.010** 0.25	Tin Plated Brass	**.037 × .125** 0.94 × 3.18	41989	—	466129-2
A	22-18	0.3–0.9	**.060–.110** 1.52–2.79	**.010** 0.25	Tin Plated Brass	**.031 × .062** 0.79 × 1.57	61489-1	90238-1	687122-2
			.060–.110 1.52–2.79	**.010** 0.25	Gold Plated Brass	**.031 × .062** 0.79 × 1.57	61616-1	90238-1	687122-2
B	22-18	0.3–0.9	**.050–.085** 1.27–2.16	**.010** 0.25	Pre-Tin Brass	**.010 × .093** 0.25 × 2.36	63391-1[4,5] 63391-2[5]	— —	— 466100-2
B	20-18	0.5–0.9	**.080–.120** 2.03–3.05	**.010** 0.25	Pre-Tin Brass	**.032 × .103** 0.81 × 2.62	60252-1[7]	46564	466005-2
				.010 0.25	Pre-Tin Brass	**.020 × .103** 0.51 × 2.62	60432-1[7]	46564	466005-2
				.010 0.25	Tin Plated Brass	**.020 × .156** 0.51 × 3.96	62399-1	—	466005-2
D	20-18	0.5–0.9	—	**.010** 0.25	Brass	**.010 × .110** 0.25 × 2.79	62589-1	—	466183-2
E	20-16	0.5-1.5	—	**.010** 0.25	Tin Plated Brass	**.037 × .125** 0.94 × .318	63615-1	—	—
C	18-14	0.8–2.0	—	**.025** 0.64	Brass	**.060 × .250** 1.52 × 6.35	60312-1	—	671257-4

[1]Available in Loose Piece form, order **Part No. 61454-1**.
[2]Reverse reel of **Part No. 60900-1**.
[3]Loose Piece form of **Part No. 60900-1.**
[4]Loose Piece form of **Part No. 63391-2.**
[5]Compliant base.
[6]No dimple.
[7]Dimple.
[8]Reverse reel of **Part No. 60900-2**.

SOURCE: Catalog 82004

Tab Caps
187 and 250 Series



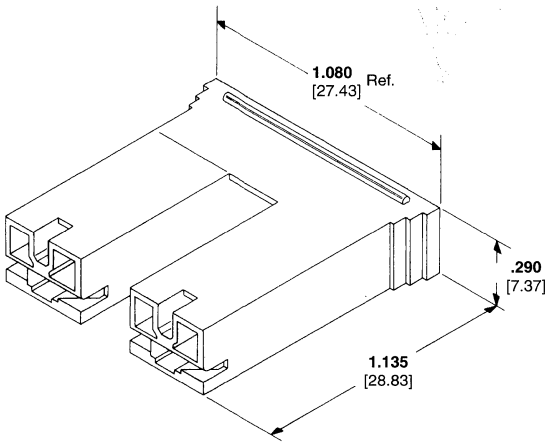
Tab Size	Material	UL 94[1]	Color	Dimensions		Insulator Part No.
				T	W	
"187" Series **.020** [0.51] Thick	Nylon	V-2	Natural	**.320** [8.13]	**.260** [6.60]	360041-1
"250" Series **.032** [0.81] Thick	Nylon	V-2	Natural	**.380** [9.65]	**.320** [8.13]	360042-1

[1]Flammability rating.

250 Series Housings

Water Valve Coil Connector

This connector is designed to mate with the Appliance Industry's Standard Water Valve Coil. The connector is suitable for such applications as washing machine mixing valves, dishwasher fill valves, and refrigerators with automatic ice makers. The housing has a unique internal cavity design to accommodate either two Positive Lock or two Budget and LIF FASTON receptacles.



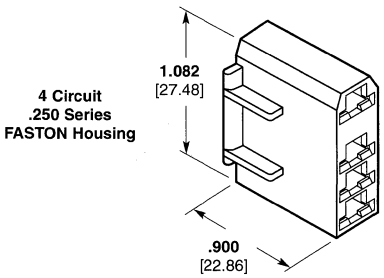
Product Facts

- **Prevents terminal back-out of housing through plastic retention feature**
- **Higher disengagement forces possible with Positive Lock or Low Insertion Force (LIF) FASTON receptacles (Hole required in mating tab)**

Material	UL 94[3]	Color	Part Number	Accepts Terminals[1]		
Nylon	V-2	Natural	520935-1	"250" Series FASTON Receptacles 42400, 42510, 60635, 63097[2], 63119[2], 63239[2], 63306, 63365	X	X
		Red	520935-2			
		Black	520935-3[4]			

[1]For dimensions and plating, refer to Terminal Specifications on pages 1084-1101
[2]For Positive Lock Mark II Receptacles, refer to Alphabetical Index.
[3]Flammability rating of plastic material.
[4]Weather-resistant material.

Defrost Timer Housing



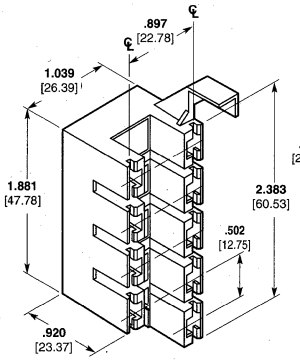
Material	UL 94[1]	Color	Part Number	Accepts Terminals		
Nylon	V-2	Black	520987-1	**.250** [6.35] Low Insertion Terminals	X	X
		Natural	520987-2	**.250** [6.35] Low Insertion Terminals	X	X

[1]Flammability rating of plastic material.

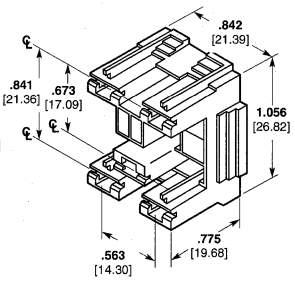
SOURCE: Catalog 82004

250 Series and 187 Series Housings

Appliance Connector Housings



Part No. 521000-1



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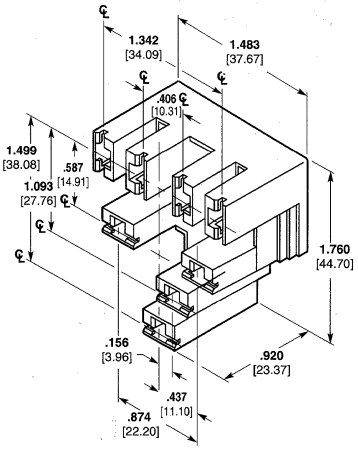

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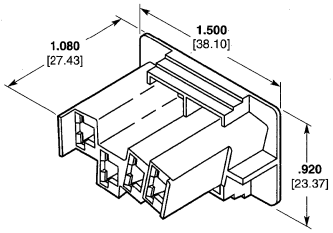

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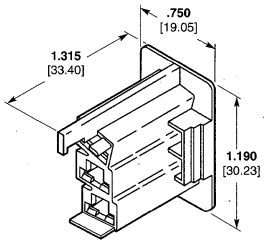

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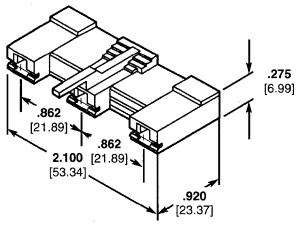

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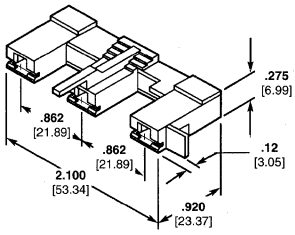

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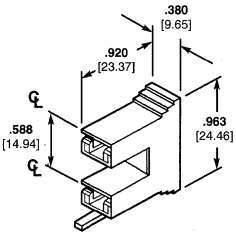

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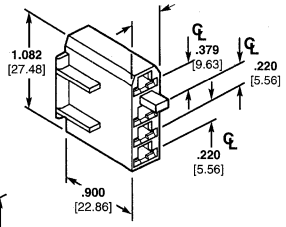
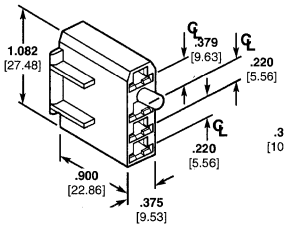


Part No. 521065



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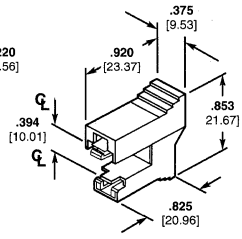

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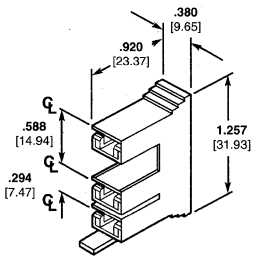

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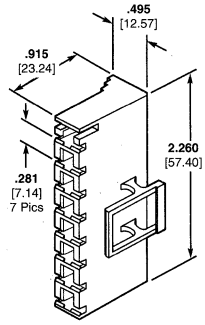
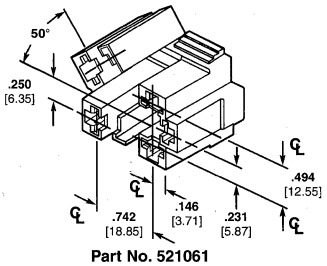


Part No. 521040



Part No. 521061

No. of Circuits	Material	UL 94[1]	Color	Part Number	Accepts Terminals[2]	®RU	SP®
9	Nylon	V-2	Natural	521000-1	250 LIF	X	X
8				521002-1	250 LIF	X	X
4				521003-1	250 LIF	X	X
3				521004-1	250 LIF	X	X
5				521001-1	187 LIF	X	X
7	Nylon	V-2	Black	521040-1	250 LIF	X	X
5				521061-1	250 LIF	X	X
2				521064-1	187 LIF/250 LIF	X	X
4				521065-1	250 LIF	X	X
4				521066-1	250 LIF	X	X
3				521067-1	250 LIF	X	X
3				521068-1	250 LIF	X	X
2				521069-1	250 LIF	X	X
3				521070-1	250 LIF	X	X

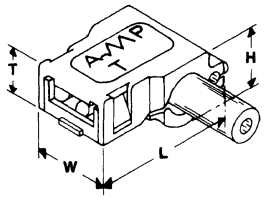
[1]Flammability rating of plastic material.
[2]Order LIF receptacles separately. See pages 1085-1096.

SOURCE: Catalog 82004

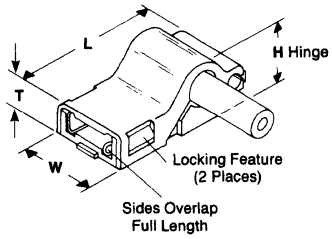
250 Series and 187 Series Housings (Continued)

AMPIP Post-Insulation Pods

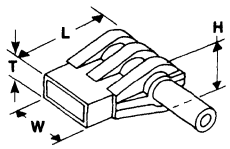
Flag Style Receptacle Housings



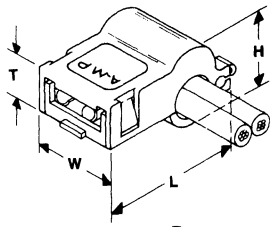
A
.250 Series



B
.250 Series



C
.250 Series

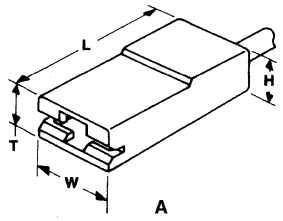


D
.187 Series

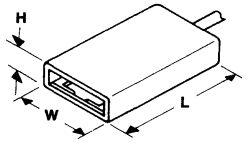
Style	Type	Material	UL 94[1]	Color	Insulation Dia. Max.	Dimensions L	T	W	H	Part Number	Accepts Terminal		
A	Continuous Strip	Nylon	V-2	Natural	.210 [5.33]	.787 19.99	.266 6.76	.448 11.38	.360 9.14	1-480298-0	"250" Series Flag FASTON Receptacles 41531, 41532, 42511, 61156, 63445	X	X
	Loose Piece									1-480307-1			
B	Continuous Strip	Nylon	V-2	Natural	.140 [3.56] or (2) .110 [2.79]	.732 18.59	.180 4.57	.460 11.68	.315 8.00	1-480296-0	"250" Series Flag FASTON Receptacles 60290, 60736, 62418	X	X
	Loose Piece									1-480306-1			
C	Loose Piece	Vinyl	HB	Blue	.150 [3.81]	.710 18.03	.210 5.33	.380 9.65	.400 10.16	480019-6	"250" Series Flag FASTON Receptacles	—	—
D	Loose Piece	Nylon	V-2	Natural	.175 [4.44]	.699 17.76	.230 5.84	.430 10.92	.320 8.13	1-480487-2	"187" Series Flag FASTON Receptacles[2]	X	—

[1]Flammability rating of plastic material.
[2]Does not accept commercial series.

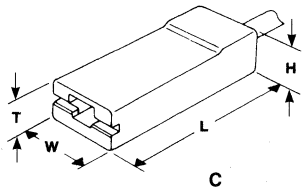
Straight Style Receptacle Housings



A
.250 Series



B
.250 Series



C
.250/.187 Series

Style	Type	Material	UL 94[1]	Color	Insulation Dia. Max.	Dimensions L	T	W	H	Part Number	Accepts Terminal		
A	Loose Piece	Nylon	V-2	Natural	.200 [5.08]	.920 23.37	.260 6.60	.390 9.91	.298 7.57	1-480416-0	"250" Series FASTON Receptacles 41143, 41194, 41202, 41274, 41771, 41772, 42285, 42400, 42510, 42640, 42643, 60650, 60938, 61107, 61368, 61375, 63306, 63365	X	X
				Black	.200 [5.08]	.920 23.37	.260 6.60	.390 9.91	.298 7.57	1-480416-1			
B	Loose Piece	Nylon	V-2	Natural	.125 3.18	.955 24.26	—	.570 14.48	.190 4.83	1-480458-0	"250" Series FASTON Receptacles 42660, 42743, 42845, 61202	X	X
C	Loose Piece	Nylon	V-2	Natural	.180 4.57	.775 19.68	.225 5.72	.338 8.58	.245 6.22	1-480418-0	"250" Series FASTON Receptacles 42197, 42198, 42710, 42712[2], 42713, 60904, 60523	X	X
				Natural	.170 4.32	.775 19.68	.215 5.46	.308 7.82	.235 5.97	1-480435-0	"187" Series FASTON Receptacles 42373, 42374, 42452, 42453, 42617, 60487, 60573, 62137, 62138, 62187, 63475, 63477	X	X

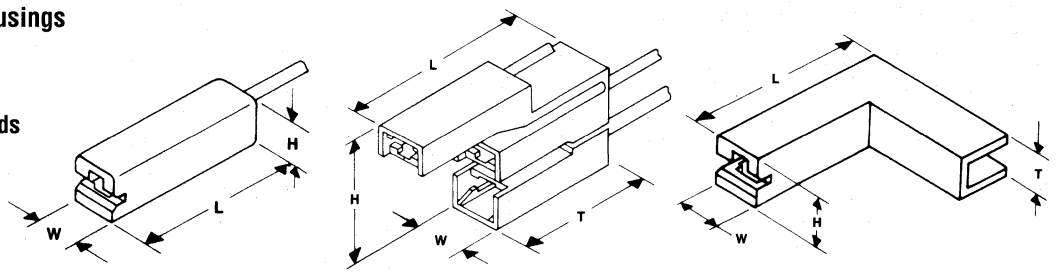
[1]Flammability rating of plastic material.
[2]Except **Part No. 42712-3**.

SOURCE: Catalog 82004

187 and 110 Series Housings

AMPIP Post-Insulation Pods (Continued)

Straight Style Receptacle Housings (Continued)



D
.110 Series

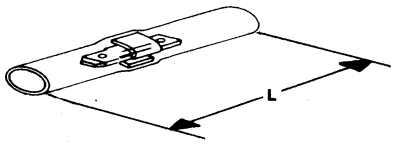
E
.187 Series

F
.110 Series

Style	Type	Material	UL 94[1]	Color	Insulation Dia. Max.	Dimensions L	T	W	H	Part Number	Accepts Terminal		
D	Loose Piece	Nylon	V-2	Natural	.150 3.81	.790 20.07	—	.235 5.97	.240 6.10	1-480417-0	"110" Series FASTON Receptacles 42067, 42068, 42236, 42398, 42399, 42415, 42604, 60118, 60197, 60577, 60601, 60729, 61158, 61400, 61457, 61818, 62050, 62094, 62191, 62345	X	X
E	Loose Piece	Nylon	V-2	Natural	.170 4.32	1.655 42.04	.845 21.46	.317 8.05	.875 22.22	520212-1	"187" Series FASTON Receptacles 42452, 42453, 42373, 42374, 42617, 60487, 60573, 62137, 62187	X	X
				Red						520212-2			
				Natural	.170 4.32	1.405 35.69	.845 21.46	.317 8.05	.875 22.22	360010-1			
				Red						360010-3			
F	Loose Piece	Nylon	V-2	Natural	—	.550 13.97	.205 5.21	.225 5.72	.200 5.08	360040-1	"110" Series FASTON Receptacles 61070, 61481, 62336	X	X

[1]Flammability rating of plastic material.
Note: For additional "110" Series Housings (2- and 3- Circuit), see Catalog 82004.

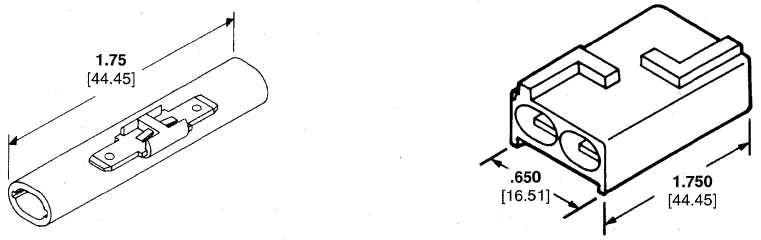
Line Splice Connectors for "250" Series



Material and Finish	Dimension L Max.	Splice Part Number		
Plastic Tube over Brass Tab	2.093 53.16	321235	—	—
	2.625 66.68	1-321235-0[1]	X	X
Plastic Tube over Tin Plated Brass Tab	2.625 66.68	1-321235-1[1]	X	X
	2.093 53.16	321688	—	—

[1]Recommended for UL applications.

Line Splice Connectors for "187" Series



Single

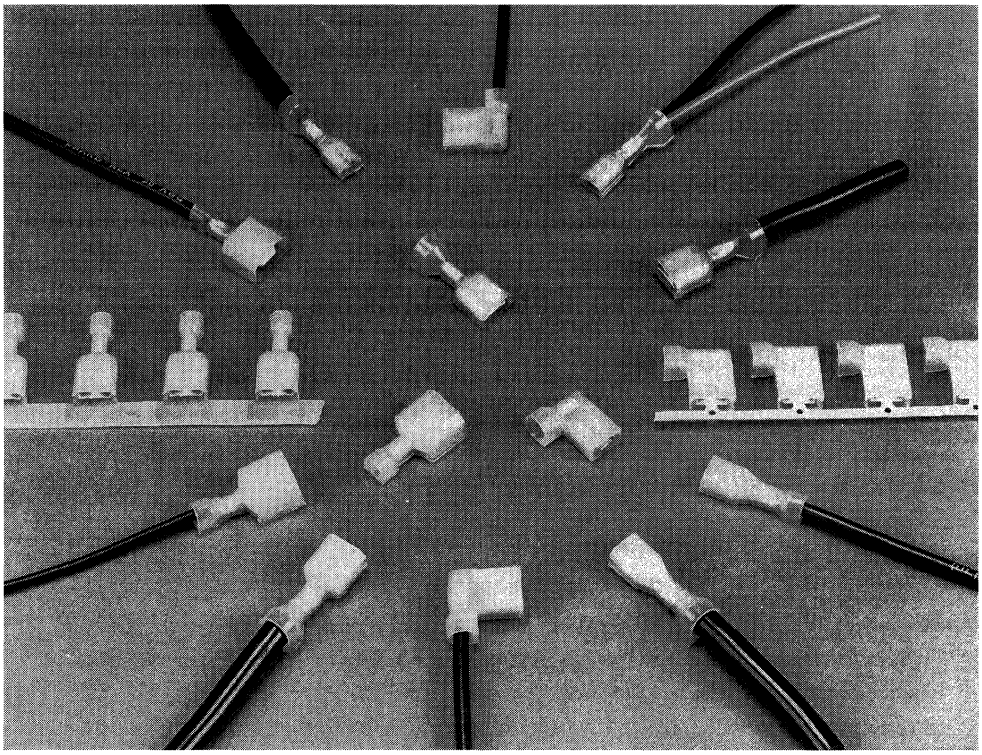
Dual

Type	Material and Finish	UL 94[1]	Splice Part Number		
Single	Natural Nylon Housing over Brass Tab	V-2	360035-1	X	—
Dual			360025-1	X	—

[1]Flammability rating of plastic material.

SOURCE: Catalog 82004

Ultra-Fast Fully Insulated FASTON Receptacles and Tabs



Performance Capabilities

- Meets UL 310 specification for quick connect terminals
- Meets CSA C22.2 No. 153 Specification for quick connect terminals
- Meets NEMA DC-2 Standard for quick connect terminals (Flag meets mechanical standard only)
- 600 volt application capability (1000 volts for signs and fixtures)

Product Facts

- One-piece Fully Insulated Premier quality FASTON Receptacle helps prevent shock and short hazards
- Designed to allow correct lead-in of tab
- Designed to provide full mating with a variety of tab styles including those with shoulders
- Funnel wire entry
- Wire stop
- Visual inspection of crimp and wire brush
- Assemblies are color coded by wire size
- Assemblies contain wire size and tab size designation
- Tab thickness marked on terminal and visible through housing
- Standard and large insulation diameter product
- Application tooling available to meet production requirements
- Tin-plated copper alloy terminals
- UL rated at +105°C
- Terminates 26-10 AWG solid, fused and stranded wire (Flags terminate stranded wire only)
- UL Listed under File No. E66717
- CSA Certified under File No. LR 7189
- VDE tested according to DIN VDE 0627/9.91, VDE Reg. No. 5193

The Ultra-Fast Fully Insulated FASTON Receptacle and Tab offers the advantage of a completely protected terminal and a wire crimp with comparable electromechanical performance to open barrel "F" crimp FASTON Terminals. The "User-Friendly" design combines easy mating with rounded corners. The .187 and .250 series receptacles incorporate a two-stage roll configuration and a cantilever mounted dimple which provides easy insertion and multiple independent points of contact for reduced tab interface resistance.

Ultra-Fast Fully Insulated FASTON Receptacles, Flag Receptacles and Tabs preclude the need for costly electrical safety interlocks or special protective shields to prevent shock hazards. In addition, electrical short circuits from exposed leads are eliminated, even in equipment requiring close contact spacing.

The Ultra-Fast Receptacle, Flag Receptacle and Tab are preinsulated assemblies featuring a housing molded from type 6/6 nylon material with a +125°C UL temperature rating.

The Ultra-Fast Receptacle housing completely encloses a tin-plated copper alloy Premier FASTON receptacle which has been stress-relieved for increased durability and resistance to abuse. The FASTON receptacle is recessed sufficiently within the housing to allow its use in 600-volt applications. The front end of the terminal is designed for positive mating with a variety of tabs, including those with shoulders. The housing has a slotted membrane which is displaced by two tab shoulders allowing proper engagement of tab and receptacle while maintaining the fully insulated characteristic.

Positive entry and lead-in of the tab is provided by the inner housing wall and the lead-in on the terminal rolls. This permits positive engagement, even in blind mating locations.

The Ultra-Fast Tab housing completely encloses a tin-plated copper alloy FASTON tab. The FASTON tab is recessed sufficiently within the housing to allow its use in 600-volt applications. The housing is designed to completely encapsulate the tab and receptacle when the two are mated.

Quality control is easily maintained. The nylon housing is translucent, allowing visual inspection of the termination. In addition, a crimp code on the hand tool is indented into the housing during the crimping operation which identifies that the proper crimp dies were used.

Depending on production requirements, AMP provides a complete selection of terminating equipment including the AMP-O-LECTRIC terminating machine and fully automatic AMPOMATOR, CLS II and CLS III lead-making machines.

For the exact application tooling to meet your production requirements, see the applicator recommendations in this catalog or call the Tooling/Technical Assistance Center.

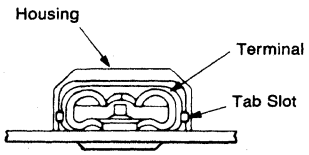
SOURCE: Catalog 82004

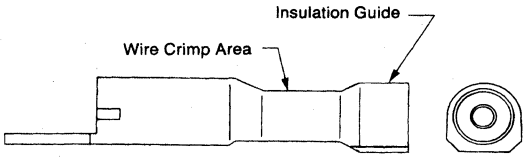
Ultra-Fast Fully Insulated FASTON Receptacles and Tabs (Continued)

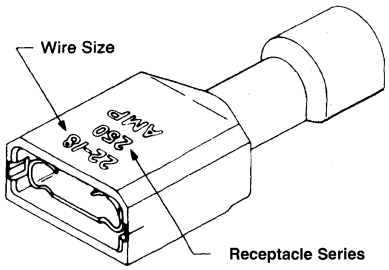
Ultra-Fast Fully Insulated FASTON Receptacles

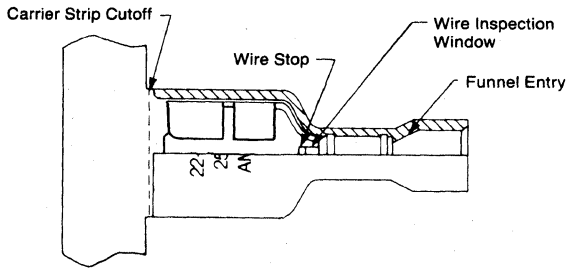
Color Code (Translucent)

Violet—26-22 AWG
Red—22-18 AWG
Blue—16-14 AWG
Yellow—12-10 AWG









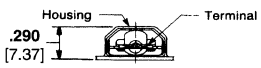
Description	Wire Range AWG	Ins. Dia. Max.	Mating Tab	Terminal Base Material	Part No.	
					Strip	Loose Piece
.110/.125 Series	26-22	.100 [2.54]	.020 x .110/.125 [0.51 x 2.79/3.18]	Brass	7-520365-2[1]	7-520366-2[1]
	22-18	.120 [3.05]	.016 x .110/.125 [0.41 x 2.79/3.18]	Brass	2-520080-2[1]	2-520081-2[1]
			.020 × .110/.125 [0.51 x 2.79/3.18]	Brass	2-520083-2	2-520084-2
			.032 × .110/.125 [0.81 x 2.79/3.18]	Brass	2-520272-2	2-520273-2
		.230 [5.84]	.020 × .110/.125 [0.51 x 2.79/3.18]	Brass	2-520306-2	—
			.032 × .110/.125 [0.81 x 2.79/3.18]	Brass	2-520310-2	—
	16-14	.260 [6.60]	.020 × .110/.125 [0.51 x 2.79/3.18]	Brass	3-520370-2[2]	—
.187 Series	22-18	.135 [3.43]	.020 × .187 [0.51 x 4.75]	Brass	2-520181-2	2-520182-2
			.032 × .187 [0.81 x 4.75]	Brass	2-520193-2	2-520194-2
		.230 [5.84]	.020 × .187 [0.51 x 4.75]	Brass	2-520261-2	—
			.032 × .187 [0.81 x 4.75]	Brass	2-520274-2	2-520275-2
	16-14	.160 [4.06]	.020 × .187 [0.51 x 4.75]	Brass	3-350815-2	3-350816-2
			.032 × .187 [0.81 x 4.75]	Brass	3-520124-2	3-520125-2
		.260 [6.60]	.020 × .187 [0.51 x 4.75]	Brass	3-520150-2	3-520151-2
			.032 × .187 [0.81 x 4.75]	Brass	3-520276-2	—
.250 Series	22-18	.135 [3.43]	.032 × .250 [0.81 x 6.35]	Brass	2-520183-2	2-520184-2
				Phos. Brz.	2-520183-4	2-520184-4
		.230 [5.84]	.032 × .250 [0.81 x 6.35]	Brass	2-520263-2	2-520264-2
				Phos. Brz.	2-520263-4	—
	16-14	.160 [4.06]	.032 × .250 [0.81 x 6.35]	Brass	3-350819-2	3-350820-2
				Phos. Brz.	3-520116-2	3-520117-2
		.260 [6.60]	.032 × .250 [0.81 x 6.35]	Brass	3-520140-2	3-520141-2
				Phos. Brz.	3-520140-4	—
	12-10	.320 [8.13]	.032 × .250 [0.81 x 6.35]	Brass	4-520447-2	4-520448-2

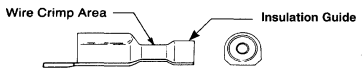
[1]UL Recognized, CSA Certified.
[2]UL Recognized 8 Amps Max., CSA Certified.

SOURCE: Catalog 82004

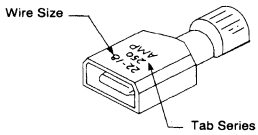
Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

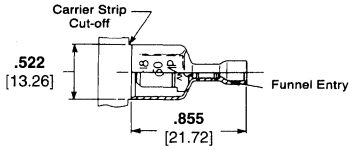
Ultra-Fast Fully Insulated FASTON Receptacles and Tabs (Continued)





Ultra-Fast Fully Insulated FASTON Tabs



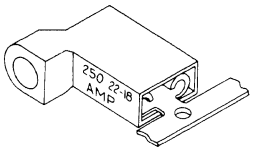


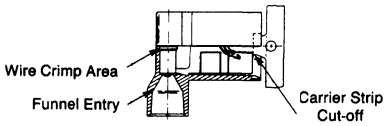
Color Code (Translucent)

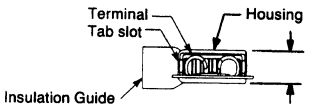
Red—22-18 AWG
Blue—16-14 AWG

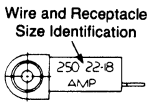
Description	Wire Range AWG	Ins. Dia. Max.	Tab Size	Terminal Base Material	Part No.	
					Strip	Loose Piece
.250 Series	22-18	**.135** [3.43]	**.032 x .250** [0.81 x 6.35]	Brass	2-520102-2	2-520103-2
	16-14	**.160** [4.06]			3-520106-2	3-520107-2

Ultra-Fast Fully Insulated FASTON Flag Receptacles









Color Code (Translucent)

Red—22-18 AWG
Blue—16-14 AWG

Description	Wire Range[1] AWG	Ins. Dia. Max.	Mating Tab	Terminal Base Material	Part No.	
					Strip	Loose Piece
.187 Series	22-18	**.165** [4.19]	**.020** × **.187** [0.51 x 4.75]	Brass	2-520334-2	2-520335-2
			.032 × **.187** [0.81 x 4.75]	Brass	2-520336-2	2-520337-2
	16-14	**.185** [4.70]	**.020** × **.187** [0.51 x 4.75]	Brass	3-520338-2	3-520339-2
			.032 × **.187** [0.81 x 4.75]	Brass	3-520340-2	—
		.260 [6.60]	**.020** × **.187** [0.51 x 4.75]	Brass	3-520997-2	—
.250 Series	22-18	**.165** [4.19]	**.032** × **.250** [0.81 x 6.35]	Brass	2-520128-2	2-520129-2
		.230 [5.84]	**.032** × **.250** [0.81 x 6.35]	Brass	2-520856-2	—
	16-14	**.185** [4.70]	**.032** × **.250** [0.81 x 6.35]	Brass	3-520132-2	3-520133-2
		.260 [6.60]	**.032** × **.250** [0.81 x 6.35]	Brass	3-521013-2	—

[1]Stranded wire only.

Crimp Tooling

Terminal Description		Wire Range AWG	Strip Form Terminals Quick-Change Applicator for AMP-O-LECTRIC Machine Part No. 565435-5	Strip Form Terminals Quick-Change Applicator for AMPOMATOR Machines Model IV A	Strip Form Terminals Quick-Change Applicator for AMPOMATOR Machines Model IV B, CLS II, CLS III	Loose Piece Terminals Die Insert Set for Hand Tool Part Numbers 58078-3	Loose Piece Terminals Die Insert Set for Hand Tool Part Numbers 69710-1
.110/.125 Receptacles		26-22	567082-2	—	567082-1[1]	58052-3	—
		22-18	567041-2	567039-7	567041-1	90390-3	—
		16-14	567117-2	—	567117-1	90391-3	—
.187 Receptacles		22-18	466779-4	567039-1	466779-3	90390-3	—
		16-14	466778-4	567039-2	466778-3	90391-3	—
.250 Receptacles		22-18	466779-4	567039-3	466779-3	90390-3	—
		16-14	466778-4	567039-4	466778-3	90391-3	—
		12-10	567142-2	567039-8	—	—	58267-1[3] 58267-2[2]
.250 Tabs		22-18	466779-4	567039-5	466779-3	90390-3	—
		16-14	466778-4	567039-6	466778-3	90391-3	—
.187 Flag Receptacles	STD	22-18	567083-2	567121-1	567083-1	90390-3	—
		16-14	567085-2	567122-1	567085-1	90391-3	—
	LID[4]	16-14	567460-2	—	567460-1	—	—
.250 Flag Receptacles	STD	22-18	466784-2	682317-1	466784-1	90390-3	—
		16-14	466785-2	682317-2	466785-1	90391-3	—
	LID[4]	22-18	567228-2	—	567228-1	—	—
		16-14	567494-2	—	567494-1	—	—

[1]22 AWG only.
[2]12 AWG only.
[3]10 AWG only.
[4]Large Insulation Diameter.

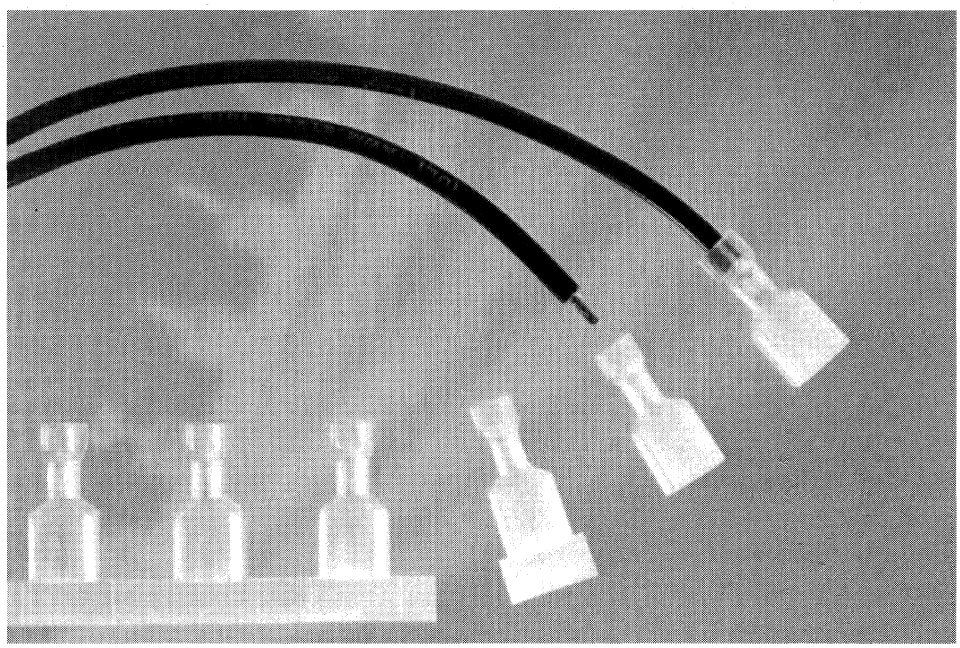
SOURCE: Catalog 82004

Specifications subject to change.

1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

Ultra-Fast Plus—Fully Insulated FASTON Receptacles and Tabs



Product Facts

- One-piece Fully Insulated Premier quality FASTON Receptacle with insulation crimp helps prevent shock and short hazards
- Designed to allow correct lead-in of tab
- Designed to provide full mating with a variety of tab styles including those with shoulders
- Funnel wire entry
- Wire stop
- Visual inspection of crimp and wire brush
- Assemblies are color-coded by wire size
- Assemblies contain wire size and tab size designation
- Tab thickness marked on terminal and visible through housing
- Application tooling available to meet production requirements
- Tin-plated copper alloy terminals
- UL rated at +105°C
- Terminates 22-14 AWG solid, fused and stranded wire
- Complies with the IEC 380, 601, 950, and UL 1950 requirements for a secondary means of insulation fixing

Performance Capabilities

- Meets UL 310 specification for quick connect terminals; UL Listed under File No. E66717
- Meets CSA C22.2, No. 153 Specification for quick connect terminals; CSA Certified under File No. LR 7189
- VDE tested according to DIN VDE 0627/9.91, VDE Reg. No. 5193
- Meets NEMA DC-2 standard for quick connect terminals
- 600-volt application capability (1,000 V for signs and fixtures)
- Tested by TUV, File No. E9071003, as suitable for end product certification to the following standards:

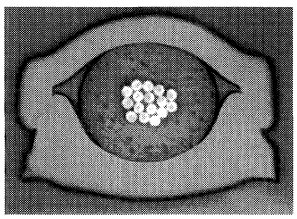
  EN 60 950/09.87
  DIN IEC 380/VDE 0806/08.81
  DIN IEC 601-1 Part 1/VDE 0750 T1/05.82
  DIN VDE 0700 T1/02.81

Ultra-Fast Plus Fully Insulated FASTON Receptacles and Tabs offer all the advantages of the standard Ultra-Fast terminal plus an insulation crimp.

Ultra-Fast Plus Fully Insulated FASTON Receptacles and Tabs preclude the need for costly electrical safety interlocks or special protective shields to prevent shock hazards. In addition, electrical short circuits from exposed leads are eliminated, even in equipment requiring close contact spacing.

Ultra-Fast Plus Receptacles and Tabs are preinsulated assemblies featuring a co-molded housing produced from two different nylon materials. The receptacle/tab and wire barrel portions of the housing are molded from type 6/6 nylon material with a +125°C UL temperature rating. The insulation barrel is molded from a premium grade nylon selected to retain the insulation crimp shape. This premium nylon exhibits minimal springback, thus providing actual insulation crimp tensile strength as well as strain relief for applications where extreme wire dressing and/or vibration are present.

The Ultra-Fast Plus Receptacle housing completely encloses a tin-plated copper alloy Premier FASTON receptacle which has been stress relieved for increased durability and resistance to operator abuse.



The FASTON receptacle is recessed sufficiently within the housing to allow its use in 600-volt applications. The front end of the terminal is designed for positive mating with a variety of tabs, including those with shoulders. The housing has a slotted membrane which is displaced by two tab shoulders allowing proper engagement of tab and receptacle while maintaining the fully insulated characteristics.

Positive entry and lead-in of the tab is provided by the inner housing wall and the lead-in on the terminal rolls. This permits positive engagement, even in blind mating locations.

The Ultra-Fast Plus Tab housing completely encloses a tin-plated copper alloy FASTON tab. The FASTON tab is recessed sufficiently within the housing to allow its use in 600-volt applications. The housing is designed to completely encapsulate the tab and receptacle when the two are mated.

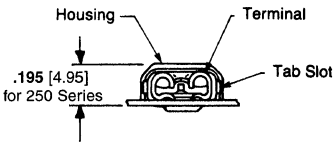
Quality control is easily maintained. The nylon housing is translucent, allowing visual inspection of the termination.

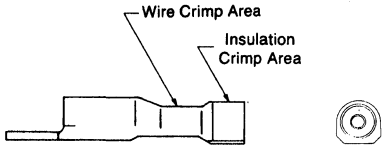
Depending on production requirements, AMP provides a complete selection of terminating equipment including the AMP-O-LECTRIC terminating machine and the fully automatic AMPOMATOR, CLS II and CLS III lead-making machines.

For the exact application tooling to meet your production requirements, consult AMP.

SOURCE: Catalog 82004

Ultra-Fast Plus—Fully Insulated FASTON Receptacles and Tabs (Continued)

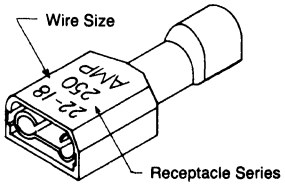


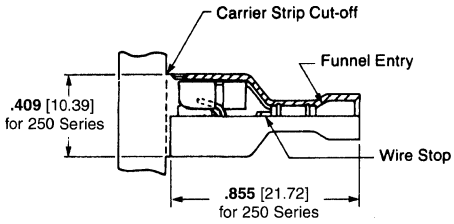


Ultra-Fast Plus—Fully Insulated FASTON Receptacles

Color Code (Translucent)

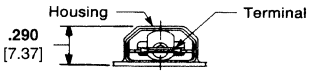
Red—22-18 AWG
Blue—16-14 AWG

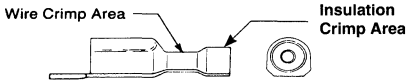




Description	Wire Range AWG	Ins. Dia. Range	Mating Tab	Terminal Base Material	Part No. Strip	Part No. Loose Piece
.110/.125 Series	22-18	.060–.120 [1.52-3.05]	.032 x .110/.125 [0.81 x 2.79/3.18]	Brass	2-520979-2	—
			.020 × .110/.125 [0.51 x 2.79/3.18]	Brass	2-520932-2	—
.187 Series	22-18	.060–.135 [1.52-3.43]	.020 × .187 [0.51 x 4.75]	Brass	2-520401-2	2-520409-2
			.032 × .187 [0.81 x 4.75]	Brass	2-520403-2	2-520411-2
	16-14	.090–.160 [2.29-4.06]	.020 × .187 [0.51 x 4.75]	Brass	3-520402-2	3-520410-2
			.032 × .187 [0.81 x 4.75]	Brass	3-520404-2	3-520412-2
.250 Series	22-18	.060–.135 [1.52-3.43]	.032 × .250 [0.81 x 6.35]	Brass	2-520405-2	2-520407-2
	16-14	.090–.160 [2.29-4.06]	.032 × .250 [0.81 x 6.35]	Brass	3-520406-2	3-520408-2

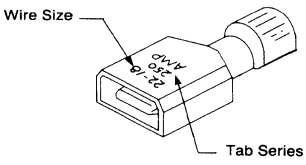
Ultra-Fast Plus—Fully Insulated FASTON Tabs

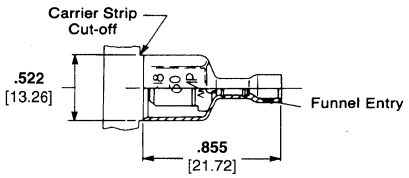




Color Code (Translucent)

Red—22-18 AWG
Blue—16-14 AWG





Description	Wire Range AWG	Ins. Dia. Range	Tab Size	Terminal Base Material	Part No. Strip
.250 Series	22-18	.060–.135 [1.52-3.43]	.032 x .250 [0.81 x 6.35]	Brass	2-521055-2
	16-14	.090–.160 [2.29-4.06]			3-521057-2

Crimp Tooling

Terminal Description	Wire Range AWG	Strip Form Terminals: Quick-Change Applicators for AMP-O-LECTRIC Machine Part No. 565435-5	Strip Form Terminals: Quick-Change Applicators for AMPOMATOR Machines: Model IV A	Strip Form Terminals: Quick-Change Applicators for AMPOMATOR Machines: Model IV B, CLS II, CLS III	Loose Piece Terminals: Die Insert Set for Hand Tool Part No. 58078-3
.110/.125 Series	22-18	567276-2	—	567276-1	—
.187 Series	22-18	567111-2	567201-1	567111-1	58079-3
	16-14	567112-2	567202-1	567112-1	58080-3
.250 Series	22-18	567111-2	567201-1	567111-1	58079-3
	16-14	567112-2	567202-1	567112-1	58080-3

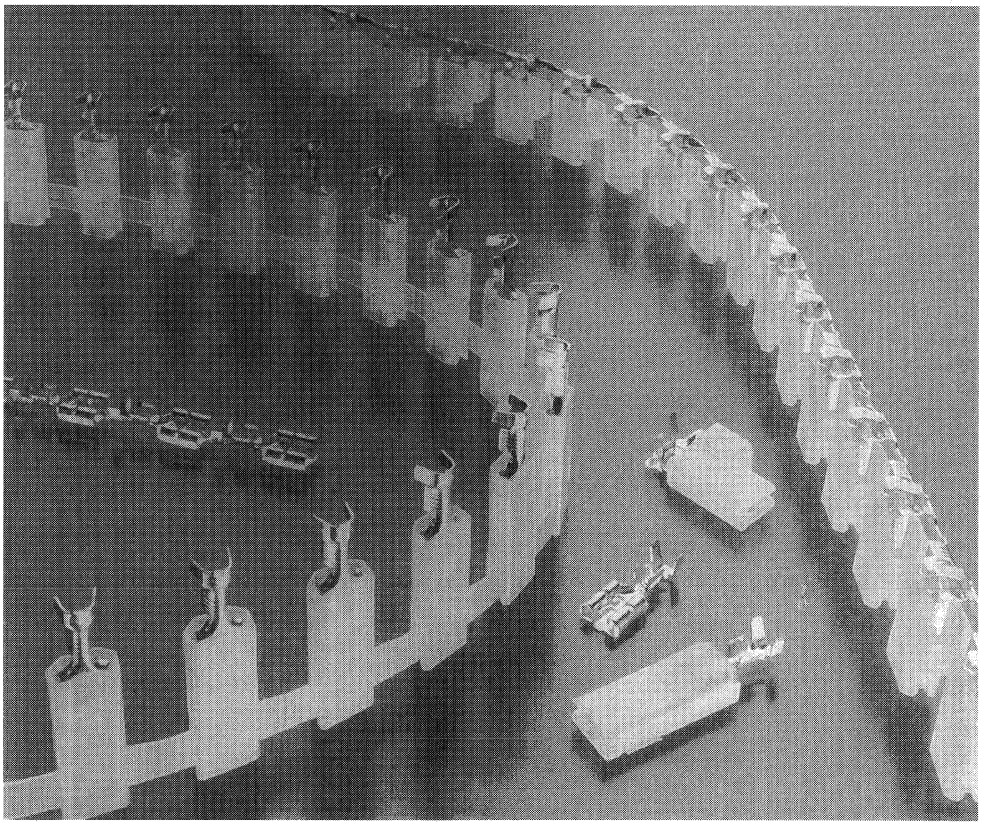
SOURCE: Catalog 82004

Specifications subject to change.

1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

Ultra-Pod Fully Insulated FASTON Receptacles



Product Facts

- Reduced insertion force
- Designed to provide correct lead-in of tab
- Mates with typical NEMA DC-2 187 and 250 Series tab styles including those with shoulders
- Housing UL rated at +105°C
- 187 Series accepts 20-16 AWG [0.5–1.4 mm²] wire and 250 Series accepts 22-12 AWG [0.3–3 mm²] wire
- Visual inspection of crimp and wire brush
- Terminated by automatic or semiautomatic equipment to meet production requirements
- Complies with the IEC 380, 601 and 950 and UL 1950 requirements for a secondary means of insulation fixing
- Listed by Underwriters Laboratories Inc., File No. E66717
- Certified by Canadian Standards Assocation, File No. LR 7189
- VDE tested according to DIN VDE 0627/9.91, VDE Reg. No. 5193

Ultra-Pod Fully Insulated Receptacles offer the newest in one-step automatic application of insulated quick connects. The unique integral plastic carrier designed specifically for this product allows insulated F-crimp terminations to be produced quickly and easily. Applied cost savings are attainable with either bench or high-speed automatic termination equipment and the elimination of any secondary insulation operations. Both the crimping of the terminal and the terminal insulating occur in a single stroke of the machine and applicator—the crimping on the down-stroke and the insulating on the up-stroke.

The receptacles contained within the Ultra-Pod FASTON Receptacle assemblies are proven, tested and customer qualified and can be immediately used in existing applications where insulation has been accomplished by other means. The low insertion force design provides easier tab insertion, reduces operator fatigue and improves the productivity and reliability of the end assembly operation.

The translucent insulating housing is produced by a unique molding process which provides an integral carrier and eliminates the crimp location problems related to secondary carriers. This housing, produced from 125°C rated 6/6 nylon, covers the FASTON receptacle sufficiently to provide for use in 600-volt applications. Most importantly, this insulating system eliminates the labor costs of chemically expanded or heat shrink tubing.

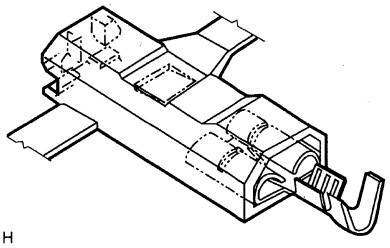
Depending on production requirements, AMP provides a complete selection of terminating equipment including the AMP-O-LECTRIC terminating machine and fully automatic AMPOMATOR CLS II and CLS III lead-making machines.

For the exact application tooling to meet your production re-quirements, see the applicator recommendations in this catalog or call the Tooling/ Technical Assistance Center.

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

Ultra-Pod Fully Insulated FASTON Receptacles (Continued)

Insulation Support

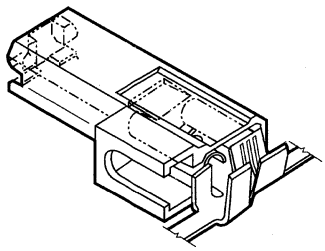


Note: 250 Series Housing Dim. (Typ.)—.950 [24.13] L x .370 [9.4] W x .195 [4.95] H

Description	Wire Range AWG	Wire Range [mm²]	Ins. Dia. Range	Mating Tab	UL 94[1]	Color	Material and Finish	Part Nos.
.187 [4.75] Series	20-16	0.5–1.4	**.090–.130** 2.29–3.3	**.020** × **.187** 0.51 × 4.75	V-2	Natural	Brass	520973-1
							Tin Plated Brass	520973-2
				.032 × **.187** 0.81 × 4.75	V-2	Natural	Brass	520982-1
							Tin Plated Brass	520982-2
.250 [6.35] Series	22-18	0.3–0.8	**.090–.130** 2.29–3.3	**.032** × **.250** 0.81 × 4.75	V-2	Natural	Brass	520988-1
							Tin Plated Brass	520988-2
					V-0	Natural	Tin Plated Brass	521058-1
	18-14	0.8–2	**.120–.170** 3.05–4.32	**.032** × **.250** 0.81 × 4.75	V-2	Natural	Brass	520963-1
							Tin Plated Brass	520963-2
					V-0	Natural	Tin Plated Brass	521046-1
					V-2	Black	Tin Plated Brass	521011-2[3]
							Nickel Plated Steel	521011-1[2]
	14-12	2–3	**.130–.180** 3.3–4.57	**.032** × **.250** 0.81 × 4.75	V-2	Natural	Brass	520974-1
							Tin Plated Brass	520974-2

[1]Flammability rating of plastic material.
[2]CSA Certification pending.
[3]UL Recognized for 18 AWG only. CSA Certification pending.

Flag Insulation Support



Note: Housing Dim. (Typ.)—.680 [17.27] L x .585 [14.86] W x .200 [5.08] H

Description	Wire Range AWG	Wire Range [mm²]	Ins. Dia. Range	Mating Tab	UL 94[1]	Color	Material and Finish	Part Nos.
.250 [6.35] Series	22-18	0.3–0.8	**.110–.160** 2.79–4.06	**.032** × **.250** 0.81 × 6.35	V-2	Natural	Tin Plated Brass	521050-2
	18-14	0.8–2	**.110–.160** 2.79–4.06	**.032** × **.250** 0.81 × 6.35	V-2	Natural	Brass	520971-1
							Tin Plated Brass	520971-2
					V-2	Black	Tin Plated Brass	520971-4

[1]Flammability rating of plastic material.

Application Tooling

Description	Wire Range AWG	Wire Range [mm²]	Tooling Part No. Quick-Change Applicator for AMP-O-LECTRIC Machine	Quick-Change Applicator for AMPOMATOR Machines	Hand Tools Insertion	Hand Tools Extraction
.187 [4.75] Receptacles	20-16	0.5–1.4	853358-2	853358-1	314920-1	314918-1
.250 [6.35] Receptacles	22-18	0.3–0.8	853741-2	853741-1	314916-1	314917-1
	18-14	0.8–2	852293-2	852293-1		
	14-12	2–3	853740-2	853740-1		
.250 [6.35] Flag Receptacles	22-18	0.3–0.8	680020-2	680020-1	314919-1	
	18-14	0.8–2	852500-2	852500-1		

SOURCE: Catalog 82004

Specifications subject to change.

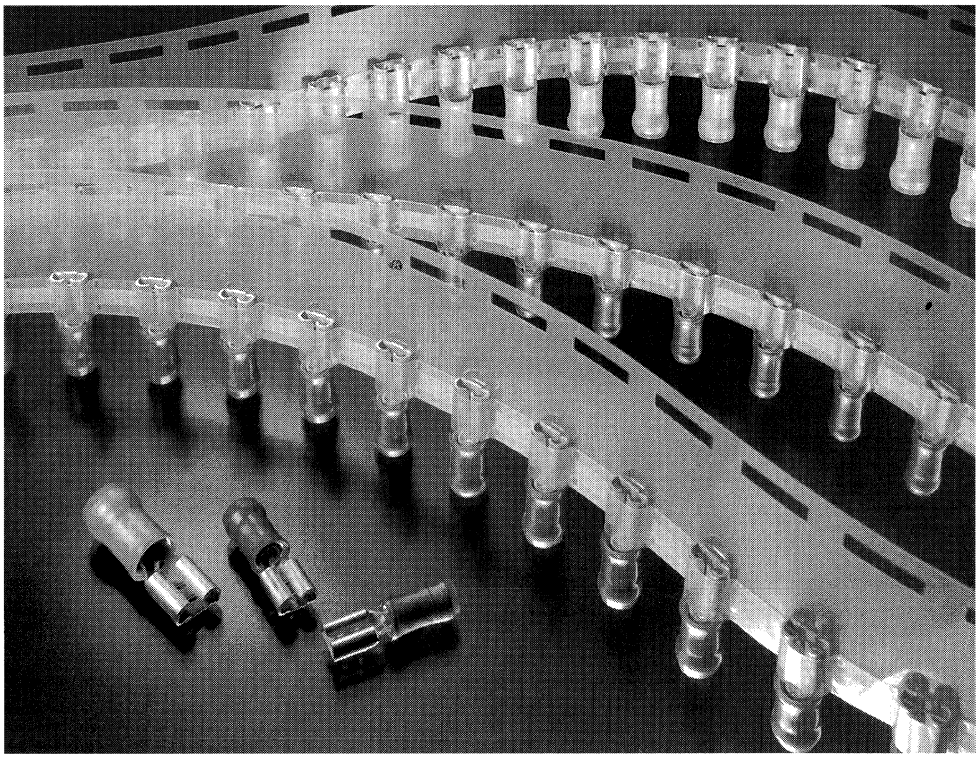
1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

PIDG FASTON Receptacles

Product Facts

- Basic terminal is tin-plated brass
- Color-coded by wire range to help eliminate errors during installation
- Serrations, inside barrel, provide maximum contact and tensile strength after crimping
- Specially designed copper sleeve fits over terminal barrel, providing circumferential insulation support to the wire
- Temperature rating of 105°C



Here is a pre-insulated terminal designed for reliability in most difficult circuit environments. Each PIDG Terminal consists of a tin-plated brass body with a specially designed copper sleeve and insulation sleeve fitted over the terminal barrel. The design of the tool dies and the construction of the terminal provides uniform insulation thickness under crimping pressure, transmitting this pressure evenly to the center of the crimp area.

AMP compression crimping produces crimps for a given size wire and terminal that are precisely alike in appearance and performance. This is a calculated result made possible by designing the terminal and the crimping tool as precisely matched devices. The dies are precision-engineered from the finest hard-metal alloys. Crimping pressure is controlled by a ratchet device on the hand tool or a corresponding pre-calibration in the crimping jaws of AMP automated crimping machines.

Crimping pressure can neither over-stress nor understress the terminal barrel—machined dies fully bottom to the precise crimp height required.

The resulting termination is free of contamination, is extremely resistant to shock and critical environments, and its tensile strength approaches that of the wire itself.

Temperature Rating: 105°C

Wire Range	E66717 Recognized	LR7189 Certified
22-16	22-16 Stranded	300 V Max., 105°C Max.[1]
16-14	16-14 Stranded	
12-10	12-10 Stranded	

[1]UL and CSA—Nylon.

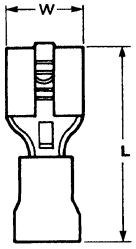
SOURCE: Catalog 82004

PIDG FASTON Receptacles
(Continued)

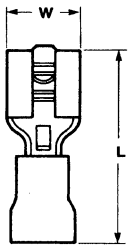
Receptacle Style

A—No dimple with wire stop

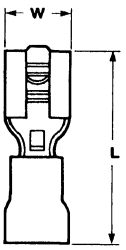
B—Dimple with wire stop



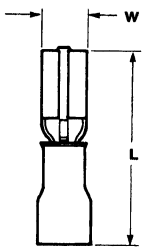
.250 Series



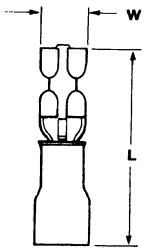
.205 Series



.187 Series



.110 Series (Standard[1])



.110 Series (Low Insertion[2])

Series	Receptacle Style	Wire Size Range AWG	Wire Size Range CMA	Dimensions W Nom.	Dimensions L Max.	Terminal Insulation Color	Wire Insulation Diameter Max.	Recept. Matl.	Stock Thk.	Fits Tab Thk.	Part Numbers Loose Piece	Part Numbers Tape Mounted	Part Numbers Strip Form
.250	B	22-18	509–1,900	.300	.900	Red	.140	Brass	.018	.032	640903-1	640903-2	640902-1
	B	16-14	2,050–5,180	.300	.900	Blue	.170	Brass	.018	.032	640905-1	640905-2	640904-1
	B	14-12	3,831–6,654	.300	1.012	Green	.250	Brass	.018	.032	42844-1[3]*	42844-3[3]*	60544-3[3]*
				.300	1.012	Green	.250	Phos. Brz.	.018	.032	42844-2[3]*	—	—
	B	12-10	5,180–13,100	.300	1.012	Yellow	.250	Brass	.018	.032	640907-1	640907-2	640906-1
.205	B	22-18	509–1,900	.250	.800	Red	.135	Brass	.016	.020	640909-1	640909-2	—
				.250	.800	Red	.135	Brass	.016	.032	640911-1	640911-2	—
	B	16-14	2,050–5,180	.250	.800	Blue	.170	Brass	.016	.020	640913-1	640913-2	—
				.250	.800	Blue	.170	Brass	.016	.032	640915-1	640915-2	—
.187	B	26-24	238–475	.230	.700	Yellow	.085	Brass	.016	.020	641321-1[3]*	—	—
	B	22-18	509–1,900	.230	.800	Red	.135	Brass	.016	.020	640917-1	640917-2	640916-1
	B	16-14	2,050–5,180	.230	.800	Blue	.170	Brass	.016	.020	640919-1	640919-2	640918-1
.110	B	22-18	509–1,900	.148	.734	Trans.	.100	Brass	.012	.016	61048-1[1,3]*	61048-2[1,3]*	—
	A	22-18	509–1,900	.148	.734	Trans.	.100	Brass	.012	.020	61060-1[1,3]*	61060-2[1,3]*	61059-2[1,3]*
	B	22-18	509–1,900	.148	.734	Trans.	.100	Brass	.012	.032	60894-1[1,3]*	60894-2[1,3]*	—
	A	22-18	509–1,900	.160	.756	Red	.140	Brass	.016	.012	—	—	350871-1[2,3]*
				.160	.800	Red	.140	Brass	.016	.016	640921-1[2]*	640921-2[2]*	—
				.160	.800	Red	.140	Brass	.016	.020	640923-1[2]	640923-2[2]	640922-1[2]
				.160	.800	Red	.140	Brass	.016	.032	640925-1[2]	640925-2[2]	640924-1[2]
	B	16-14	2,050–5,180	.160	.800	Blue	.170	Brass	.016	.016	640927-1[2]*	640927-2[2]*	—
	A	16-14	2,050–5,180	.160	.800	Blue	.170	Brass	.016	.020	640929-1[2]	640929-2[2]	—
				.160	.800	Blue	.170	Brass	.016	.032	640931-1[2]	640931-2[2]	—

[1]Standard receptacle.
[2]Low insertion receptacle.
[3]Contact Tooling/Technical Assistance Center for Tooling Application.
Note: All the above part numbers are UL Recognized and CSA Certified, except those part numbers followed by an asterisk(*).

Application Tooling for PIDG FASTON Receptacles

Wire Range AWG	Part Numbers: Hand Tool	Part Numbers: Tools for Tape Mounted Terminations (Tape Dies for 69875 AMP-TAPETRONIC 818057-2 AUTO-PRO Applicator[2] 567200-2 Applicator[3] 687658-1 Applicator[4])	Part Numbers: Applicators for Strip Form Terminations — AMP-O-LECTRIC Machine	Part Numbers: Applicators for Strip Form Terminations — AMPOMATOR Machine
22-18	59824-1[1]	59826-1[1]	466788-4	466788-3
16-14	59824-1[1]	59827-1[1]	466789-4	466789-3
12-10	59824-1[1]	59828-1[1]	466790-4	466790-3

[1]TETRA-CRIMP Hand Tool.
[2]For AUTO-PRO Machine **Part No. 818380-1.**
[3]For AMP-O-LECTRIC Machine **Part No. 565435-5.**
[4]For AMPOMATOR Machine.

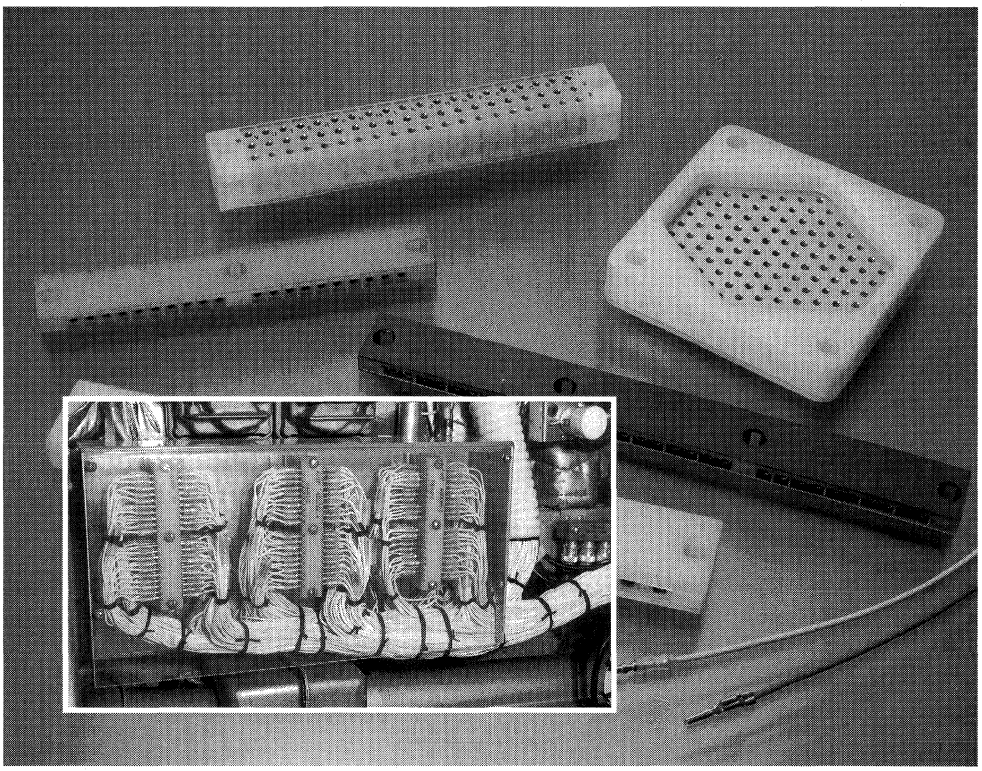
SOURCE: Catalog 82004

Specifications subject to change.

1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

Taper Pins, Receptacles, Blocks and Assemblies



Product Facts

- Small size
- Contact finish in gold, silver or tin-lead plating
- Wide range of sizes and types
- Perform well under most severe operating conditions
- Ease of insertion and extraction

Taper Technique Product Line

Formed Taper Pins and Receptacles

The only complete line of formed taper pins available in the industry, these pins are uninsulated and can be supplied with or without insulation support. Manufactured from fine grade brass, they meet and exceed military and commercial specifications for vibration, corrosion, heat resistance and electrical conductivity. Two versions are available.

The first utilizes our "F" crimp to terminate the pins. This consists of two sides of the wire barrel wrapped around conductor strands and penetrating into the center of the strands.

The second formed pin is an insulation piercing type designed for termination of tinsel cords. Two perpendicular lances drive through the wire insulation to make contact with the conductor, thereby eliminating the wire stripping operation. Tensile characteristics vary depending upon the type of wire insulation. Because the barrel wraps around the insulation, it deters fraying. The "93" Series taper receptacles mate with taper pins .093 [2.36] in diameter at the tip. The receptacle is manufactured from brass and accommodates a wire size range from 24 thru 20 AWG. Wire insulation range is from .048 [1.22] to .071 [1.80].

Taper Blocks

Complementing the "53" Series taper pin line is an extensive range of taper blocks. Significant contributions have been made by AMP in the development of taper blocks. With the one-piece solid block, AMP offers industry the broadest and most versatile lines on the market.

For positive dielectric performance, nylon and polyethylene are used for all housing materials.

Readily stocked, Taper Blocks are made in basic units of 10, 20, 30 and 60 cavities, with combinations of single and commoned taper receptacles in each block. Taper blocks can be—and have been—designed by AMP to meet specialized requirements.

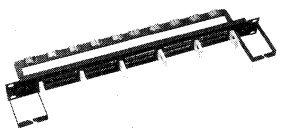
An important feature of the AMP Solid Taper Block is the recessed insert (.047 [1.19] on either side) which acts as a barrier to voltage creep. Depressed numerals clearly identify each cavity. Of equal importance is the fact that AMP has eliminated moisture entrapment in its solid taper blocks and warpage tendencies found in other two-piece taper blocks.

Taper Common Connectors

These connectors provide a means for distribution management. They are available in 40 and 101 positions.

Taper Panel Assemblies and Junction Box Assemblies

Designed for standard 19 [482.6] rack applications, these assemblies are available with other AMP connectors (e.g. Taper to CPC and Taper to CHAMP connector assemblies). Terminated lead assemblies are also available. Call AMP with your specific requirements.

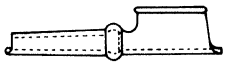


SOURCE: Catalog 82016

Formed Taper Pins "53" Series

Non-Insulation Support — End Feed

Mate with—"53" Series Blocks or Patchcord Programming Systems



Wire Range AWG	Wire Range mm²	Overall Length	Finish	Part Numbers Loose Piece	Part Numbers Strip	Tooling Part Numbers Double Action Hand Tool	Tooling Part Numbers Quick-Change Applicator[2]	Tooling Part Numbers Insertion Tool Code[3]
20-16	0.6-1.4	**.512** 13.01	Tin-Lead	—	41653	47093[1]	—	3, 11

[1] Not for AWG 20 wire
[2] For use in AMP-O-LECTRIC Machine **Part Number 565435-5**. For automatic application, contact AMP.
[3] See page 1139.

Insulation Support

Mate with—"53" Series Blocks

Wire Range AWG	Wire Range mm²	Insul. Dia. Range	Overall Length	Finish	Part Numbers Loose Piece	Part Numbers Strip	Tooling Part Numbers Double Action Hand Tool[1]	Tooling Part Numbers Straight Action Hand Tool	Tooling Part Numbers Quick-Change Applicator[2]	Tooling Part Numbers Insertion Tool Code[3]
24-22	0.2-0.4	**.040-.055** 1.02-1.40	**.490** 12.45	Tin-Lead	41661	41278	48698	—	687893-2	2, 10
				Silver	41662	41640	48698	—	687893-2	2, 10
				Sel. Gold	41663	41646	48698	—	687893-2	2, 10
		0.40-.060 1.02-1.52	**.540** 13.72	Tin-Lead	—	66113-3	48698	—	567275-2	2, 10
			.550 13.97	Silver	—	66266-2	90178-1	—	466087-2	2
				Sel. Gold	66280-3	66266-3	90178-1	—	466087-2	2
		.065-.080 1.65-2.03	**.550** 13.97	Tin-Lead	41664	41647	47042	—	—	3, 11
				Silver	—	41648	47042	—	—	3, 11
				Sel. Gold	41666	41649	47042	—	—	3, 11
20-18	0.6-0.9	**.050-.075** 1.27-1.91	**.617** 15.67	Brass	—	66267-4	—	90214-1	—	3, 11
		.080-.100 2.03-2.54	**.617** 15.67	Tin-Lead	41667	41650	47043 LH	—	687876-2	3, 11
				Silver	—	41651	47043 LH	—	687876-2	3, 11
				Sel. Gold	41669	41652	47043 LH	—	687876-2	3, 11
18-16	0.8-1.4	**.100-.140** 2.54-3.56	**.617** 15.67	Tin-Lead	41673	41656	90024 LH	90007-1	—	3, 11
				Silver	—	41657	90024 LH	90007-1	—	3, 11
				Sel. Gold	41675	41658	90024 LH	90007-1	—	3, 11

[1] LH=Long Handle
[2] For use in AMP-O-LECTRIC Machine **Part No. 565435-5**. For automatic applications, contact AMP.
[3] See page 1139.

SOURCE: Catalog 82016

Formed Taper Pins
"53" Series
(Continued)

Insulation Support — Side Feed

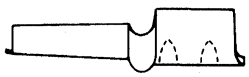
Mate with—"53" Series Blocks

Wire Size AWG	Wire Size mm²	Insul. Dia. Range	Overall Length	Finish	Part Numbers Loose Piece	Part Numbers Strip	Tooling Part Numbers Straight Action Hand Tool	Tooling Part Numbers Quick-Change Applicator[1]	Tooling Part Numbers Insertion Tool Code[2]
30-26	0.05-0.15	**.030-.050** 0.76-1.27	**.595** 15.11	Tin-Lead	66354-1	66353-1	90206-2	466583-2	2
				Sel. Gold	66354-3	66353-3	90206-2	466583-2	2
24-22	0.2-0.4	**.040-.055** 1.02-1.40	**.573** 14.55	Silver	—	66186-2	—	466579-2	2
				Sel. Gold	—	66186-3	—	466579-2	2
				Tin-Lead	—	66186-5	—	466579-2	2

[1] For use in AMP-O-LECTRIC Machine **Part No. 565435-5**. For automatic applications, contact AMP.
[2] See page 1139.

Insulation Piercing

Mate with—"53" Series Blocks



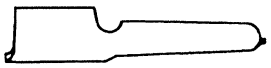
Wire Size AWG	Wire Size mm²	Insul. Dia. Range	Overall Length	Finish	Part Numbers Loose Piece	Part Numbers Strip	Tooling Part Numbers Double Action Hand Tool	Tooling Part Numbers Applicator[2]	Tooling Part Numbers Insertion Tool Code[3]
2049 Tinsel		**.057-.063** 1.45-1.60	**.490** 12.45	Tin-Lead	41676	41506	47106[1] 47150	672114	15
1895 Tinsel		**.070-.076** 1.78-1.93	**.490** 12.45	Tin-Lead	—	42004-1	47106[1] 47150	672115	14
				Brass	—	42004	47106[1] 47150	672115	14

[1] This tool does not have a CERTI-CRIMP ratchet.
[2] For use in terminating unit **Part No. 1-471273-2.**
[3] See page 1139.

SOURCE: Catalog 82016

Formed Taper Pins "61" Series

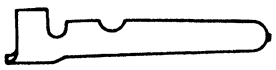
Non-Insulation Support — End Feed Special 2-1/2° Formed Pins



Solid Wire Size		Overall Length	Finish	Strip Part No.	Tooling Part Numbers	
AWG	mm²				Applicator[1]	Insertion Tool Code[2]
22-16	0.4-1.4	**.562** 14.28	Brass	66062-1	671023-2	13
			Tin-Lead	41296	671023-2	13

[1] For use in Terminating Machine **Part No, 1-471273-3**
[2] See page 1139.

Insulation Support — Special 2-1/2° Formed Pins



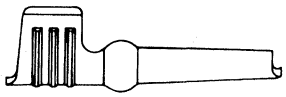
Wire Size		Insul. Dia. Range	Overall Length	Finish	Part Numbers		Tooling Part Numbers		
AWG	mm²				Loose Piece	Strip	Straight Action Hand Tool	Applicator	Insertion Tool Code[3]
24-20	0.2-0.6	**.048-.071** 1.22-1.80	**.566** 14.38	Tin-Lead	66141-1	66140-1	90119	466198-2[1]	14
				Brass	—	66140-2	90119	466198-2[1]	14
				Sel. Gold	—	66140-4	90119	466198-2[1]	14
18-16	0.8-1.4	**.080-.120** 2.03-3.05	**.700** 17.78	Brass	—	42147-1	—	671937[2]	16
				Tin-Lead	—	42147-2	—	671937[2]	16

[1] Quick-change Applicator for use in AMP-O-LECTRIC Machine **Part No. 565435-5**. For automatic applications, contact AMP.
[2] For use in Terminating Machine **Part No. 1-471273-3.**
[3] See page 1139.

SOURCE: Catalog 82016

Formed Taper Pins "88" and "93" Series

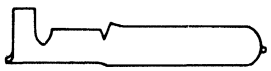
Non-Insulation Support — "88" Series End Feed



Wire Size		Overall Length	Finish	Part Numbers		Tooling Part Numbers		
AWG	mm²			Loose Piece	Strip	Double Action Hand Tool	Applicator[1]	Insertion Tool Code[2]
14-12	2.0-3.0	**.743** 18.87	Tin-Lead	42279-1	42107-2	47689	687919-2	8
			Silver	—	42107-3	47689	687919-2	8

[1] For use in AMP-O-ELECTRIC Machine Part No. 565435-5
[2] See page 1139.

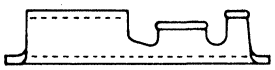
Insulation Support — "93" Series End Feed Special 2-1/2° Formed Pin



Wire Size		Insul. Dia. Range	Overall Length	Finish	Part Numbers		Tooling Part Numbers	
AWG	mm²				Loose Piece	Strip	Quick-Change Applicator[1]	Insertion Tool Code[2]
18-16	0.8-1.4	**.080-.120** 2.03-3.05	**.770** 19.56	Brass	—	66228-1	466205-2	16

[1] For use in AMP-O-LECTRIC Machine **Part No. 565435-5.** For automatic applications, contact AMP.
[2] See page 1139.

"93" Series Insulation Support — Special 2-1/2° Formed Pin Receptacle

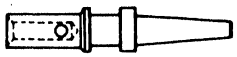


Wire Size		Insul. Dia. Range	Overall Length	Finish	Part Numbers		Tooling Part Number
AWG	mm²				Loose Piece	Strip	Insertion Tool Code[1]
24-20	0.2-0.6	**.048-0.71** 1.22-1.80	**.610** 15.50	Brass	—	42371-1	9
				Tin-Lead	—	42371-2	9

[1] See page 1139.

Solid Taper Pins
For Stranded Wire Only

"37" Series
Non-Insulation Support



Wire Size		Overall Length	Finish	Part Numbers		Tooling Part Numbers	
AWG	mm²			Loose Piece	Tape Mounted	Double Action Hand Tool	Insertion Tool Code[1]
24-22	0.2-0.4	.475 12.07	Tin-Lead	42882-1	—	90049-1	25

[1] See page 1139.

"53" Series
Non-Insulation Support

Mate with—"53" Series Blocks

Wire Size		Overall Length	Finish	Part Numbers		Tooling Part Numbers	
AWG	mm²			Loose Piece	Tape Mounted	Double Action Hand Tool	Insertion Tool Code[1]
26	0.12-0.15	.515 13.08	Tin-Lead	66050-1	—	90049-1	25
			Gold	66050-3	—	90049-1	25
24-22	0.2-0.4	.515 13.08	Tin-Lead	66051-1	—	90049-1	25
			30 µ in Gold	66051-3	66051-9	90049-1	25
			100 µ in Gold	66051-4	—	90049-1	25
			200 µ in Gold	66051-5	—	90049-1	25
20-18	0.6-0.9	.535 13.59	Tin-Lead	66052-1	—	90050-1	25
			Gold	66052-3	—	90050-1	25
16	1.2-1.4	.535 13.59	Tin-Lead	66053-1	—	90050-1	25

[1] See page 1139.

"53" Series
Non-Insulation Support — Round Nose (NASA)

Mate with—"53" Series Blocks

Wire Size		Overall Length	Finish	Part Numbers		Tooling Part Numbers	
AWG	mm²			Loose Piece	Tape Mounted	Double Action Hand Tool	Insertion Tool Code[1]
24-22	0.2-0.4	.745 18.92	Gold	66123-3	—	90049-1	25
20-18	0.6-0.9	.780 19.81	Gold	66125-3	—	90050-1	25
16	1.2-1.4	.780 19.81	Gold	66163-3	—	90050-1	25

[1] See page 1139.

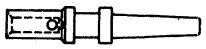
SOURCE: Catalog 82016

Solid Taper Pins For Stranded Wire Only
(Continued)

"53" Series
(Continued)

Non-Insulation Support — Round Nose Pins

Mate with—"53" Series Blocks

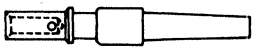


Wire Size AWG	Wire Size mm²	Overall Length	Finish	Part Numbers Loose Piece	Tooling Part Numbers Double Action Hand Tool	Tooling Part Numbers Insertion Tool Code[1]
24-22	0.2-0.4	.650 16.51	Tin-Lead	66074-1	90049-1	25
			Gold	66074-3	90049-1	25
20-18	0.6-0.9	.685 17.40	Tin-Lead	66075-1	90050-1	25
			Gold	66075-3	90050-1	25
16	1.2-1.4	.685 17.40	Gold	66076-3	90050-1	25

[1] See page 1139.

Non-Insulation Support — Long Shoulder Pins

Mate with—"53" Series Blocks or Patchcord Programming Systems

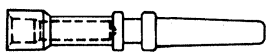


Wire Size AWG	Wire Size mm²	Overall Length	Finish	Part Numbers Loose Piece	Tooling Part Numbers Double Action Hand Tool	Tooling Part Numbers Insertion Tool Code[1]
26	0.12-0.15	.650 16.51	Silver	66058-2	90049-1	25
			Gold	66058-3	90049-1	25
24-22	0.2-0.4	.650 16.51	Gold	42631-3	90049-1	25
20-18	0.6-0.9	.670 17.02	Tin-Lead	42632-1	90050-1	25
			Gold	42632-3	90050-1	25
16	1.2-1.4	.670 17.02	Gold	42647-3	90050-1	25

[1] See page 1139.

Un-Insulated Insulation Support — Solid Pins[1]

Mate with—"53" Series Blocks



Wire Size AWG	Wire Size mm²	Insul. Dia. Range	Overall Length	Finish	Part Numbers Loose Piece	Tooling Part Numbers Double Action Hand Tool	Tooling Part Numbers Insertion Tool Code[2]
28-24	0.08-0.2	.031-.048 0.79-1.22	.680 17.27	Gold	66205-2	90116	25
		.045-.062 1.14-1.58	.680 17.27	Gold	66206-2	90116	25
24-20	0.2-0.6	.055-.070 1.40-1.76	.680 17.27	Gold	66209-2	90116	25
18-16	0.8-1.4	.102 Max. 2.59	.680 17.27	Gold	66211-2	90117	24

[1] These taper pins crimpable in MS 3191 crimping tool.
[2] See page 1139.

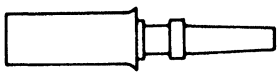
SOURCE: Catalog 82016

Solid Taper Pins
For Stranded Wire Only
(Continued)

"53" Series
(Continued)

Pre-Insulated Pins

Mate with—"53" Series Blocks

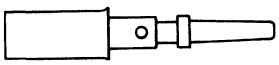


Wire Size AWG	Wire Size mm²	Insul. Dia. Range	Nylon Insul. Color Code	Overall Length	Finish	Part Numbers Loose Piece	Part Numbers Tape Mounted	Tooling Part Numbers Double Action Hand Tool[1]	Tooling Part Numbers AMP-TAPETRONIC Die (69875)	Tooling Part Numbers Insertion Tool Code[2]
26	0.12-0.15	**.040-.080** 1.02-2.03	Blue	**.695** 17.65	Gold	42927-3	—	90015 LH	—	24
24-22	0.2-0.4	**.040-.080** 1.02-2.03	Yellow	**.695** 17.65	Tin-Lead	42574-1	42574-8	90015 LH	90232-2	24
					30 µ in. Gold	42574-3	1-42574-0	90015 LH	90232-2	24
					100 µ in. Gold	42574-4	—	90015 LH	—	24
					200 µ in. Gold	42574-5	—	90015 LH	—	24
20-18	0.6-0.9	**.060-.100** 1.52-2.54	Natural	**.715** 18.16	Tin-Lead	42575-1	—	90016 LH	—	24
					Silver	42575-2	—	90016 LH	—	24
					Gold	42575-3	42575-8	90016 LH	90304-1	24
16	1.2-1.4	**.080-.115** 2.03-2.92	Black	**.705** 17.91	Tin-Lead	42637-1	—	90016 LH	—	24
					Gold	42637-3	42637-7	90016 LH	90304-1	24

[1] LH=Long Handle
[2] See page 1139.

Pre-Insulated
Round Nose Pins (Standard)

Mate with—"53" Series Blocks



Wire Size AWG	Wire Size mm²	Insul. Dia. Range	Nylon Insul. Color Code	Overall Length	Finish	Part Numbers Loose Piece	Part Numbers Tape Mounted	Tooling Part Numbers Double Action Hand Tool	Tooling Part Numbers Insertion Tool Code[1]
24-22	0.2-0.4	**.040-.080** 1.02-2.03	Yellow	**.825** 20.96	Tin-Lead	66071-1	—	90026	24
					Gold	66071-3	—	90026	24
20-18	0.6-0.9	**.060-.100** 1.52-2.54	Natural	**.860** 21.84	Tin-Lead	66072-1	—	90025	24
					Gold	66072-3	—	90025	24
16	1.2-1.4	**.080-.115** 2.03-2.92	Black	**.860** 21.84	Gold	66073-3	—	90025	24

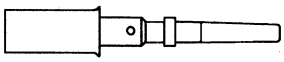
[1] See page 1139.

Solid Taper Pins For Stranded Wire Only
(Continued)

"53" Series
(Continued)

Pre-Insulated Round Nose Pins (Long)

Mate with—"53" Series Blocks

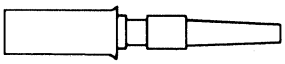


Wire Size		Insul. Dia. Range	Nylon Insul. Color Code	Overall Length	Finish	Part Numbers	Tooling Part Numbers	
AWG	mm²					Loose Piece	Double Action Hand Tool	Insertion Tool Code[1]
20-18	0.6-0.9	**.060-.100** 1.52-2.54	Natural	**.955** 24.26	Gold	66124-3	90037	24, 12
16	1.2-1.4	**.080-.115** 2.03-2.92	Black	**.955** 24.26	Gold	66162-3	90037	24, 12

[1] See page 1139.

Pre-Insulated Long Shoulder Pins

Mate with—"53" Series Blocks or Patchcord Programming Systems

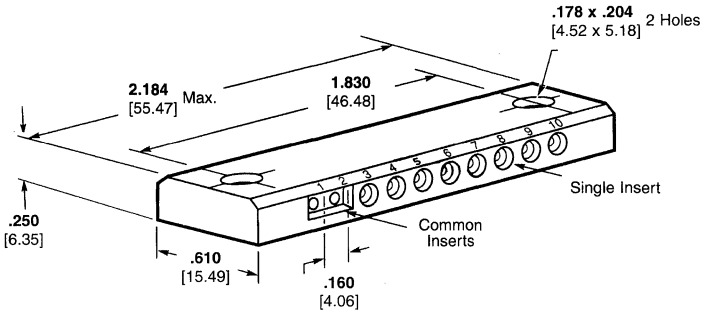


Wire Size		Insul. Dia. Range	Nylon Insul. Color Code	Overall Length	Finish	Part Numbers	Tooling Part Numbers	
AWG	mm²					Loose Piece	Double Action Hand Tool[1]	Insertion Tool Code[2]
26	0.12-0.15	**.040-.080** 1.02-2.03	Blue	**.830** 21.08	Gold	66059-3	90015 LH	12
		.080-.115 2.03-2.92	Black	**.850** 21.59	Gold	66129-3	90016 LH	12
24-22	0.2-0.4	**.040-.080** 1.02-2.03	Yellow	**.820** 20.83	Gold	42633-3	90015 LH	12
20-18	0.6-0.9	**.060-.100** 1.52-2.54	Natural	**.850** 21.59	Gold	42634-3	90016 LH	12

[1] LH=Long Handle
[2] See page 1139.

Taper Blocks
"53" Series

10 Position
Connector Block Assembly
Block Material—Nylon



Section Typical for
10 Position Block

Notes: 1. All assemblies have standard cavity identification unless otherwise noted.
2. "53" Series Taper Blocks mate with "53" Series Taper Pins.

Function	Insert Plating	Remarks[1]	Base Part Number	Suffix Numbers & Colors									
				Brown	Red	Orange	Yellow	Green	Blue	Violet	Grey	Natural	Black
10 Position Single	Tin-Lead		480064	—	—	—	—	—	—	—	—	1	—
	Gold		480064	—	—	—	—	—	—	—	—	3	—
	Gold		581424	—	2	—	4	5	—	—	—	—	8
6 Single— 2 Sets of 2 Common	Tin-Lead	1 to 2C, 3 to 4C, 5 to 10S	1-582305	—	—	—	—	—	—	—	—	9	—
4 Single— 3 Sets of 2 Common	Gold	1 to 2C, 3 & 4C, 5 & 6C, 7 to 10S	582009	—	—	—	—	—	—	—	—	9	—
1 Single— 6 Common— 3 Common	Gold	1 to 3C, 4 to 9C, 10S	3-582266	1	—	—	—	—	—	—	—	—	—
10 Common	Tin-Lead		581948	—	—	—	—	—	—	—	—	9	—
	Gold		480112	—	2	—	—	5	—	—	8	9	0
2 Sets of 5 Common	Tin-Lead		581952	—	—	—	—	—	—	—	—	9	—
	Gold		581950	—	2	3	—	—	6	—	—	9	—
5 Sets of 2 Common	Tin-Lead		480064	—	—	—	—	—	—	—	—	4	—
	Gold		480064	—	—	—	—	—	—	—	—	6	—
	Gold		581358	—	—	—	—	—	—	—	—	—	9

[1] "S" indicates single insert, "C" indicates common inserts.

SOURCE: Catalog 82016

Specifications subject to change.

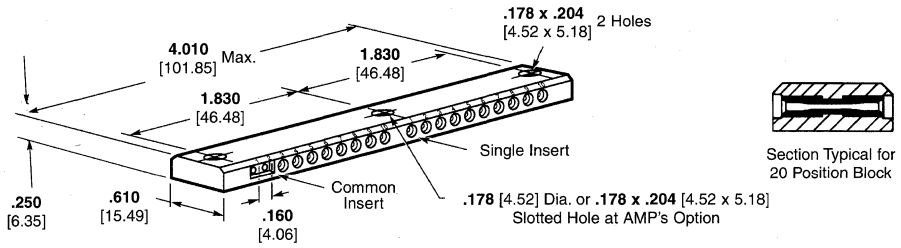
1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

Taper Blocks
"53" Series
(Continued)

20 Position Connector Block Assembly

Block Material—Nylon



Notes: 1. All assemblies have standard cavity identification unless otherwise noted.
2. "53" Series Taper Blocks mate with "53" Series Taper Pins.

Function	Insert Plating	Remarks[1]	Base Part Number	Suffix Numbers & Colors									
				Brown	Red	Orange	Yellow	Green	Blue	Violet	Grey	Natural	Black
20 Position Single	Tin-Lead		480065	—	—	—	—	—	—	—	—	1	—
	Gold		480065	—	—	—	—	—	—	—	—	3	—
	Gold		480076	—	2	3	—	5	—	7	—	—	9
	Gold	Cavities Numbered 21 thru 40	582498	—	1	—	—	—	—	—	—	—	—
	Gold	Cavities Numbered 41 thru 60	582498	—	3	—	—	—	—	—	—	—	—
	Gold	Cavities Numbered 61 thru 80	582498	—	5	—	—	—	—	—	—	—	—
	Gold	Cavities Numbered 81 thru 100	582498	—	7	—	—	—	—	—	—	—	—
5 Single 3 Sets of 5 Common	Gold	1 to 5C, 6 to 10C, 11 to 15C, 16 to 20S	3-582352	—	—	—	—	—	—	—	—	9	—
2 Single 6 Sets of 3 Common	Gold	1 to 3C, 4 to 6C, 7 to 9C, 10 to 12C, 13 to 15C, 16 to 18C, 19 and 20S	582105	—	—	—	—	—	—	—	—	9	—
20 Common	Tin-Lead		581421	—	—	—	—	—	—	—	—	9	—
	Gold	Stamped 1 thru 20, Both Sides	581423	—	—	—	—	—	—	—	—	9	0
	Gold	No Cavity Ident	3-582198	—	2	—	—	—	—	—	—	—	—
2 Sets of 10 Common	Tin-Lead		581949	—	—	—	—	—	—	—	—	9	—
	Silver		480104	—	—	—	—	—	—	—	—	9	—
	Gold		480077	—	—	—	4	—	—	—	—	9	—
6 Common— 4 Common— 2 Sets of 3 Common 2 Sets of 2 Common	Gold	1 and 2C, 3 and 4C, 5 to 10C 11 to 13C, 14 to 16C, 17 to 20C	3-582134	—	—	—	—	—	—	—	—	9	—
4 Sets of 5 Common	Gold		581729	—	—	—	—	—	—	—	—	9	—
5 Sets of 4 Common	Gold	1 to 4C, 5 to 8C, 9 to 12C, 13 to 16C, 17 to 20C	3-582137	—	—	—	—	—	—	—	—	9	—
3 Sets of 4 Common— 2 Sets of 3 Common— 2 Common	Gold	1 to 4C, 5 to 8C, 9 to 10C 11 to 13C, 14 to 16C 17 to 20C	581957	—	—	—	—	—	—	—	—	—	0
10 Sets of 2 Common	Tin-Lead		480065	—	—	—	—	—	—	—	—	4	—
	Gold		480065	—	—	—	—	—	—	—	—	6	—

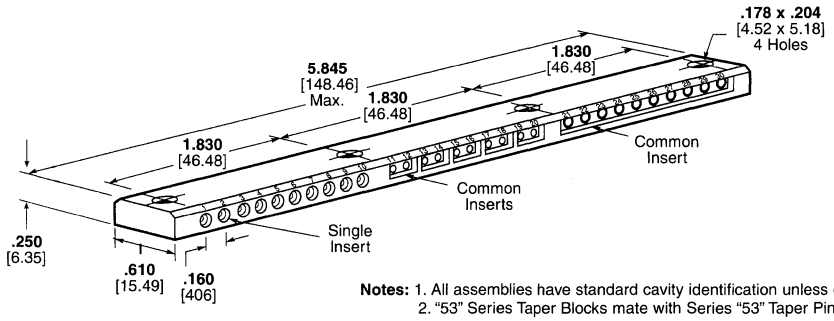
[1] "S" indicates single insert, "C" indicates common inserts.

Taper Blocks "53" Series

(Continued)

30 Position Connector Block Assembly

Block Material—Nylon

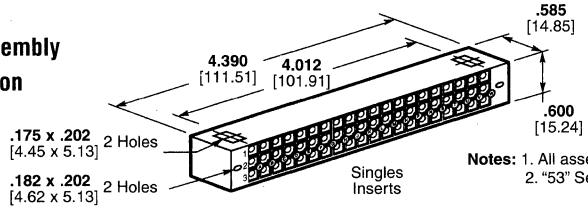


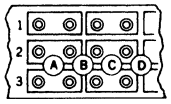
Notes: 1. All assemblies have standard cavity identification unless otherwise noted.
2. "53" Series Taper Blocks mate with Series "53" Taper Pins.

Function	Insert Plating	Base Part Number	Suffix Numbers & Colors									
			Brown	Red	Orange	Yellow	Green	Blue	Violet	Grey	Natural	Black
30 Single	Gold	480107	—	—	—	4	5	6	—	—	9	—
30 Common	Gold	582059	—	—	3	—	—	—	—	—	9	0
2 Sets of 15 Common	Gold	3-582932	—	—	—	—	—	—	—	—	9	0
3 Sets of 10 Common	Gold	480109	—	—	—	—	—	6	—	—	0	9
6 Sets of 5 Common	Gold	582104	—	—	—	—	—	—	—	—	9	—
15 Sets of 2 Common	Gold	480108	1	2	—	—	—	—	—	—	9	0

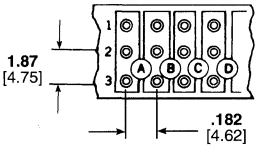
60 Position Connector Block Assembly

Block Material—Nylon





Dual Common Inserts



Columns of 3 Common Insert

Notes: 1. All assemblies have standard cavity identification unless otherwise noted.
2. "53" Series Taper Blocks mate with "53" Series Taper Pins.

Function	Insert Plating	Remarks[1]	Base Part Number	Suffix Numbers & Colors									
				Brown	Red	Orange	Yellow	Green	Blue	Violet	Grey	Natural	Black
60 Single	Tin-Lead	Stamped 1 thru 20, instead of A thru W	1-582219	—	2	—	—	—	—	—	—	—	—
	Gold	No Cavity Indent	3-582181	—	—	—	—	—	—	—	—	9	—
		Stamped 1 thru 20, instead of A thru W	3-582219	1	2	—	4	—	6	—	—	9	—
			581173	—	—	—	—	—	—	—	—	3	—
			3-582415	—	2	—	—	—	—	—	—	—	—
40 Single 20 Common	Gold	Rows 1 & 3S, Row 2C	3-582411	—	—	—	—	—	—	—	—	9	—
		Rows 1 & 2S, Row 3C, 1, 2, 3 and A thru W stamped upside down	583799	—	—	—	—	—	—	—	—	1	—
60 Common	Gold		3-582217	—	2	—	—	—	—	—	—	9	0
3 Sets of 20 Common	Tin-Lead		1-582150	—	—	—	—	—	—	—	—	9	—
	Gold		3-582150	—	—	—	—	—	—	—	—	9	—
			3-582640	—	—	3	—	—	6	—	—	—	0
		Stamped 1 thru 20, instead of A thru W	3-582656	—	2	—	—	—	—	—	8	—	—
6 Sets of 10 Common	Gold		3-582363	—	—	—	—	—	—	—	—	9	—
10 Sets of 6 Common	Gold		3-582753	—	—	—	—	—	—	—	—	9	0
12 Sets of 5 Common	Gold		2-582362	—	—	—	—	—	—	—	—	9	—
15 Sets of 4 Common	Gold		583564	—	—	—	—	—	—	—	—	1	—
20 Sets of 3 Common	Tin-Lead		581342	—	—	—	—	—	—	—	—	1	—
	Gold		581342	—	—	—	—	—	—	—	—	3	—
		Stamped 1 thru 20, instead of A thru W	3-582521	—	2	3	—	5	6	—	—	9	—
			3-582349	—	—	—	—	—	6	—	—	—	0
30 Sets of 2 Common	Tin-Lead		1-582401	—	—	—	—	—	—	—	—	—	0
	Gold		581177	—	—	—	—	—	—	—	—	3	—
			3-582401	—	—	—	—	—	—	—	8	—	—

[1] "S" indicates single insert, "C" indicates common inserts.

SOURCE: Catalog 82016

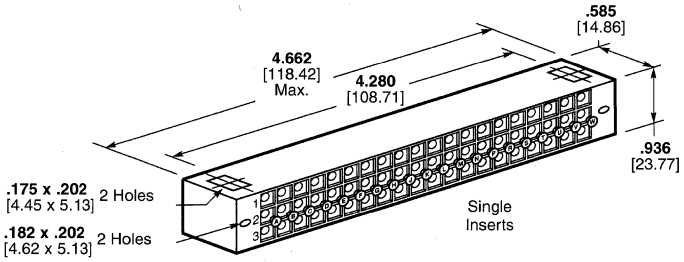
Specifications subject to change.

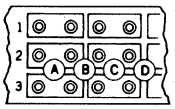
1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

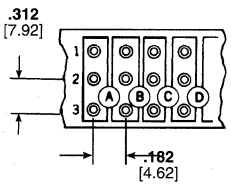
Taper Blocks
"53" Series
(Continued)

60 Position
Connector Block Assembly
.312 [7.92] Centers
Between Rows





Dual Common Inserts

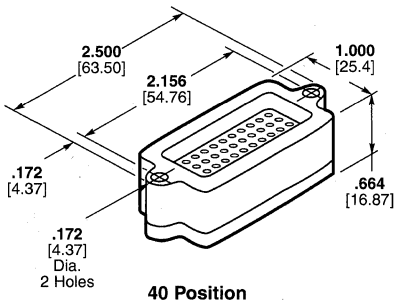


Columns of 3 Common Insert

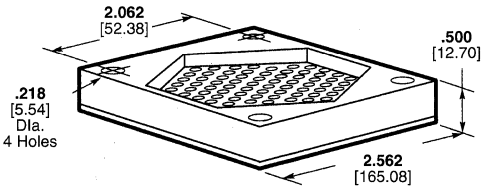
Notes: 1. All assemblies have standard cavity identification unless otherwise noted.
2. "53" Series Taper Blocks mate with "53" Series Taper Pins.

Function	Insert Plating	Block Material	Part Number	Color
60 Single	Silver	Polyethylene	582632-1	Natural
20 Sets of 3 Common	Gold	Polyethylene	3-583118-9	

"53" Series
Common Connectors



40 Position



101 Position

Insert Plating	Function	Block Material	Base Part Number	Suffix Numbers & Colors		
				Red	Natural	Black
Gold	40 Common	Nylon	581194	—	1	2
Gold	101 Common	Nylon	480031	3	—	—

Tooling

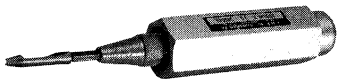
CERTI-LOK Insertion Tools (Including Tips)

CERTI-LOK insertion tools firmly seat the taper pins in their mating components by providing the exact amount of insertion force to lock the two parts together. The tools are available in two types:

1. The standard tool which inserts only.

2. The pull-test tool which inserts and can apply ten to twelve pounds pull test force to check the completed connection.

Standard

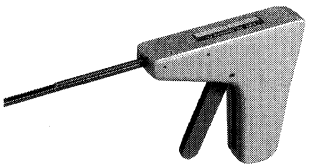


Pull Test

Code	Standard Part No.	Pull Test Part No.	Application
2	380306-2	380310-2	Receptacles in Rigid Material
3	380306-3	380310-3	Receptacles in Rigid Material
5	380306-5	811167-1	Receptacles onto Tabs and onto Pins
8	380306-8	380310-8	Receptacles in Rigid Material
9	1-380306-0	—	Receptacles onto Tabs
10	—	497652-1	Patchcord Programming Systems Only
11	—	497652-2	Patchcord Programming Systems Only
12	—	497652-3	Patchcord Programming Systems Only
14	811034-2	—	Receptacles in Rigid Material
15	811034-3	—	Receptacles in Rigid Material
16	811034-4	—	Receptacles in Rigid Material
24	380430-2	380431-2	Receptacles in Rigid Material
25	380430-3	380431-3	Receptacles in Rigid Material

Taper Pin Extraction Tools

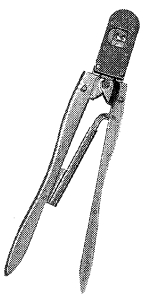
Easy removal of taper pins without damage. Thin line construction affords ease of use in confined areas.



Use Tool Part No. 91012-1 To Remove These Pins							Use Tool Part No. 91012-2 To Remove These Pins
41279	41658	42637	66033	66073	66163	66208	41278
41506	41744	42646	66050	66074	66171	66209	41640
41647	42004	42647	66051	66075	66172	66210	41646
41648	42229	42682	66052	66076	66173	66211	42762
41649	42574	42910	66053	66122	66186	66235	66091
41650	42575	42911	66058	66123	66200	66266	66113
41651	42631	42912	66059	66124	66202	66267	66318
41652	42632	42927	66070	66125	66205	66268	66353
41653	42633	60066	66071	66129	66206	66285	583519
41656	42634	60183	66072	66162	66207	66346	583771
41657							

Application Tooling

Hand Crimping Tool with CERTI-CRIMP Ratchet

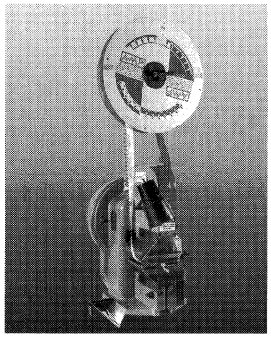


The major factor contributing to the low cost and high reliability of our taper technique is this family of matching crimping tools.

SOURCE: Catalog 82016

AMP-TAPETRONIC Machine

Part No. 69875



This machine terminates a wide range of taper pins which are tape mounted. The machine is actuated by a foot pedal.

This machine offers terminations of pins at up to 1000 per hour, depending upon operator. Contact AMP for tooling recommendations.

Specifications subject to change.

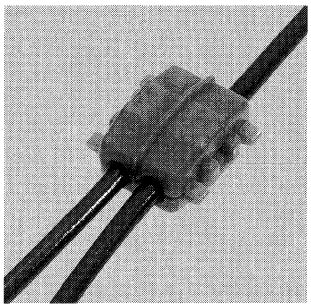
1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

AMP ELECTRO-TAP Connectors

Product Facts

- **Fast branch or thru-wire connections on solid or stranded wire 20-10 AWG; .160-.195 [4.06-4.95] max. ins. dia.**
- **No special tool required, use standard pliers**
- **Insulation displacement type contacts, no wire stripping or cutting of run wire needed**
- **Durable nylon construction with permanent lock**



Wire Size Range (AWG)	Wire Combination/Conductor Type	Max. Wire Ins. Dia.	Color	Part Number
20-18	(2) 18/Solid; (2) 20/Solid; (1) 18/Stranded or Solid to (1) 20/Solid	**.160** [4.06]	Red	53440-2
18-14	(2) 14/Solid; (2) 16/Solid; (2) 18/Solid; (1) 14/Stranded or Solid to (1) 16/Solid or 18/Solid; (1) 16/Solid to (1) 18/Solid	**.160** [4.06]	Blue	53440-1
12-10	—	**.195** [4.95]	Yellow	735411

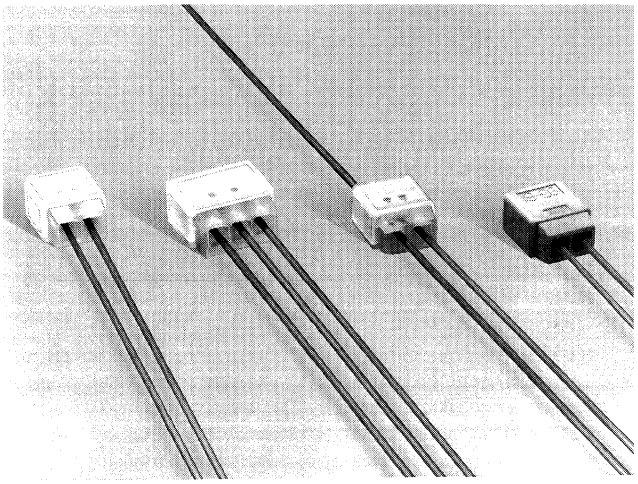
Note: AMP ELECTRO-TAP Connectors for 20-14 AWG are UL Listed and CSA Certified.

SOURCE: Catalog 82564

Tel-Splice Connectors

Product Facts

- 26-19 AWG [0.4-0.9 mm] solid copper conductors
- Available in either filled or unfilled versions
- 2-Wire, 3-Wire, Half-Tap, and Clear & Cap versions
- Packaged in either loose piece or cartridge versions
- Color-coded individual connectors and colored stickers on packages for easy identification
- Wire entry ports extend to rear of housing, which prevents two wires sliding into one contact position
- Dual slot for each wire
- No prestripping required
- Lower applied cost
- Minimum training required
- Gas-tight connections
- Used with PVC, PE, PP or filled cable (maximum insulation outside diameter .080 [2.03])
- Wide range of terminating tools available
- Listed for Flame Retardant† by Underwriters Laboratories Inc., File No. E81956



Connector			Part Numbers					
			Loose Piece*			Cartridge**		
Housing Color	Color Dot	Description	1,000/ Tub	500/ Tub	100/ Box	14/ Cart.	72/ Cart.	56/ Cart.
Translucent	—	2-Wire Splice (Filled)	552795-2	—	1-552795-2	555790-1	552966-2	—
Yellow	—	2-Wire Splice (Unfilled)	552795-4	—	1-552795-4	555790-2	552966-4	—
Clear (Flame Retardant)	—	2-Wire Splice (Unfilled)	553395-1†	—	1-553395-1†	—	—	—
Translucent	—	3-Wire Splice (Filled)	—	552678-2	1-552678-2	555791-1	—	552965-2
Yellow	—	3-Wire Splice (Unfilled)	—	552678-4	1-552678-4	555791-2	—	552965-4
Clear (Flame Retardant)	—	3-Wire Splice (Unfilled)	—	—	1-553759-1†	—	—	—
Translucent Blue	—	Half-Tap (Filled)	553017-2	—	1-553017-2	—	—	—
Translucent Blue	Yellow	Half-Tap (Unfilled)	553017-4	—	1-553017-4	—	—	—
Clear (Flame Retardant)	—	Half-Tap (Unfilled)	553397-1†	—	1-553397-1†	—	—	—
Green	—	Clear & Cap (Filled)	5-554374-3	—	5-554374-1	555792-1	554897-1	—
Green	Yellow	Clear & Cap (Unfilled)	5-554374-4	—	5-554374-2	555792-2	554897-2	—

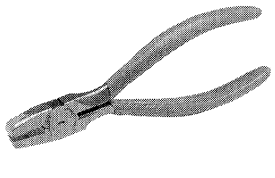
2-Wire | 3-Wire | Half-Tap | Clear & Cap

*Must be ordered in multiples of 1,000 connectors
**Must be ordered in multiples of 10 cartridges
NOTE: To check proper crimp height of terminated connectors, use Gage **(Part Number 230495-1)**. One gage is included for every 1,000 loose piece connectors.

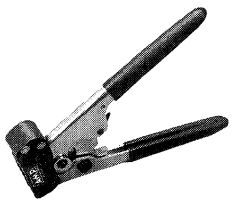
Fits 3M's E-9C Tool

Tooling

Hand Tools for Loose Piece Application

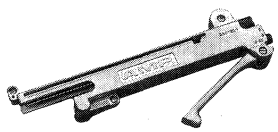


Economy (E.T.) Tool
Part Number 231839-1



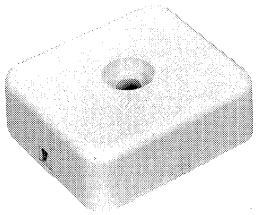
CERTI-CRIMP TOOL with Ratchet
Part Number 552724-1

Hand Tool for Cartridge Application

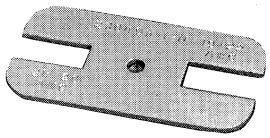


Tel-Splice Cartridge Tool
Part Number 230722-1

Accessories



Tel-Splice Splice Box—Part Number 555769-1
This splice box houses four Tel-Splice connectors which may be used for piecing out or extending station wire. It is suitable for both outdoor and indoor use.



Tel-Splice Gage—Part Number 230495-1
Use this gage periodically to check crimp height of terminated connectors. One gage is included for every 1,000 loose piece connectors.

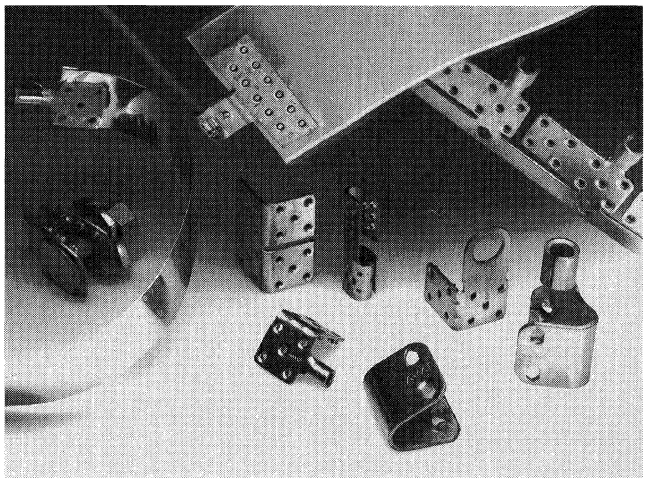
SOURCE: Catalog 82211

Specifications subject to change.

1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

Terminals and Splices for Aluminum and Copper Foil or Strip (TERMI-FOIL)



Product Facts

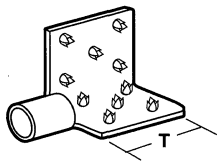
- Accommodates aluminum foil or strip thickness from .001 to .095 [0.03 to 2.41] and soft copper to .010 [.025]
- Exceeds current-carrying requirements
- For use in air or oil filled transformers, capacitors, reactors, solenoids, relays, regulators, etc.
- No surface preparation necessary
- No noise injection in low-level audio circuits
- Available in copper, brass and steel base metal—tin plated, nickel plated or plain
- Will terminate or tap aluminum foil-wound coils
- Will splice two or more pieces of foil or strip
- Apply to bare, insulated, anodized or coated aluminum and bare or insulated copper
- Can be applied in heating elements, alarm systems and electrostatic shields
- Low applied cost
- Tin plated items acceptable for use in 150°C [302°F]; nickel plated items to 343°C [649°F]

Selection of the proper TERMI-FOIL terminal or splice depends on (1) the CMA of the TERMI-FOIL terminal or splice must be equivalent to the CMA of the aluminum foil or strip. Use the nomograph in Appendix or the following formula T x W x .7893 = equivalent CMA of the TERMI-FOIL terminal or splice. T = thickness, W = width of aluminum strip or foil in mils. (2) Lanced area of the TERMI-FOIL terminal must cover a minimum of 60% of the width of the aluminum strip or foil to insure proper current distribution in the strip or foil. (3) For TERMI-FOIL terminals with wire barrels, the current-carrying capacity of the wire used in conjunction with the terminal can be considered the current-carrying capability of the connection.

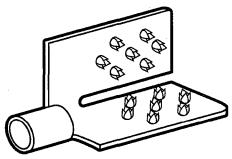
Barrel Terminals

.030 [0.76] Max. Aluminum Foil Thickness

Type 1
Double Face



Type 2
Double Face
(Slotted)



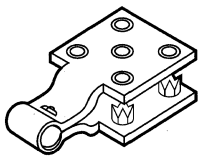
Material and Finish	Type	Wire Barrel Range AWG	Wire Barrel Range mm²	Dim. T	Part Numbers
Nickel-Plated Copper	1	16–14	1.25–2.0	—	329860
	1	12–10	3.0–6.0	—	329254
	2	16–14	1.25–2.0	—	052195
	2	12–10	3.0–6.0	—	330716
Tin-Plated Copper	1	16–14	1.25–2.0	—	329860-1
	1	12–10	3.0–6.0	—	2-329254-4
	2	12–10	3.0–6.0	—	1-330716-2
	2	12–10	3.0–6.0	—	1-330716-3*
	1	12–10	3.0–6.0	.932 [23.67]	330003
	1	12–10	3.0–6.0	2.635 [66.93]	330005
	1	8	7.0–8.0	—	50682

*Oblong wire barrel.

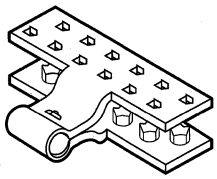
Barrel Terminals

Double Face Tap

Type 3



Type 4

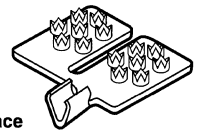


Aluminum Foil Thickness	Wire Barrel Range AWG	Wire Barrel Range mm²	Material and Finish	Type	Part Numbers
.030 [0.76] Max. Aluminum Foil	22-16	0.3-1.4	Tin-Plated Copper	3	52584
.010 [0.25] Max. Bare or Insul. Aluminum Foil	18-14 (Solid)	0.8-0.2		4	53264-2
	18-12 (Stranded)	0.8-0.3			

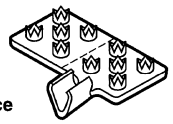
SOURCE: Catalog 82039

Strip Tap

.030 [0.76] Max.
Aluminum Foil Thickness



Type 5
Double Face
(Slotted)

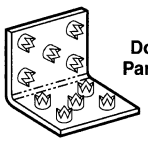


Type 6
Double Face

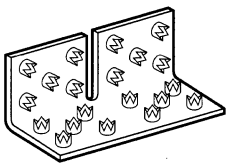
Wire Barrel Range		Material and Finish	Type	Part Numbers
AWG	mm²			
16–14	1.25–2.0	Tin-Plated Copper	5	53645-2
12–10	3.0–6.0		5	53644-2
16–14	1.25–2.0		6	276708-2 Unannealed

Splices

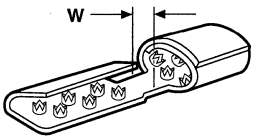
.030 [0.76] Max.
Aluminum Foil Thickness



Type 7
Double Face
Parallel Splice



Type 8
Double Face
Butt Splice



Type 9
Double Face

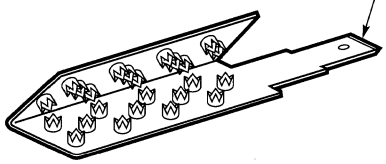
Wire Range	Material and Finish	Type	Dim. W	Part Numbers
Current-Carrying Capacity Equal to 10 AWG [5-6 mm²]	Tin-Plated Copper	7	—	329656
		8	—	329657
		9	.170 [4.32]	1-332006-0
		9	.340 [8.64]	1-332006-2
	Nickel-Plated Copper	7	—	1-329656-1

End Tap Terminals
Double Face

.030 [0.76] Max.
Aluminum Foil Thickness

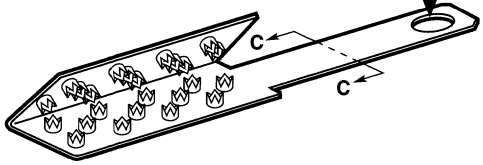
Material and Finish:
Copper, tin-plated (Unannealed)

.250 [6.35] Terminal Tab
(See Catalog 82004 for
mating receptacles.)



Part No. 51943

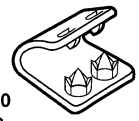
.203 x .334
[5.16 x 8.48]



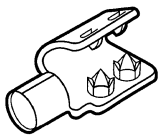
Part No. 51911-2
Terminal CMA at C-C—16,000

Tap Splice and
Barrel Terminal

Power Factor Capacitor
.095 [2.41]
Aluminum Foil Thickness



Type 10
Splice



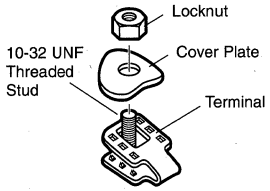
Type 11
Terminal

Material and Finish	Type	Wire Barrel Range		Part Numbers
		AWG	mm²	
Steel, tin-plated	10	—	—	53612-4
Brass, tin-plated	11	8	7.0–8.0	53660-4

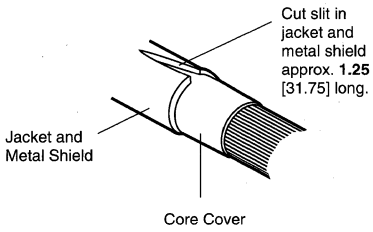
SOURCE: Catalog 82039

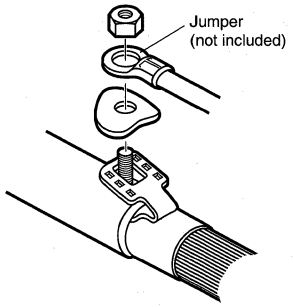
Shield Connector for Telephone and Power Cable

Material and Finish:
Brass, tin-plated



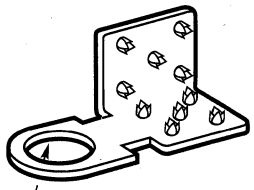
Part No. 53490-1





Ring Tongue Terminal
.030 [0.76] Max. Aluminum Foil Thickness

Material and Finish:
Copper, tin-plated



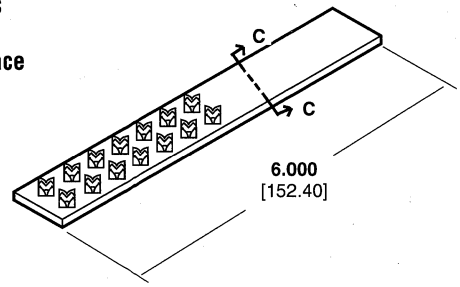
.265 [6.73] Dia. (for 1/4 stud)

Part No. 276959-2

End Cap Terminals

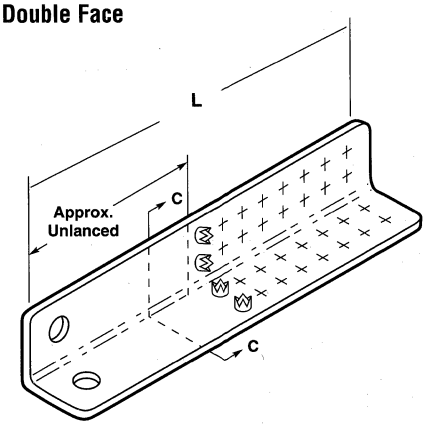
Large Size Single Face

Material:
Unplated copper



Aluminum Foil Thickness Range Max.	Terminal CMA at C-C	Part Number
.080 2.03	178,220	50854
	89,110	50855

Large Size Double Face



Nomograph Terminal Size*	Aluminum Foil Thickness Max**	Terminal CMA at C-C	Stud Size	Material and Finish	Dim. L	Part Numbers: With Stud Hole	Part Numbers: Without Stud Hole
1	.020 0.51	45,828	5/16 M6	Tin-Plated Copper	—	329488	—
2	.035 0.89	77,653	3/8	Tin-Plated Copper	—	2-329489-1	—
				Unplated Copper	—	—	3-329489-7***
3	.045 1.14	143,212	7/16	Tin-Plated Copper	6.00 [152.4]	329490	—
					9.00 [228.6]	2-329490-1	—
					12.00 [304.8]	2-329490-2	
4	.060 1.52	217,683	1/2 M12	Tin-Plated Copper	12.00 [304.8]	2-329491-2	—
					15.00 [381.0]	2-329491-3	—

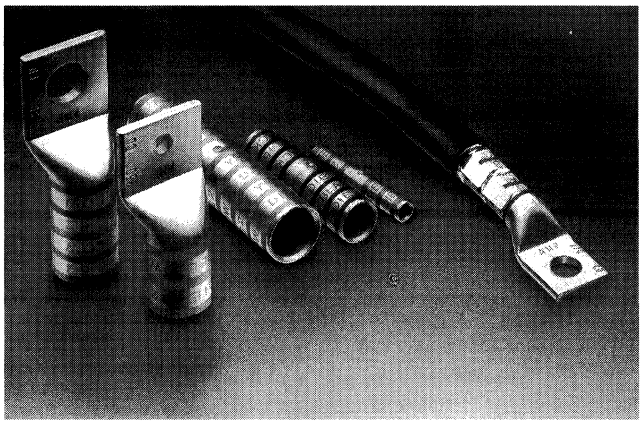
*See nomograph chart in Appendix
**Maximum aluminum foil thickness for lance penetration.
***Unplated in Unlanced area.

SOURCE: Catalog 82039

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

AMPOWER II Uninsulated Terminals & Splices

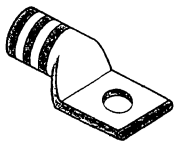
For Copper Wire Range 8 AWG - 600 kcmil



Product Facts

- Terminals have color-coded bands on the barrel and wire size on the tongue
- Terminals and splices are made of high-quality seamless tubular copper
- Terminals and splices are easily crimped with industry standard hex dies in hand hydraulic and power operated tooling
- Terminals and splices meet UL and CSA requirements when applied with proper Thomas & Betts tooling
- Listed by Underwriters Laboratories Inc., File No. E13288
- Certified by Canadian Standards Association, File No. LR7189

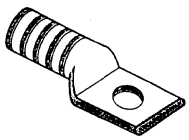
Short Barrel, Short Tongue One-Hole Terminals



Wire Size	Stud Size	Color Key	Part Numbers
8 AWG	#10	Red	1-606200-1
	1/4 [6.35]		2-606200-1
6 AWG	1/4 [6.35]	Blue	2-606204-1
	5/16 [7.94]		3-606204-1
4 AWG	1/4 [6.35]	Grey	2-606208-1
	5/16 [7.94]		3-606208-1
2 AWG	1/4 [6.35]	Brown	1-606212-1
	5/16 [7.94]		2-606212-1
	3/8 [9.53]		3-606212-1
1 AWG	1/4 [6.35]	Green	1-606216-1

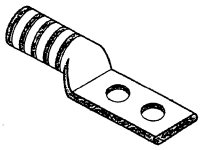
Wire Size	Stud Size	Color Key	Part Numbers
1/0 AWG	3/8 [9.53]	Pink	3-606220-1
	1/2 [12.70]		4-606220-1
3/0 AWG	3/8 [9.53]	Orange	3-606228-1
	1/2 [12.70]		4-606228-1
4/0 AWG	3/8 [9.53]	Purple	3-606232-1
250 kcmil	1/2 [12.70]	Yellow	4-606236-1
300 kcmil	1/2 [12.70]	White	3-606240-1
500 kcmil	1/2 [12.70]	Brown	1-606252-1

Long Barrel, Short Tongue One-Hole Terminals



Wire Size	Stud Size	Color Key	Part Numbers
6 AWG	1/4 [6.35]	Blue	606204-1
4 AWG	1/4 [6.35]	Grey	606208-1
1/0 AWG	3/8 [9.53]	Pink	606220-1
2/0 AWG	3/8 [9.53]	Black	606224-1

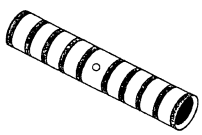
Long Barrel, Long Tongue Two-Hole Terminals



Wire Size	Stud Size	Color Key	Part Numbers
6 AWG	1/4 [6.35]	Blue	606205-1
4 AWG	1/4 [6.35]	Grey	606209-1
4/0 AWG	1/2 [12.70]	Purple	606233-1*

*NEMA-type terminal

Long Barrel Two-Way Splices



Wire Size	Color Key	Part Number
6 AWG	Blue	606206-1
2 AWG	Brown	606214-1
1 AWG	Green	606218-1
1/0 AWG	Pink	606222-1
2/0 AWG	Black	606226-1
3/0 AWG	Orange	606230-1
4/0 AWG	Purple	606234-1
250 kcmil	Yellow	606238-1
500 kcmil	Brown	606254-1
600 kcmil	Green	606258-1

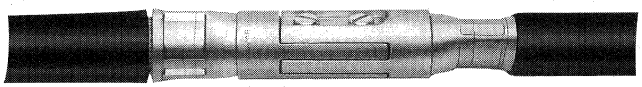
SOURCE: Catalog 82600

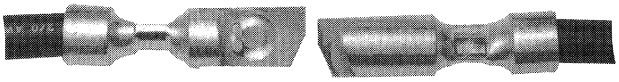
Specifications subject to change.

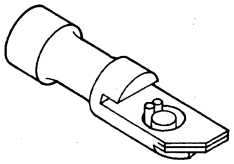
1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

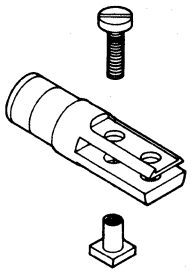
AMPOWER Quick Disconnect and Bolt Type Disconnect Terminals







Quick Disconnect Style



Bolt Disconnect Style

Product Facts

- **Standard interface, allows terminal to mate with existing disconnects**
- **Crimp style terminals marked with standard R.R. cable designations and commercial wire range**
- **Pin and groove or tongue and groove design for fast positive terminal engagement with complete detachability**
- **Silver-plated Quick Disconnect Terminals withstand higher temperatures and offer greater conductivity corrosion protection**
- **Crimp with standard AMP hydraulic power units and heads**

Performance Characteristics

Quick Disconnect Style Material

Body and Pins — Brass per QQ-B-626

Finish — Silver-plated per QQ-S-365

Bolt Disconnect Style Material

Body — Brass per QQ-B-626

Nut — Steel per QQ-S-631 and QQ-S-634; Tin plate per MIL-T-10727

Screw — Steel; Tin plate per MIL-T-10727

AMPOWER Quick Disconnect Terminals for Traction Motor and Car Body Leads

Wire Size	CMA Wire Range	Maximum Insulation Diameter	Part Numbers	Head & Die Inserts for Power Unit 69120-1, 69120-2 and 314979-1 Part Numbers		
				Head	Die Insert	Die Insert with Locator
1/0 AWG	83,700/ 119,500	**.656** [16.66]	52594-1	69099	68200-1	68361-1
		.656 [16.66]	52594-2†	69099	68200-1	68361-1
		.734 [18.64]	52594-3†	69099	68200-1	68361-1
2/0 AWG	119,500/ 150,500	**.750** [19.05]	52595-1†	69099	—	68253-1
		.641 [16.28]	52595-3†	69099	—	68253-1
3/0 AWG	150,500/ 190,000	**.812** [20.62]	52596-1†	69099	—	59867-1
4/0 AWG	190,000/ 231,000	**.812** [20.62]	53631-1†	69099	—	68304-1
250 MCM	231,000/ 275,000	**1.060** [26.92]	53446-1	69099	68203-1	—
400 MCM	375,000/ 450,000	—	53434-1*	69082	68332-1	—
500 MCM	450,000/ 550,000	—	53435-1*	69082	68206-1	—
600 MCM	550,000/ 650,000	—	606713-1*	69082	46757-3	—

AMPOWER Bolt Type Disconnect Terminal for Dynamic Brake Grid Systems

400 MCM	375,000/ 450,000	**1.135** [28.83]	53661-1*	69082	68332-1	—

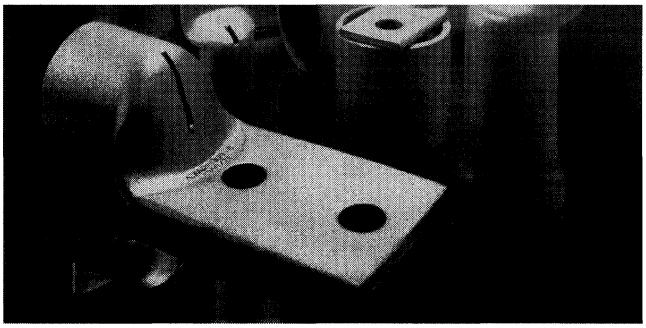
* Two Crimps Necessary
† With Inspection Hole

SOURCE: Catalog 82565

AMPOWER Uninsulated Terminals & Splices

Product Facts

- Designed for large cables and leads
- Ideally suited for power generation and distribution
- Accepts a wide range of stranded copper wires (6 AWG to 1000 MCM [13-507 mm²]—for terminals and up to 1500 MCM [760 mm²] for splices)
- High-quality, seamless tubular copper for maximum conductivity
- Available in a variety of terminal and splice styles
- Listed by Underwriters Laboratories, Inc. File No. E13288, Spec. UL 486
- Certified by Canadian Standards Association, File No. LR7189



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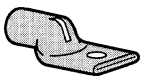

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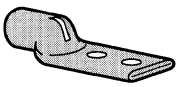
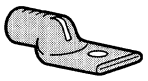
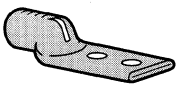


C[1]

D



E



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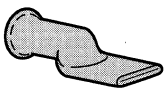
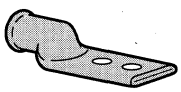


G

H



I[1]

Wire Size	Wire Range CMA	Style	Stud Size	Part Numbers
6 AWG* 13-15 mm²	20,800-33,100	A	—	328140
		B	10	328141
		B	1/4 M6	328142
		B	5/16 M8	328143
		B	3/8	328144
		B	1/2 M12	328158
4 AWG* 21 mm²	33,100-52,600	A	—	321860
		B	1/4 M6	328162
		B	5/16 M8	328163
		B	3/8	328164
		B	1/2 M12	328178
2 AWG 34-35 mm²	52,600-83,700	A	—	325200
		B	1/4 M6	325201
		B	5/16 M8	325202
		B	3/8	325203
		A	—	325207
		B	1/2 M12	325250
		C	3/8	326799
1/0 AWG 50-60 mm²	83,700-119,500	A	—	325300
		A	—	325308
		G	—	325318
		B	1/4 M6	325301
		B	5/16 M8	325302
		B	3/8	325303
		B	7/16	325304
		C	5/16 M8	328169
		B	1/2 M12	325305
		C	3/8	326800
		I	1/2 M12	53680-2
2/0 AWG 67-70 mm²	119,500-150,500	B	1/4 M6	325401
		B	5/16 M8	325402
		B	3/8	325403
		B	1/2 M12	325405
		A	—	325406
		C	3/8	326801
		H	3/8	325410
		G	—	325411-1
		I	1/2 M12	53681-2

SOURCE: Catalog 82025

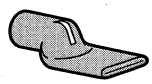
[1] Per NEMA specification. *Terminals for wire sizes 6 AWG and 4 AWG are manufactured from annealed copper per ASTM B-152.

Specifications subject to change.

1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

Uninsulated Terminals
(Continued)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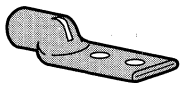
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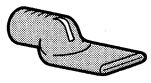
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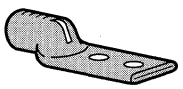
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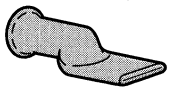
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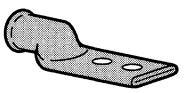
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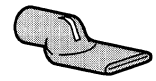
Wire Size	Wire Range CMA	Style	Stud Size	Tongue Length	Part Numbers
3/0 AWG 80-95 mm²	150,500-190,000	B	5/16 M8	—	325502
		B	3/8	—	325503
		B	1/2 M12	—	325505
		A	—	—	325508
		G	—	—	325514
		C	5/16 M8	—	325516
		I	1/2 M12	—	53682-2
		C	3/8	—	326802
4/0 AWG 100-125 mm²	190,000-231,000	A	—	—	325600
		B	5/16 M8	—	325602
		B	3/8	—	325603
		B	3/8	—	325603-2*
		B	1/2 M12	—	325605
		C	3/8	—	326803
		A	—	**2.95** [74.93]	325610
		A	—	**2.20** [55.88]	325611
		G	—	—	325614
		C	1/2 M12	—	327284
		I	1/2 M12	—	53683-2
250 MCM 127 mm²	231,000-275,000	B	5/16 M8	—	325702
		B	3/8	—	325703
		B	1/2 M12	—	325705
		B	5/8	—	325707
		A	—	**1.54** [39.12]	325708
		A	—	**3.49** [88.65]	325712
		A	—	—	1-325712-3**
		A	—	**2.29** [58.17]	325716
		G	—	—	325719
		C	3/8	—	326804
		C	1/2 M12	—	327285
300 MCM 152 mm²	275,000-325,000	C	5/16 M8	—	276917-1
		B	5/16 M8	—	325802
		B	3/8	—	325803
		B	3/8	—	325803-1*
		B	1/2 M12	—	325805
		B	1/2 M12	—	325805-1*
		A	—	—	2-325806-2**
		B	5/8	—	325807
		C	3/8	—	326805
		C	3/8	—	326805-1*
		C	1/2 M12	—	327286
		B	3/8	—	325814
		A	—	—	325816
		G	—	—	325821
		I	1/2 M12	—	53684-2

*No sight hole.
**Cleaned but not plated
[1] Per NEMA specification.

Uninsulated Terminals
(Continued)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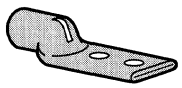
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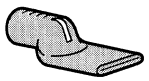
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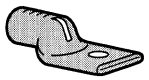
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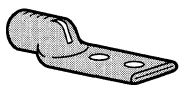
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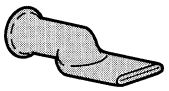
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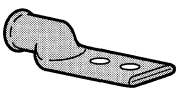

I[1]

Wire Size	Wire Range CMA	Style	Stud Size	Tongue Length	Part Numbers
350 MCM 177 mm²	325,000-375,000	A	—	—	325917
		B	1/2 M12	—	325926-1*
		A	—	—	325956**
		B	3/8	—	325903
		B	1/2 M12	—	325905
		B	1/2 M12	—	325905-1*
		A	—	—	325906
		C	3/8	—	326806
		C	3/8	—	326806-1*
		C	1/2 M12	—	327287
		I	1/2 M12	—	53641-2
400 MCM 203 mm²	375,000-450,000	A	3/8	—	326003
		B	1/2 M12	—	326005
		B	1/2 M12	—	326005-2*
		B	5/8 M16	—	326007
		A	—	—	1-326012-2**
		D	—	—	326016
		C	3/8	—	326807
		G	—	—	326021
		H	5/8 M16	—	326020
500 MCM 253 mm²	450,000-550,000	B	3/8	—	326103
		B	1/2 M12	—	326105
		B	5/8 M16	—	326106
		A	—	**1.68** [42.67]	326107-1**
		A	—	**2.04** [51.82]	2-326111-1**
		A	—	—	326117
		C	1/2 M12	—	327289
		C	3/8	—	326808
		G	—	—	326123
		I	1/2 M12	—	53642-2
600 MCM† 304 mm²	550,000-650,000	C	1/2 M12	—	276916-1
		A	—	—	1-326211-1
		G	—	—	326222
		C	3/8	—	326809-1*
		F	1/2 M12	—	327290
		C	1/2 M12	—	327290-1*
700 MCM† 355 mm²	650,000-750,000	E	1/2 M12	—	326305
		I	1/2 M12	—	53686-2
800 MCM† 406 mm²	750,000-850,000	B	1/2	—	326405
		E	5/8 M12	—	326406
		D	—	—	2-326413-1**
		C	1/2 M12	—	327292
1000 MCM† 507 mm²	950,000-1,125,000	C	1/2 M12	—	327294

[1] Per NEMA specification.
† Two crimps necessary.
* No sight hole
**Cleaned but not plated

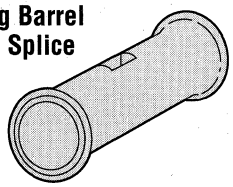
SOURCE: Catalog 82025

Specifications subject to change.

1-800-522-6752
Product Information Center/ AMP FAX Service

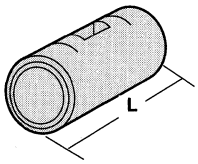
1-800-722-1111
Tooling/Technical Assistance Center

Uninsulated Long Barrel Butt Splice



Wire Size	Wire Range CMA	Part Numbers
1/0 AWG [50-60 mm²]	83,700-119,500	53081
4/0 AWG [100-125 mm²]	190,000-231,000	53084
250 MCM [127 mm²]	231,000-275,000	53085
350 MCM [177 mm²]	325,000-375,000	53087
400 MCM [203 mm²]	375,000-450,000	53088
500 MCM [253 mm²]	450,000-550,000	53089

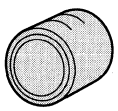
Uninsulated Butt Splice



Wire Size	Wire Range CMA	Dim. L	Part Numbers
2 AWG [34-35 mm²]	52,600-83,700	—	324457
1/0 AWG [50-60 mm²]	83,700-119,500	—	324458
2/0 AWG [67-70 mm²]	119,500-150,500	—	324459
3/0 AWG [80-95 mm²]	150,500-190,000	**1.52** [38.61]	324460
		1.77 [44.96]	1-324460-3
4/0 AWG [100-125 mm²]	190,000-231,000	**1.65** [41.91]	324461
		1.89 [48.01]	2-324461-3
250 MCM [127 mm²]	231,000-275,000	—	324462
300 MCM [152 mm²]	275,000-325,000	—	324463
		—	2-324463-4*
350 MCM [177 mm²]	325,000-375,000	—	324464
400 MCM [203 mm²]	375,000-450,000	—	324465
500 MCM [253 mm²]	450,000-550,000	**2.41** [61.21]	324466
		2.64 [67.06]	2-324466-2
600 MCM† [304 mm²]	550,000-650,000	**2.61** [66.29]	324467
		2.84 [72.14]	2-324467-3
700 MCM† [355 mm²]	650,000-750,000	—	324468
800 MCM† [406 mm²]	750,000-850,000	**2.96** [75.18]	324469
		3.31 [84.07]	2-324469-2
900 MCM† [456 mm²]	850,000-950,000	—	324470
1000 MCM† [507 mm²]	950,000-1,125,000	**3.27** [83.06]	324471
		3.62 [91.95]	2-324471-1
1250 MCM† [634 mm²]	1,125,000-1,300,000	—	53182-1
1500 MCM† [760 mm²]	1,300,000-1,600,000	—	53646-3

*Cleaned but not plated.
†Two crimps necessary on each end.

Uninsulated Parallel Splice



Wire Size	Wire Range CMA	Part Numbers
2 AWG [34-35 mm²]	52,600-83,700	324442
		1-324442-0*
1/0 AWG [50-60 mm²]	83,700-119,500	324443
2/0 AWG [67-70 mm²]	119,500-190,000	324444
		1-324444-0*
3/0 AWG [80-95 mm²]	150,500-190,000	324445
4/0 AWG [100-125 mm²]	190,000-231,000	324446
		1-324446-0*
250 MCM [127 mm²]	231,000-275,000	324447
300 MCM [152 mm²]	275,000-325,000	324448
		1-324448-0*
350 MCM [177 mm²]	325,000-375,000	324449
400 MCM [203 mm²]	375,000-450,000	324450
500 MCM [253 mm²]	450,000-550,000	324451
		1-324451-0*
600 MCM† [304 mm²]	550,000-650,000	324452
700 MCM† [355 mm²]	650,000-750,000	324453
800 MCM† [406 mm²]	750,000-850,000	324454
		1-324454-0*
900 MCM† [456 mm²]	850,000-950,000	324455
		1-324455-0*
1000 MCM† [507 mm²]	950,000-1,125,000	324456
		1-324456-0*

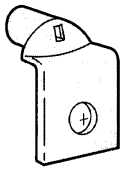
*Cleaned but not plated.
†Two crimps necessary.

SOURCE: Catalog 82025

Specifications subject to change.
1-800-522-6752 Product Information Center/ AMP FAX Service
1-800-722-1111 Tooling/Technical Assistance Center

Uninsulated Special Terminals

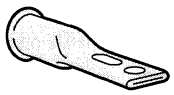
90° Bent Tongue



Wire Size	Wire Range CMA	Stud Size	Part Numbers
2 AWG 34-35 mm²	52,600-83,700	3/16	325223-1
		(2) 3/16	325224-1**
		(2) 1/4 M6	325221-1*
		1/4 M6	55813-1
		3/8	55817-1
1/0 AWG 50-60 mm²	83,700-119,500	5/16 M8	325320
4/0 AWG 100-125 mm²	190,000-231,000	3/8	54634-2*

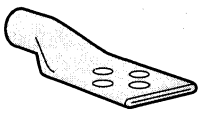
* Two stud holes
** Bent upward 30°

Slotted and Standard Stud Holes



Wire Size	Wire Range CMA	Stud Size	Part Numbers
400 MCM 203 mm²	375,000-450,000	3/8	276963-1
500 MCM† 253 mm²	450,000-550,000	3/8	276964-1

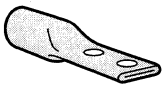
Heavy Duty 4-Hole



Wire Size	Wire Range CMA	Stud Size	Part Numbers
350 MCM 177 mm²	325,000-375,000	1/2 M12	276920-1
500 MCM 253 mm²	450,000-550,000	1/2 M12	277146-1
600 MCM† 304 mm²	550,000-650,000	1/2 M12	276919-1

†Two crimps necessary.

Center 2-Hole



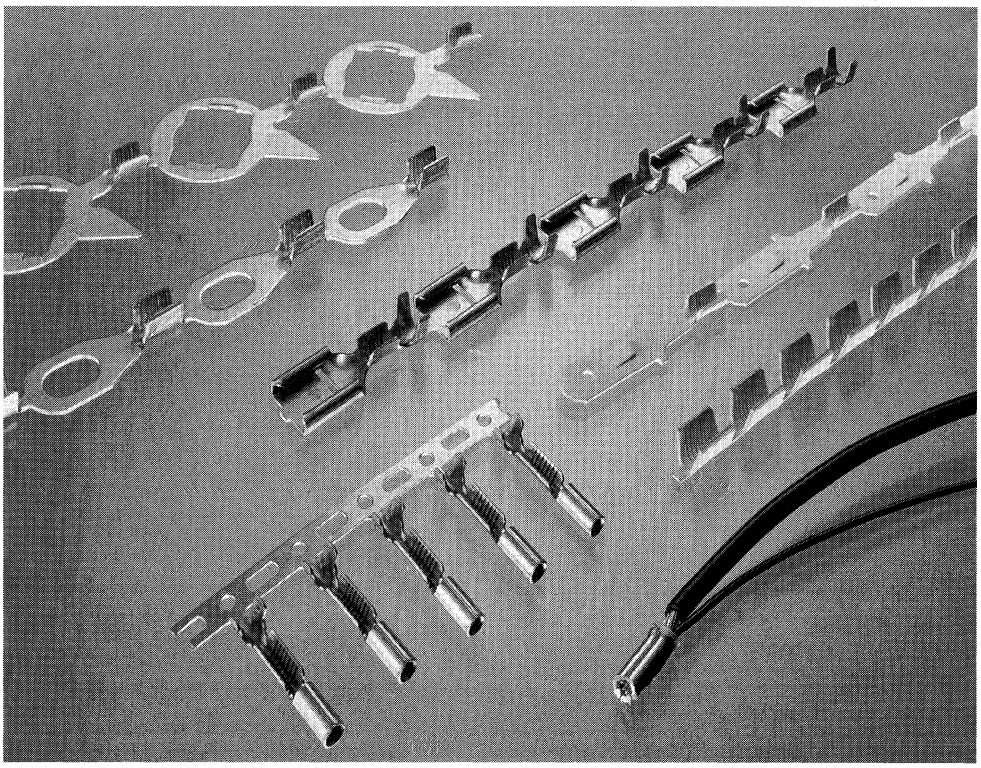
Wire Size	Wire Range CMA	Stud Size	Part Numbers
4/0 AWG 100-125 mm²	190,000-231,000	5/16 M8	277143-1
444.4 MCM 225 mm²	444,400-450,000	3/8	326151-1
500 MCM 253 mm²	450,000-550,000	3/8	276887-1
600 MCM† 304 mm²	550,000-650,000	3/8	276918-1

†Two crimps necessary.

SOURCE: Catalog 82025

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

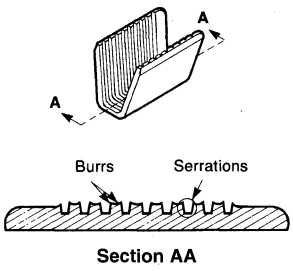
Magnet Wire Splices and Terminals (AMPLIVAR)



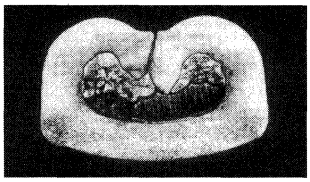
Product Facts

- **Compression crimp eliminates cold solder points, weld burns and wire enbrittlement usually connected with thermal-type terminations**
- **Excellent tensile strength—vibration resistant**
- **Provides a superior electrical connection that is free of contaminants such as stripper residue and solder flux**
- **Precision formed, strip-fed terminals and splices terminated in AMP Automatic Machines maximize production rates at the lowest applied cost**
- **Low wire consumption and the prevention of rejects caused by solder flux or heat damage results**
- **Precisely controlled crimp termination helps eliminate human error for maximum reliability**

The basic design of the AMPLIVAR wire barrel encompasses two main areas: the burrs at the top of the serrations and the serrations themselves. During the crimping operation, the burrs pierce the insulation of the magnet wire and extrude the bare conductors into the serrations—creating ultimate metal-to-metal contact.



Section AA



AMPLIVAR Splices and Terminals are specifically designed to terminate magnet wire to itself or in combination with standard solid or stranded lead wire. The product line will accommodate a wire range from 400 to 13,000 CMA.

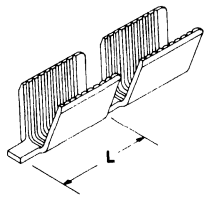
In a one-step crimping operation, the magnet wire is automatically ring-stripped of its insulation as it is forced into the wire barrel serrations. The result produces a high tensile strength, air-sealed connection that is as resistant to corrosion as the insulated conductor.

As many as three magnet wires can be terminated simultaneously in one barrel. In addition, copper or aluminum magnet wire, or a combination of both, can be terminated. When required, copper or aluminum magnet wire can be combined with prestripped standard solid or stranded lead wires.

Depending on your specific application, AMPLIVAR Splices are available in 5, 7 and 9 serration versions as well as miniature and subminiature designs for terminations in the 400 to 1600 CMA range.

AMPLIVAR Splices

9 Serrations—Pigtail Type



Product Facts

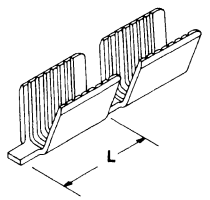
(Plus All 7 Serrations Facts)

- Splice length is increased on larger CMA splices for improved performance
- Splice CMA ranges are overlapped so that two splices are available for any given CMA
- Serration depths are varied within the splice to give optimum electrical/mechanical performance on all wire sizes
- Serration sidewall angles are varied to allow better wire stripping and serration fill
- Flat bottom of splice helps keep magnet wires on bottom as required during crimping
- Magnet wires 28 AWG [0.32 mm] and larger may be terminated without requiring shallow serrations

Wire Range CMA	Stock Thickness	Crimp Width	Dim. L	Material	Part Numbers
400–1500	.016 0.41	.080 2.03	.225 5.72	Tin-Plated Brass	62303-2*
600–3000	.020 0.51	.110 2.79	.225 5.72	Tin-Plated Brass	62304-2
600–3000	.016 0.41	.110 2.79	.225 5.72	Tin-Plated Brass	62305-2*
1500–5000	.020 0.51	.110 2.79	.225 5.72	Tin-Plated Brass	62306-2
1500–5000	.016 0.41	.110 2.79	.225 5.72	Tin-Plated Brass	62307-2*
3000–7000	.020 0.51	.140 3.56	.265 6.73	Tin-Plated Brass	62308-2
5000–10,000	.025 0.64	.180 4.57	.265 6.73	Tin-Plated Brass	62309-2
7000–13,000	.025 0.64	.180 4.57	.265 6.73	Tin-Plated Brass	62310-2
10,000–22,000	.030 0.76	.220 6.86	.340 8.64	Tin-Plated Brass	62311-2

*These splices are recommended for applications using wire size 28 AWG [0.32 mm] or smaller.

7 Serrations—Pigtail Type



Product Facts

- 6° taper on both crimper and anvil improves flex life of termination
- Longer "flat" on tooling improves electrical performance (.125 vs. .080 [3.18 vs. 2.03])
- Radius on wire entry end of splice prevents nicking wires and improves mechanical performance
- Additional serrations enhance stability of crimp
- Serrations are offset to sheared end to place additional serrations in "electrical" portion of crimped splice

Wire Range CMA	Stock Thickness	Crimp Width	Dim. L	Material	Part Numbers
600–3000	.020 0.51	.110 2.79	.225 5.72	Brass	62000-1
600–3000	.020 0.51	.110 2.79	.225 5.72	Brass	62157-1*
600–3000	.020 0.51	.110 2.79	.225 5.72	Tin-Plated Brass	62000-2
600–3000	.020 0.51	.110 2.79	.225 5.72	Tin-Plated Brass	62157-2*
1500–5000	.020 0.51	.110 2.79	.225 5.72	Brass	62040-2
1500–5000	.020 0.51	.110 2.79	.225 5.72	Tin-Plated Brass	62040-1
3000–7000	.020 0.51	.140 3.56	.225 5.72	Brass	62001-1
3000–7000	.020 0.51	.140 3.56	.225 5.72	Tin-Plated Brass	62001-2
7000–12,000	.025 0.64	.250 6.35	.225 5.72	Tin-Plated Brass	62295-1
7000–12,000	.025 0.64	.250 6.35	.225 5.72	Brass	62295-2
7000–13,000	.025 0.64	.180 4.57	.225 5.72	Tin-Plated Brass	62002-2

*These splices are recommended for applications using wire size 26 AWG [0.404 mm] or smaller.

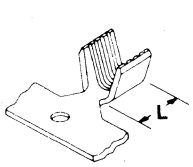
SOURCE: Catalog 82221

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

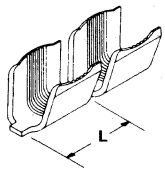
AMPLIVAR Splices

(Continued)

5 Serrations— Thru Type



A



B

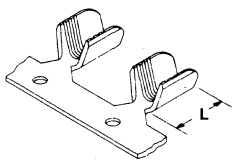
Product Facts

- Wide range of thru splices
- Serrations centered in splice to achieve optimum electrical and mechanical performance in a thru splice
- CMA range accepts a wide variety of wire sizes and combinations

Type	Wire Range CMA	Stock Thickness	Crimp Width	Dim. L	Material	Part Numbers
A	2000–5400	.020 0.51	.110 2.79	.235 5.97	Brass	63564-1
A	10,000–16,000	.032 0.81	.180 4.57	.267 6.78	Tin-Plated Brass	63561-1
A	10,400–22,900	.030 0.76	.300 7.62	.310 7.87	Tin-Plated Brass	63562-1
B	600–3000	.020 0.51	.110 2.79	.225 5.72	Brass	42076
B	600–3000	.020 0.51	.110 2.79	.225 5.72	Brass	42192-1*
B	600–3000	.020 0.51	.110 2.79	.225 5.72	Tin-Plated Brass	42192-2*
B	1500–5000	.020 0.51	.110 2.79	.225 5.72	Brass	41765
B	1500–5000	.020 0.51	.110 2.79	.225 5.72	Brass	42119-1*
B	1500–5000	.020 0.51	.110 2.79	.225 5.72	Tin-Plated Brass	41899
B	3000–7000	.020 0.51	.140 3.56	.225 5.72	Brass	41766
B	3000–7000	.020 0.51	.140 3.56	.225 5.72	Tin-Plated Brass	41900
B	7000–13,000	.025 0.64	.180 4.57	.225 5.72	Brass	41770
B	7000–13,000	.025 0.64	.180 4.57	.225 5.72	Tin-Plated Brass	41904

*These splices are recommended for applications using wire size 26 AWG [0.404 mm] or smaller.

Miniature Splice— Pigtail Type

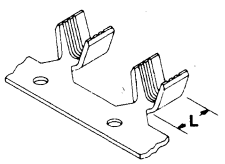


Product Facts

- The compactness of these splices makes them ideal for use in small subfractional motors, transformers, relays, solenoids, indicator lamps and small appliance terminations
- These splices provide the same reliability as the larger AMPLIVAR splices

Wire Range CMA	Stock Thickness	Crimp Width	Dim. L	Material	Part Numbers
200–850	.012 0.30	.055 1.40	.195 4.95	Tin-Plated Brass	63431-1
480–1700	.014 0.36	.080 2.03	.195 4.95	Tin-Plated Brass	62341-1

Subminiature Splice — Thru or Pigtail Type

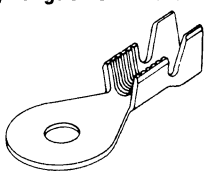


Wire Range CMA	Stock Thickness	Crimp Width	Dim. L	Material	Part Numbers
100–300	.010 0.25	.042 1.08	.080 2.03	Tin-Plated Brass	63621-1
400–1600	.016 0.41	.070 1.78	.100 2.54	Tin-Plated Brass	62194-2

SOURCE: Catalog 82221

AMPLIVAR Terminals

Ring Tongue Terminals



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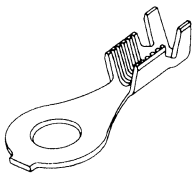

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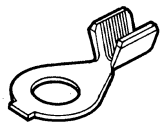

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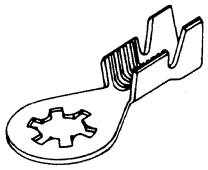
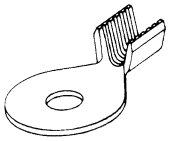


D



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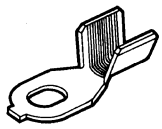
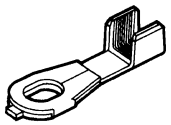


F



G

Wire Size Range AWG 29–22 [0.287–0.643 mm]

Type	Insulation Dia. Range	Hole Dia.	Stud Size	Stock Thk.	Material	Part Number
B	.040–.060 1.02–1.52	.197 5	10	.020 0.51	Tin-Plated Brass	63399-1

Wire Size Range AWG 23–19 [0.574–0.912 mm]

Type	Insulation Dia. Range	Hole Dia.	Stud Size	Stock Thk.	Material	Part Numbers
A	.100–.140 2.54–3.56	.197 5	10	.020 0.51	Tin-Plated Brass	60319-2
A	.125–.165 3.18–4.19	.197 5	10	.020 0.51	Tin-Plated Brass	60325-2
A	.100–.140 2.54–3.56	.171 4.34	8	.020 0.51	Tin-Plated Brass	60321-2
A	.125–.165 3.18–4.19	.171 4.34	8	.020 0.51	Tin-Plated Brass	60323-2

Wire Size Range AWG 22–18 [0.643–1.024 mm]

Type	Insulation Dia. Range	Hole Dia.	Stud Size	Stock Thk.	Material	Part Numbers
A	.125-.165 3.18-4.19	.265 6.73	1/4	.025 0.64	Tin-Plated Brass	63612-1
C	—	.265 6.73	1/4	.025 0.64	Tin-Plated Brass	62835-1
E	—	.171 4.34	8	.025 0.64	Brass	63446-1
E	—	.171 4.34	8	.025 0.64	Tin-Plated Brass	63446-2
C	—	—	6	.025 0.64	Tin-Plated Brass	63649-1

Wire Size Range AWG 20–16 [0.813–1.29 mm]

Type	Insulation Dia. Range	Hole Dia.	Stud Size	Stock Thk.	Material	Part Numbers
A	.125–.165 3.18–4.19	.171 4.34	8	.020 0.51	Tin-Plated Brass	60322-2
H	—	—	8	.020 0.51	Brass	505071-1
L	—	—	3/8	.020 0.51	Brass	505075-1
M	—	—	3/8	.020 0.51	Brass	505072-1

Wire Size Range AWG 18–14 [1.024–1.628 mm]

Type	Insulation Dia. Range	Hole Dia.	Stud Size	Stock Thk.	Material	Part Numbers
A	.100–.140 2.54–3.56	.197 5	10	.020 0.51	Brass	60318-1
A	.100–.140 2.54–3.56	.171 4.34	8	.020 0.51	Brass	60320-1
A	.100–.140 2.54–3.56	.171 4.34	8	.020 0.51	Tin-Plated Brass	60320-2
D	.080–.120 2.03–3.05	.185 4.7	8	.028 0.71	Lu-Bronze[1]	485044-1
D	.080–.120 2.03–3.05	.173 4.39	8	.028 0.71	Lu-Bronze[1]	485079-1

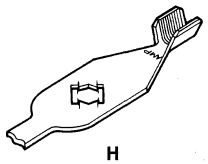
[1]High conductivity copper-tin-zinc alloy.

SOURCE: Catalog 82221

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

AMPLIVAR Terminals
(Continued)

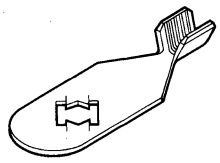
Stud Retaining Terminals



H

Wire Range (1) 18 AWG [1.024 mm] and (1) 20½ AWG [0.768 mm]

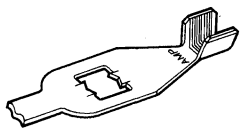
Type	Insulation Dia. Range	Hole Dia.	Stud Size	Stock Thk.	Material	Part Number
J	—	—	8	.020 0.51	Brass	505044-1



J

Wire Range 17–13½ AWG [1.151–1.78 mm]

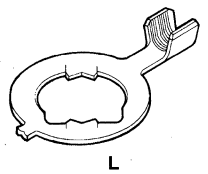
Type	Insulation Dia. Range	Hole Dia.	Stud Size	Stock Thk.	Material	Part Numbers
F	—	—	8	.020 0.51	Brass	63147-1
F	—	—	8	.020 0.51	Tin-Plated Brass	63147-2



K

Wire Range (2) 17 AWG [1.51 mm] or (2) 15 AWG [1.45 mm]

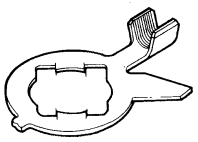
Type	Insulation Dia. Range	Hole Dia.	Stud Size	Stock Thk.	Material	Part Numbers
A	.150–.190 or (2) .115 3.18–4.83 or (2) 2.92	.197 5	10	.025 0.64	Tin-Plated Brass	61151-1
A	.150–.190 or (2) .115 3.18–4.83 or (2) 2.92	.171 4.34	8	.025 0.64	Tin-Plated Brass	60752-2



L

Wire Range 16–13½ [1.29–1.78 mm]

Type	Insulation Dia. Range	Hole Dia.	Stud Size	Stock Thk.	Material	Part Number
K	—	—	10	.020 0.51	Brass	505079-1



M

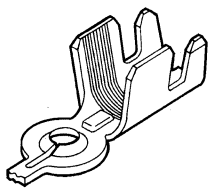
Wire Range 14½ AWG [1.539 mm]

Type	Insulation Dia. Range	Hole Dia.	Stud Size	Stock Thk.	Material	Part Numbers
N	—	—	2	.025 0.64	Tin-Plated Brass	505036-1
N	—	—	2	.025 0.64	Brass	505036-3

Wire Range 14–12 AWG [1.628–2.05 mm] or (2) 15 AWG [1.45 mm]

Type	Insulation Dia. Range	Hole Dia.	Stud Size	Stock Thk.	Material	Part Number
G	—	—	8	.025 0.64	Brass	62755-1

Alternator Eyelet Terminal



N

Wire Range 13–11 AWG [1.83–2.3 mm]

Type	Insulation Dia. Range	Hole Dia.	Stud Size	Stock Thk.	Material	Part Numbers
A	.085–.150 2.16–3.81	.180 4.57	8	.025 0.64	Brass	61710-1
C	—	.180 4.57	—	.025 0.64	Tin/Brass	350571-1
C	—	.197 5	10	.025 0.64	Tin/Brass	640212-1

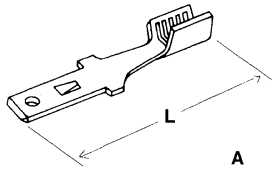
SOURCE: Catalog 82221

AMPLIVAR FASTON Terminals

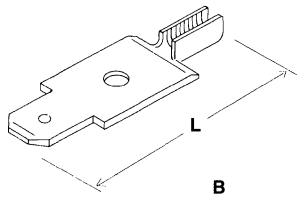
187 Series Tabs[1]

Board Thickness
.062–.072 [1.57–1.83]

Stock Thickness
A = .020 [0.51]
B = .032 [0.81]



A



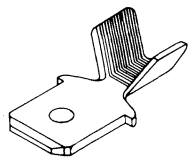
B

Type	Wire Range AWG	Wire Range mm²	Material	Dim. L	Part Numbers
B	27–23	0.1–0.2	Tin-Plated Brass	.935 23.75	63484-1[2]
A	24–21	0.2–0.4	Tin-Plated Brass	.935 23.75	61440-3
A	22–16	0.3–1.4	Tin-Plated Brass	1.015 25.78	62447-1
A	15–13	1.6–2.6	Tin-Plated Brass	.935 23.75	61442-3
A	15–12	1.6–3.0	Tin-Plated Brass	1.015 25.78	62445-1

[2]Varnish resist coating.

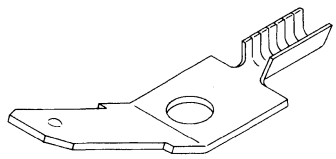
250 Series Tabs[1]

Stock Thickness
.032 [0.81]



Wire Range AWG	Wire Range mm²	Material	Part Number	Quick-Change Applicator[3]
14–12	2.0–3.0	Tin-Plated Brass	62922-1[2]	466510-1

[2]Varnish resist coating.
[3]Quick-Change Applicator for AMP-O-LECTRIC Machine **Part No. 565435-5.** For other machines not listed, contact AMP.



Wire Range AWG	Wire Range mm²	Material	Part Numbers
28–23½	0.08–0.2	Tin-Plated Brass	63136-1
25–19½	0.16–0.6	Tin-Plated Brass	63140-1
23–19	0.2–0.6	Tin-Plated Brass	63165-1

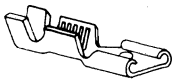
[1]Mates with FASTON receptacles. See Catalog 82004.

SOURCE: Catalog 82221

AMPLIVAR FASTON Terminals

(Continued)

250 Series Receptacles[1]



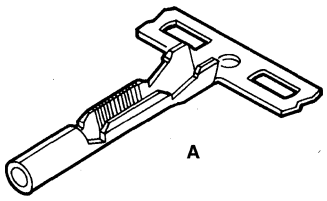
Stock Thickness
.016 [0.41]

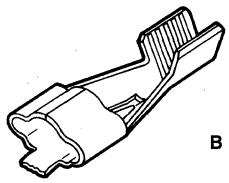
Wire Range AWG	Wire Range mm²	Insulation Dia. Range	Material	Part Numbers	Quick-Change Applicator[3]
20–16 or (2) 23 or (2) 20	0.5–1.4 or (2) 0.2 or (2) 0.5–0.6	**.100–.140 or (2) .060 Max.** 2.54–3.56 or (2) 1.52 Max.	Brass	60384-1	460010-1
			Tin-Plated Brass	60384-2	460010-1
18–14 or (2) 17	0.8–2.0 or (2) 1.0	**.120–.170 or (2) .060 Max.** 3.05–4.32 or 1.52 Max.	Tin-Plated Brass	60384-2	460010-1

[1]Mates with FASTON tabs See Catalog 82004.

[3]Quick-Change Applicator for AMP-O-LECTRIC Machine **Part No. 565435-5**. For other machines not listed, contact AMP.

AMPLIVAR Pin Receptacles

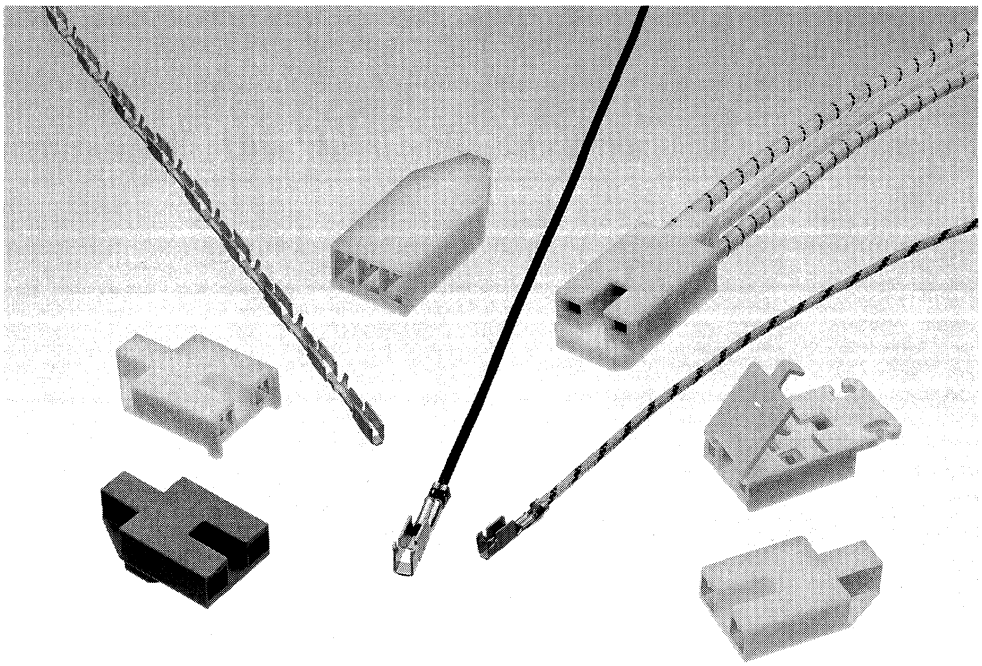




Stock Thickness
.016 [0.41]

Type	Wire Range AWG	Wire Range mm²	Insulation Dia. Range	Material	Part Numbers
A	29–22	0.07–0.3	**.040–.060** 1.02–1.52	Tin-Plated Brass	63506-1
B	21–16	0.4–1.4	—	Tin-Plated Phos. Bronze	60177-2

Cluster Blocks



Product Facts

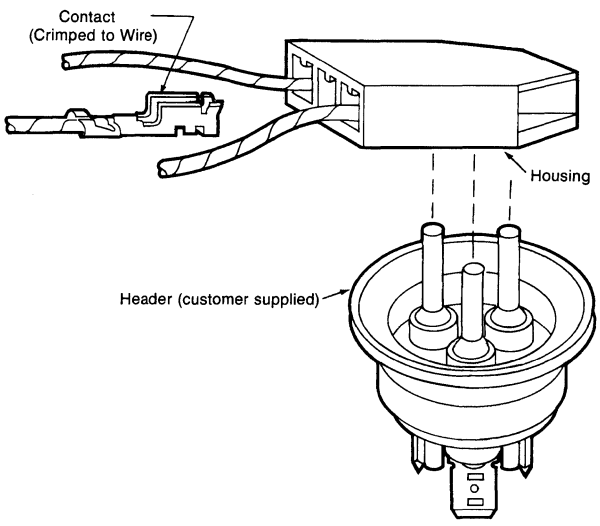
- **Contacts available in tin-plated phosphor bronze**
- **Versions available to accept .090 [2.29] and .125 [3.18] header pins**
- **Accepts wire range 18–16 AWG [0.8–1.4 mm²] and 14–12 AWG [2.0–3.0 mm²]**
- **Thermoplastic polyester housing**
- **Impervious to oils and or refrigerants**
- **Insulation compatibility**
- **Housings available to accept standard and reversed header pin layouts**
- **High-performance electrical and mechanical contact**
- **High-impact resistance housings**
- **Assemblies accept pins from one side only to prevent reversed polarity**
- **High-speed application of contacts with AMP automatic terminating machines and quick-change applicators assures volume production at lowest installed cost**
- **Contacts are easily removed from the housing for maintenance and repair**
- **Recognized under the Component Program of Underwriters Laboratories Inc., File No. E28476**

AMP Cluster Blocks offer manufacturers of air conditioning and refrigeration products a low-cost, fully insulated, quick-connect means for electrically connecting sealed hermetic header pins on compressors.

Cluster Blocks feature high-impact resistance to shock and abuse, and long-life performance in the presence of oils and refrigerants. Since the connectors accept pins from only one side, the danger of reversing polarity at the time of installation is prevented.

The one-piece housings are molded from thermoplastic polyester. The connector accepts .090 [2.29] and .125 [3.18] diameter pin sizes in either standard or reverse pin layouts.

Housings accept both lead wire and AMPLIVAR direct connect contacts made from phosphor bronze. These are precision formed and available on reels for high-speed application.



Typical Assembly

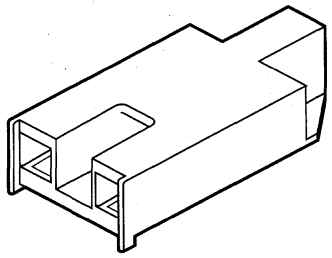
Cluster Blocks
.090 [2.29] Pin Size
(Lead Wire and AMPLIVAR Direct Connect Contacts)

Housings

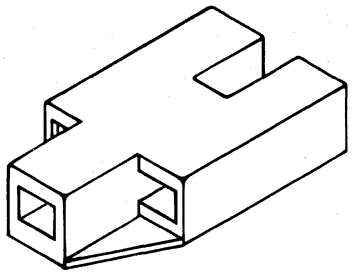
Accepts Contacts

Housings—Part Nos. 360033-1 and 360050-1 accept contact Part No. 62131-3

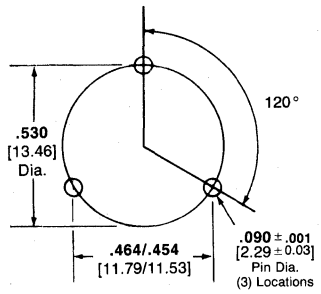
Housing—Part No. 520966-1 requires contacts—Part Nos. 63548-1 and 63549-1



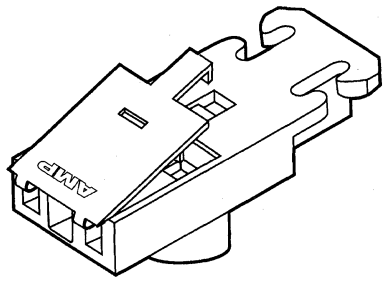
Part No. 360033-1
(Lead Wire)



Part No. 360050-1
(Lead Wire)



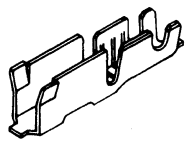
Pin Location



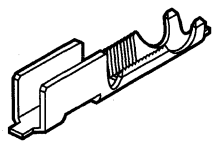
Part No. 520966-1
(Direct Connect)

Contacts

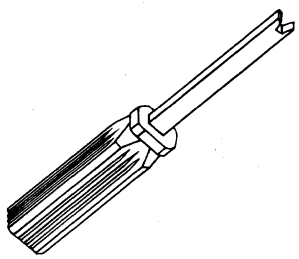
Stock Thickness
.016 [0.41]—Lead Wire
.018 [0.46]—AMPLIVAR Contact



A
Lead Wire



B
AMPLIVAR
Direct Connect
Contacts



Extraction Tool
Part No. 274185-1

Type	Wire Range AWG	Wire Range mm²	Insulation Dia. Range	Part Numbers
A	18–16	0.8–1.4	.059–.103 1.50–2.62	62131-3
			.090–.170 2.29–4.32	63448-1

Type	Wire Range CMA	Insulation Dia. Range	Part Numbers
B	400–1600	.060–.100 1.52–2.54	63548-1
	1600–4800	.075–.125 1.91–3.18	63549-1

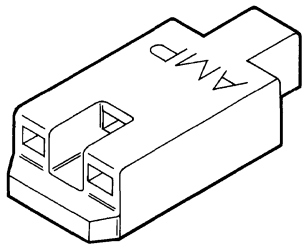
SOURCE: Catalog 82221

Cluster Blocks
.125 [3.18] Pin Size
(Lead Wire and AMPLIVAR Direct Connect Contacts)

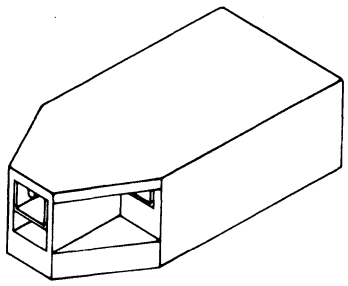
Housings

Accepts Contacts

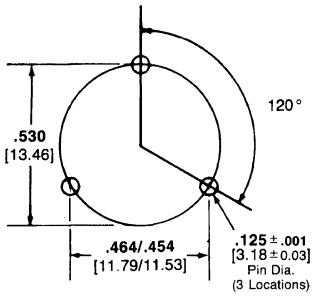
Part Nos. 62243-3, 62244-3, 63453-1, 63454-1 and 63455-1



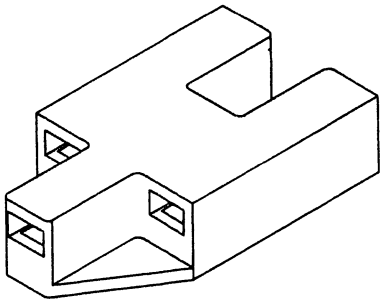
Part No. 360051-1



Part No. 360052-1



Pin Location



Part No. 520995-1

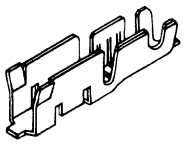
Contacts

Stock Thickness

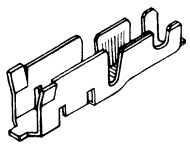
.020 [0.51]

Use with Housings

Part Nos. 360051-1, 360052-1 and 520995-1.

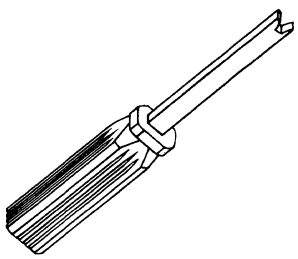


A
Lead Wire



B
AMPLIVAR
Direct Connect
Contacts

Type	Wire Range		Insulation Dia. Range	Part Numbers
	AWG	mm²		
A	16–18	1.3–0.8	.130 Max. 3.3	62244-3
A	14–10	2.0–6.0	.170 Max. 4.32	62243-3

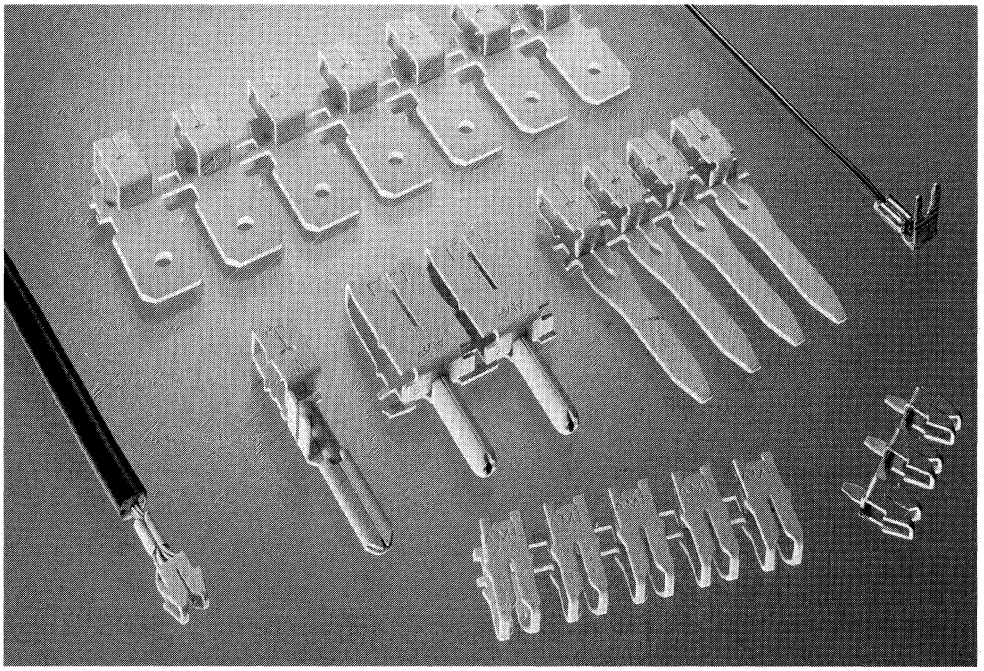


Extraction Tool
Part No. 274186-1

Type	CMA Range	Insulation Dia. Range	Part Numbers
B	400–1600	.060–.100 1.52–2.54	63453-1
B	1500–4200	.075–.125 1.91–3.18	63454-1
B	4000–8500	.090–.170 2.29–4.32	63455-1

SOURCE: Catalog 82221

Standard MAG-MATE Terminals



Product Facts

- Terminates copper magnet wire
- Terminates all magnet wire film insulations
- Eliminates need for prestripping conductors
- Excess magnet wire is automatically trimmed during the termination procedure
- Simultaneously terminates two wires of the same size in one terminal
- Many lead wire attachment techniques available
- Eliminates post insulating
- Low insertion force
- Available in strip form or loose piece for semi-automatic, automatic or hand tool application
- Capable of producing up to 2000 terminations per hour with semi-automatic bench machine (based on four terminations per coil)
- High-speed automatic coil-winding machine terminations provide uniform reliability at lowest possible applied cost
- May be mass terminated
- Clean metal-to-metal interface produces stable, gas-tight electrical terminations free of oxides and other contaminants
- Eliminates lead wire handling throughout entire production process
- Varnish resist lab terminals are available for special applications
- Those products indicated are recognized under the Component Recognition Program of Underwriters Laboratories Inc., File No. E13288
- Free 3D and 2D CAD® images— See page 56

Standard MAG-MATE Terminals bring insulation displacement technology to magnet wire terminations. The technique eliminates the need for prestripping the conductors. Insulated wire is positioned so precisely by the controlled terminating slots of the "U"-shaped design that the stamped and formed terminals can be pushed over the wire.

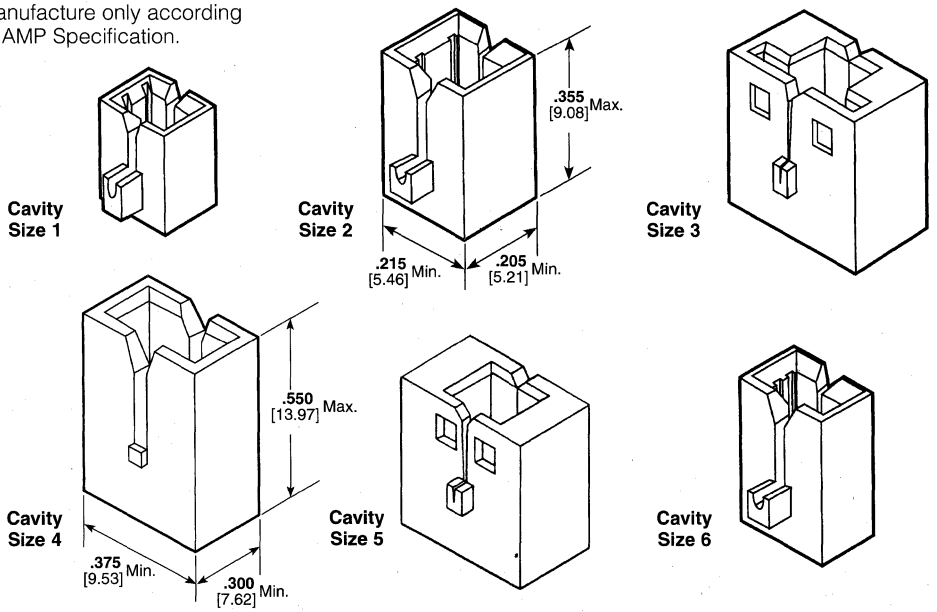
When application tooling pushes the terminal, the wire moves through the terminal's wide lead-in area, reducing it in width and reshaping it into an oval. As the wire passes into the narrow precise slots, small stripping devices penetrate the film insulation. Complete insulation displacement occurs and four areas of contact are made as the conductor is forced deep into the slots by the terminal insertion process.

During the process, the wiping action between the wire and terminal removes all oxides or other contaminants present on both the conductor and the terminal slot walls, producing a clean, metal-to-metal interface and a stable, gas-tight electrical termination. The large areas of contact between the wire and the slot walls ensure reliable conduction of high currents.

Residual spring energy in the terminal causes the side walls of each slot to function as opposing cantilever beams. This constant pressure results in an intimate metal-to-metal contact, providing a reliable, long-term connection.

Typical Plastic Cavities

Manufacture only according to AMP Specification.

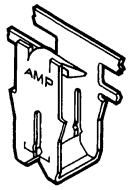


SOURCE: Catalog 82221

Standard MAG-MATE Poke-In Terminals

Typical Cavity Size 2

(See Page 1162)

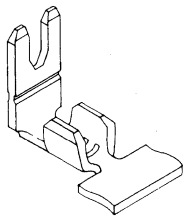


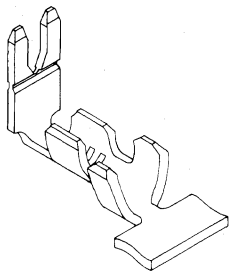
Copper Magnet Wire Range		Lead Wire Range[4]		Stock Thickness	Part Number*	
AWG	mm	AWG	mm²		Strip	Loose Piece[1]
34–33	0.16–0.18	20–18	0.5–0.9	**.010** 0.25	63662-1	—
33–31	0.18–0.23	20–18	0.5–0.9	**.010** 0.25	62431-1	62527-1
30–27[2]	0.25–0.36	20–18	0.5–0.9	**.012** 0.30	63636-1[5]	—
				.012 0.30	63590-1[7]	—
				.012 0.30	62429-1	62526-1
27–23[2]	0.36–0.57	20–18	0.5–0.9	**.016** 0.41	63754-1[6]	—
				.016 0.41	63551-1[7]	—
				.016 0.41	62935-1	63044-1
25–22	0.45–0.64	20–18	0.5–0.9	**.016** 0.41	63658-1	—
22–20[2]	0.64–0.81	20–18	0.5–0.9	**.016** 0.41	63725-1[6]	—
				.016 0.41	62420-1	62524-1
20	0.81	20–18	0.5–0.9	**.016** 0.41	63591-1	—
19–17[3]	0.91–1.15	20–18	0.5–0.9	**.016** 0.41	62833-1	—

[1]Use Hand Tool **Part No. 274250-2.**
[2]Magnet wires may be terminated in the same terminal if diameters are equal.
[3]Single magnet wire only.
[4]Solid or overcoated stranded lead wire only. Product will also accept Poke-In Tab Terminal shown on page 1164.
[5]Special nicker location.
[6]Special anti-overstress.
[7]Tin over nickel plating, special leaf.
*Recognized under the Component Program of Underwriters Laboratories Inc.

Standard MAG-MATE Poke-In Tab Terminals

EADS CD-ROM


A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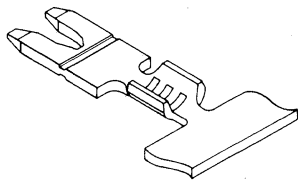
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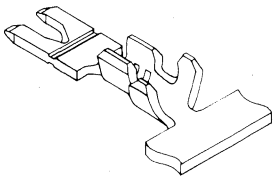
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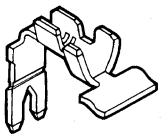
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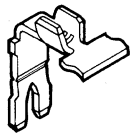
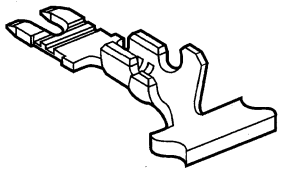

F


G

Type	Lead Wire Size AWG	Lead Wire Size mm²	Ins. O.D.	Stock Thickness	Part Numbers[1]
A	22–18	0.3–0.9	—	**.018** 0.46	62895-1*
	22–18	0.3–0.9	—	**.020** 0.51	63410-1
B	22–18	0.3–0.9	**.060–.100** 1.52–2.54	**.018** 0.46	62896-1*
	18–14	0.8–2.0	**.090–.140** 2.29–3.56	**.020** 0.51	63218-1†
C	22–18	0.3–0.9	—	**.020** 0.51	62897-1*
	18–14	0.8–2.0	**.090–1.40** 2.29–3.56	**.020** 0.51	63775-1
D	22–18	0.3–0.9	**.060–.100** 1.52–2.54	**.020** 0.51	62898-1*
	18–14	0.8–2.0	**.090–.140** 2.29–3.56	**.020** 0.51	63397-1†
E	18–14	0.8–2.0	**.090–.140** 2.29–3.56	**.020** 0.51	63458-1
F	22–18	0.3–0.9	—	**.018** 0.46	63364-1
G	22–18	0.3–0.9	**.060–.100** 1.52–2.54	**.020** 0.51	63574-1[2]
				.020 0.51	63631-1[3]
			.070-.120 1.78-3.05	**.020** 0.51	63048-1

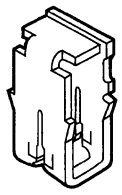
[1]Strip part numbers.
[2]Same as **Part No. 62898-1** except tab serration on top of tab only.
[3]No serrations.
†These part numbers are available upon special request; contact AMP.
*Recognized under the Component Program of Underwriters Laboratories Inc.

Notes: 1. Accepts stranded, fused stranded or solid lead wire.
2. Tab serration on top surface only.

SOURCE: Catalog 82221

Standard MAG-MATE Splice Terminals

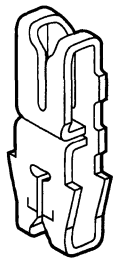
Single Slot Terminals



Copper Magnet Wire Range		Stock Thickness	Part Numbers[1]
AWG	mm		
33–31[2]	0.18–0.23	**.012** 0.30	63531-1[†,5]
31–28[2]	0.23–0.32	**.012** 0.30	63532-1[†,5]
20-18[3]	0.81-1.02	**.020** 0.51	62903-1[4]

[1]Loose piece part numbers.
[2]Only two magnet wires of equal diameter may be spliced.
[3]Single magnet wire only.
[4]Cavity Size 2 (see page 1162).
[5]Cavity Size 6 (see page 1162).
[†]These part numbers are available upon special request; contact AMP Engineering for details.

Dual Slot Terminals



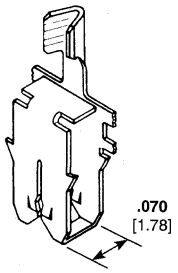
Copper Magnet Wire Range		Lead Wire Range		Stock Thickness	Part Numbers[1]
AWG	mm	AWG	mm²		
33–31[2]	0.18–0.23	26–24	0.12–0.2	**.012** 0.30	63005-1[†]
30–28[2]	0.25–0.32	26–24	0.12–0.2	**.012** 0.30	63087-1[†]
30–27[2]	0.25–0.36	26–24	0.12–0.2	**.012** 0.30	62766-1[†]

[1]Strip part numbers.
[2]Two magnet wires may be terminated in the same terminal if diameters are equal.
[†]These part numbers are available upon special request; contact AMP Engineering for details.

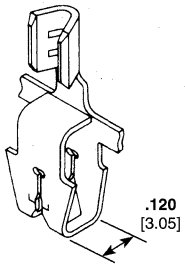
SOURCE: Catalog 82221

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

Standard MAG-MATE Crimp Wire Barrel Terminals



A
.300 [7.62] Series Box
(Typical Cavity Size 5, see page 1162)

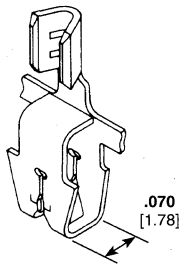


B
.187 [4.75] Series Box
(Typical Cavity Size 1, see page 1162)

Type	Copper Magnet Wire Range		Lead Wire Range		Stock Thickness	Part Numbers[1]
	AWG	mm	AWG	mm²		
A	33–31[2]	0.18–0.23	22–18	0.3–1.0	**.012** 0.30	63235-1
A	31–28[2]	0.23–0.32	22–18	0.3–1.0	**.012** 0.30	63236-1
B	30–27[2]	0.25–0.36	24–20	0.2–0.6	**.012** 0.30	62992-1[3]
B	28–24[2]	0.32–0.51	24–20	0.2–0.6	**.012** 0.30	63641-1
A	27–24[2]	0.36–0.50	22–18	0.3–1.0	**.012** 0.30	63237-1
B	27–23[2]	0.36–0.57	24–20	0.2–0.6	**.016** 0.41	62459-1[3],*
A	25–22[4]	0.45–0.64	22–18	0.3–1.0	**.012** 0.30	63690-1
B	22-20	0.45-0.81	24–20	0.2–0.6	**.016** 0.41	62458-1[3,4]

[1]Strip part numbers shown.
[2]Two magnet wires may be terminated in the same terminal if diameters are equal.
[3]Strip reeled to feed through Mini-Applicator to crimp lead wire first; magnet wire termination is secondary operation.
[4]Single magnet wire only.
*Recognized under the Component Program of Underwriters Laboratories Inc.

A
.187 [4.75] Series Box
(Typical Cavity Size 1, see page 1162)



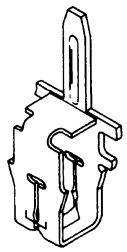
Type	Copper Magnet Wire Range		Lead Wire Range		Stock Thickness	Part Numbers[1]
	AWG	mm	AWG	mm²		
A	33-31	0.20–0.23	26–22	0.12–0.4	**.010** 0.25	63039-1
	30–28[2]	0.25–0.32	26–22	0.12–0.4	**.012** 0.30	63036-1*
			26–22[5]	0.12–0.4	**.012** 0.30	62608-1[4],*
	27–25[2]	0.36–0.46	26–22[5]	0.12–0.4	**.012** 0.30	62609-1[4],*
	24–22[3]	0.51–0.64	26–22[5]	0.12–0.4	**.012** 0.30	62610-1[4],*

[1]Strip part numbers shown.
[2]Two magnet wires may be terminated in the same terminal if diameters are equal.
[3]Single magnet wire only.
[4]Strip reeled to feed through Mini-Applicator to crimp lead wire first; magnet wire termination is secondary operation.
[5]Lead wire enters wire barrel at transition section between barrel and box portions (front entry) when strip is run through applicator to crimp lead wires.
*Recognized under the Component Program of Underwriters Laboratories Inc.

SOURCE: Catalog 82221

Standard MAG-MATE Posted Terminals

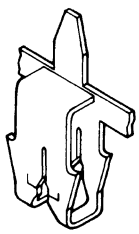
Solder Terminals



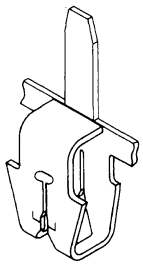
Typical Cavity Size 2
(See page 1162)

Copper Magnet Wire Range AWG	Copper Magnet Wire Range mm	Stock Thickness	Part Numbers[1]
33–31[2]	0.18–0.23	**.010** 0.25	63253-1
31–28[2]	0.23–0.32	**.010** 0.25	62928-1*
29–26[2]	0.29–0.40	**.012** 0.30	62958-1*
27–23[2]	0.36–0.57	**.016** 0.41	63659-1
22–20[3]	0.64–0.81	**.016** 0.41	63660-1
19–17[3]	0.91–1.15	**.016** 0.41	63661-1

[1]Strip part numbers.
[2]Two magnet wires may be terminated in the same terminal if diameters are equal.
[3]Single magnet wire only.
*Recognized under the Component Program of Underwriters Laboratories Inc.
Note: Pc board hole size .050 [1.27].



A
(Typical Cavity Size 1 See page 1162)



B
(Typical Cavity Size 1 See page 1162)

Type	Copper Magnet Wire Range AWG	Copper Magnet Wire Range mm	Stock Thickness	Part Numbers Strip	Part Numbers Loose Piece[1]
A	33–31[2]	0.18–0.23	**.012** 0.30	63565-1[5]	—
	30–28[2]	0.25–0.32	**.012** 0.30	63160-1[4]	—
B	33–31[2]	0.18–0.23	**.010** 0.25	62938-1*	62934-1
	30–28[2]	0.25–0.32	**.012** 0.30	62430-1*	—
	27–25[2]	0.36–0.45	**.012** 0.30	62438-1*	—
	24–22[3]	0.51–0.64	**.012** 0.30	63645-1	—
			.012 0.30	62439-1*	—

[1] Use Hand Tool **Part No. 274249-1**.
[2]Two magnet wires may be terminated in the same terminal if diameters are equal.
[3]Single magnet wire only.
*Recognized under the Component Program of Underwriters Laboratories Inc.

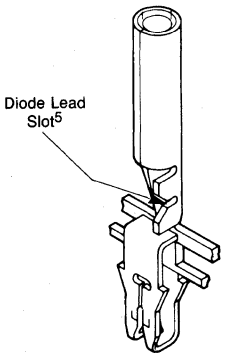
Note: Pc board hole size .046/.048 [1.17/1.22].

SOURCE: Catalog 82221

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

Standard MAG-MATE Pin Terminals

Pin Receptacle with Right- and Left-Hand Diode Lead Slot

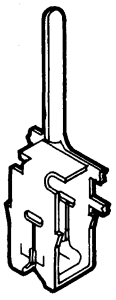


Typical Cavity Size 2
(See page 1162)

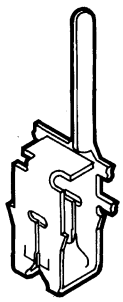
Copper Magnet Wire Range		Stock Thickness		Part Numbers[1]
AWG	mm	Receptacle Section	Mag. Wire Section	
32–31[2]	0.20–0.23	**.014** 0.36	**.010** 0.25	63208-1[3†]
				63209-1[4†]
31–27[2]	0.23–0.36	**.014** 0.36	**.010** 0.25	63326-1[3]
				63308-1[4]

[1]Strip part numbers.
[2]Two magnet wires may be terminated in the same terminal if diameters are equal.
[3]Right-hand diode lead slot (shown).
[4]Left-hand diode lead slot.
[5]Diode lead slot accepts 22 AWG [0.64 mm] solid copper wire.
[†]These part numbers are available upon special request; contact AMP Engineering for details.

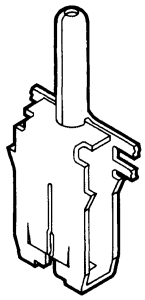
Pin I/O Terminals



A
.300 [7.62] Series Box
(Typical Cavity Size 2
See page 1162)



B
.300 [7.62] Series Box
(Typical Cavity Size 2
See page 1162)



C
.500 [12.7] Series Box
(Typical Cavity Size 4
See page 1162)

Type	Copper Magnet Wire Range		Stock Thickness	Part Numbers[1]
	AWG	mm		
A	33–31[2]	0.18–0.23	**.010** 0.25	63444-1
	31–28[2]	0.23–0.32	**.010** 0.25	63569-1
	27–23[2]	0.36–0.57	**.016** 0.41	63570-1
B	33–31[2]	0.18–0.23	**.010** 0.25	63443-1
C	22–20[2]	0.64–0.81	**.016** 0.41	63277-1[3]
	19½–17[2]	0.86–1.15	**.016** 0.41	63278-1[3]

[1]Strip product part numbers.
[2]Two magnet wires may be terminated in the same terminal if diameters are equal.
[3]Varnish resist coating.

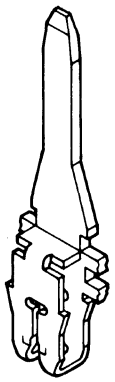
Standard MAG-MATE Tab Terminals

110 Series FASTON Terminals

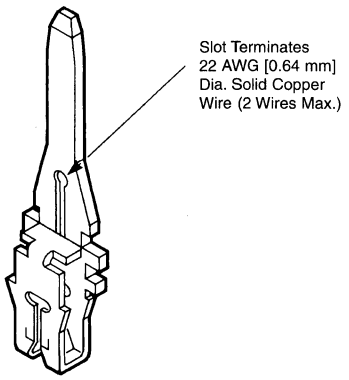
Magnet Wire Range
33–31 AWG [0.18–0.23 mm]

Tab Size
.025 x .110 [0.64 x 2.79]

Typical Cavity Size 2
(See page 1162)



Part No. 63110-1[2]

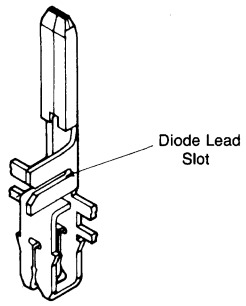


Part No. 63376-1[2]

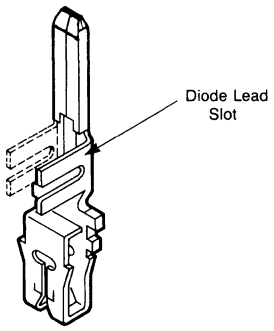
[2]Accepts either single or double copper magnet wire of the same size.

110 Series FASTON Terminals with Diode Lead Slot

Typical Cavity Size 2
(See page 1162)



A



B

Type	Copper Magnet Wire Range AWG	Copper Magnet Wire Range mm	Stock Thickness Tab Section	Stock Thickness Mag. Wire Section	Part Numbers[1]
A	30–27[2]	0.25–0.36	.032 0.81	.014 0.36	63177-1[3,5,*]
					63178-1[4,5,*]
B	31–27[2]	0.23–0.36	.032 0.81	.010 0.25	63319-1[3,6]
					63276-1[4,6]
					63331-1[3,5,†]
					63330-1[4,5,†]
					63433-1[4,5]
					63434-1[3,5]
	30–27[2]	0.25–0.36	.032 0.81	.014 0.36	63529-1[3,5]
					63530-1[4,5]

[1]Strip part numbers.
[2]Accepts either single or double copper magnet wire of the same size.
[3]Right-hand diode lead slot.
[4]Left-hand diode lead slot.
[5]Diode slot accepts 20 AWG [0.81 mm] copper wire.
[6]Diode slot accepts 22 AWG [0.64 mm] copper wire.
*Recognized under the Component Program of Underwriters Laboratories Inc.
[†]These part numbers are available upon special request, contact AMP Engineering for details.

Note: .110 [2.79] Tab Terminals mate with compatible FASTON receptacles. Request Catalog 82004.

SOURCE: Catalog 82221

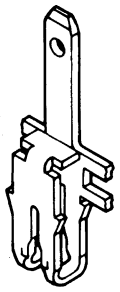
Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

Standard MAG-MATE Tab Terminals

(Continued)

110 Series FASTON Terminals

Typical Cavity Size 2
(See page 1162)

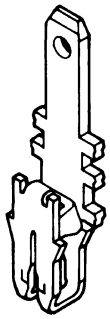


Copper Magnet Wire Range		Tab Size	Stock Thickness		Part Numbers[1]
AWG	mm		Tab Section	Mag. Wire Section	
30–27	0.25–0.36	**.010 × .110** 0.51 × 2.79	**.020** 0.51	**.020** 0.51	63777-1
27–23	0.36–0.57	**.010 × .110** 0.51 × 2.79	**.020** 0.51	**.016** 0.41	63746-1[4]
23–20[2]	0.57–0.81	**.020 × .110** 0.51 × 2.79	**.020** 0.51	**.020** 0.51	63486-1
19–17[3]	0.91–1.15	**.020 × .110** 0.51 × 2.79	**.020** 0.51	**.020** 0.51	63145-1[†]

[1]Strip part numbers.
[2]Two magnet wires may be terminated in the same terminal if diameters are equal.
[3]Single magnet wire only.
[4]Box section.
[†]These part numbers are available upon special request contact AMP Engineering for details.

110 Series Poke-In Combination FASTON Terminals

Typical Cavity Size 2
(See page 1162)



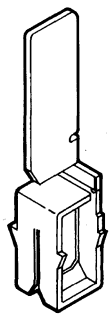
Notes:
1. After insertion into plastic holder, tab portion must be bent over 45°–90° or potted in to prevent pullout when mating receptacle is disconnected.
2. .110 [2.79] Tab Terminals mate with compatible FASTON receptacles. Request Catalog 82004.

Copper Magnet Wire Range		Lead Wire Range[3]		Tab Size	Stock Thickness		Part Numbers[1]
AWG	mm	AWG	mm²		Tab Section	Mag. Wire Section	
28–24[2]	0.32–0.51	20–18	0.5–0.8	**.020 × .110** 0.51 × 2.79	**.020** 0.51	**.012** 0.30	63062-1[4*]
25–22[2]	0.45–0.64	20–18	0.5–0.8	**.020 × .110** 0.51 × 2.79	**.010** 0.51	**.016** 0.41	63063-1[4*]

[1]Strip part numbers.
[2]Two magnet wires may be terminated in the same terminal if diameters are equal, except 22 AWG [0.64 mm] which accepts single magnet wire only.
[3]Solid or fused stranded lead wire only.
[4]Varnish resist coating.
*Recognized under the Component Program of Underwriters Laboratories Inc.

.118 [3] Tab Terminal

Typical Cavity Size 2
(See page 1162)



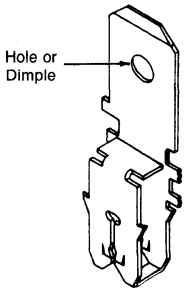
Copper Magnet Wire Range		Tab Size	Stock Thickness		Part Number[1]
AWG	mm		Tab Section	Mag. Wire Section	
19.5[2]	0.86	**.030 × .118** 0.76 × 3.00	**.030** 0.76	**.020** 0.51	63216-1
21[2]	0.72	**.030 × .118** 0.76 × 3.00	**.030** 0.76	**.016** 0.41	63416-1

[1]Strip part numbers.
[2]Single magnet wire only.

Standard MAG-MATE Tab Terminals

(Continued)

187 Series FASTON Terminals



A[5]
.300 [7.62] Box
(Typical Cavity Size 2, See page 1162)

Type	Copper Magnet Wire Range AWG	Copper Magnet Wire Range mm	Tab Feature	Tab Size	Stock Thickness: Tab Section	Stock Thickness: Mag. Wire Section	Part Number: Strip	Part Number: Loose Piece[1]
A	33–31[2]	0.18–0.23	Dimple	**.020 × .187** 0.51 × 4.75	**.020** 0.51	**.010** 0.25	62513-1*	62663-1
			Hole	**.020 × .187** 0.51 × 4.75	**.020** 0.51	**.012** 0.30	63584-1	—
	30–27[2]	0.25–0.36	Dimple	**.020 × .187** 0.51 × 4.75	**.020** 0.51	**.012** 0.30	62512-1* 63510-1[4]	— —
			Dimple	**.032 × .187** 0.81 × 4.75	**.032** 0.81	**.012** 0.30	62678-1*	—
	27–23[2]	0.36–0.57	Hole	**.020 × .187** 0.51 × 4.75	**.020** 0.51	**.016** 0.41	63664-1[4]	—
			Dimple	**.020 × .187** 0.51 × 4.75	**.020** 0.51	**.015** 0.38	62514-1*	—
			Hole	**.020 × .187** 0.51 × 4.75	**.020** 0.51	**.016** 0.41	63585-1	—
	22–20[3]	0.64–0.81	Hole	**.020 × .187** 0.51 × 4.75	**.020** 0.51	**.016** 0.41	63663-1[4]	—
			Dimple	**.020 × .187** 0.51 × 4.75	**.020** 0.51	**.015** 0.38	62511-1* 62511-2[4]	— —
	21–19	0.72–0.91	Hole	**.020 × .187** 0.51 × 4.75	**.020** 0.51	**.016** 0.41	63669-1	—
			Dimple	**.020 × .187** 0.51 × 4.75	**.020** 0.51	**.015** 0.38	63293-1	—
	19–17[3]	0.91–1.15	Hole	**.020 × .187** 0.51 × 4.75	**.020** 0.51	**.020** 0.51	63665-1[4]	—
			Dimple	**.020 × .187** 0.51 × 4.75	**.020** 0.51	**.020** 0.51	63273-1 63511-1[4]	— —
	18½–16½	0.97–1.22	Hole	**.020 × .187** 0.51 × 4.75	**.020** 0.51	**.016** 0.41	63668-1	—
			Dimple	**.020 × .187** 0.51 × 4.75	**.020** 0.51	**.016** 0.41	63494-1	—

[1]Use Hand Tool **Part No. 274260-2**.
[2]Two magnet wires may be terminated in the same terminal if diameters are equal.
[3]Single magnet wire only.
[4]Varnish resist coating.
[5]After insertion into plastic holder, tab portion must be bent over 45°–90° or potted in to prevent pullout when mating receptacle is disconnected.
*Recognized under the Component Program of Underwriters Laboratories Inc.
[†]These part numbers are available upon special request contact AMP Engineering for details.

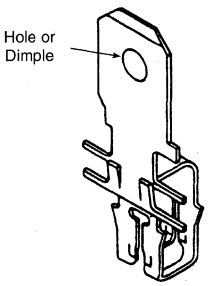
Note: .187 [4.75] Tab Terminals mate with compatible FASTON receptacles. Request Catalog 82004.

SOURCE: Catalog 82221

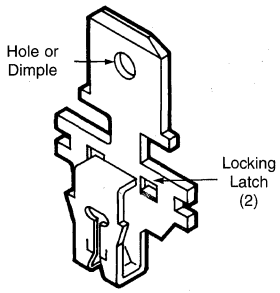
Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

Standard MAG-MATE Tab Terminals
(Continued)

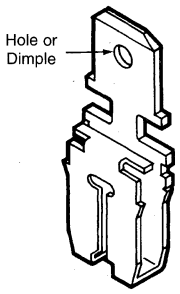
187 Series FASTON Terminals
(Continued)



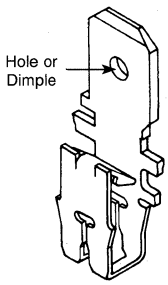
B
(Typical Cavity Size 5, See page 1162)



C
.300 [7.62] Box Latch Type (Typical Cavity Size 3, See page 1162)



D[5]
.500 [12.7] Box (Typical Cavity Size 4, See page 1162)



E[5]
Poke-In Combination (Typical Cavity Size 2, See page 1162)

Note: Lead Wire Range—20–18 AWG [0.5–0.8 mm²] Solid or fused stranded lead wire only

Type	Copper Magnet Wire Range AWG	Copper Magnet Wire Range mm	Tab Feature	Tab Size	Stock Thickness: Tab Section	Stock Thickness: Mag. Wire Section	Part Numbers[1]
B	27–23[2]	0.36-0.57	Dimple	**.020 × .187** 0.51 × 4.75	**.020** 0.51	**.015** 0.38	63107-1
	23-20	0.57-0.81	Dimple	**.020 × .187** 0.51 × 4.75	**.020** 0.51	**.016** 0.41	63340-1
	22-20	0.64-0.81	Hole	**.020 × .187** 0.51 × 4.75	**.020** 0.51	**.016** 0.41	63429-1
	19-17[3]	0.91-1.13	Hole	**.020 × .187** 0.51 × 4.75	**.020** 0.51	**.020** 0.51	62888-1
C	33–31[2]	0.18–0.23	Dimple	**.020 × .187** 0.51 × 4.75	**.020** 0.51	**.010** 0.25	63255-1
			Hole				63544-1
			Hole	**.020 × .187** 0.51 × 4.75	**.020** 0.51	**.010** 0.25	63505-1
	31–28	0.23–0.32	Hole	**.020 × .187** 0.51 × 4.75	**.020** 0.51	**.012** 0.30	63760-1
	30–27[2]	0.25–0.36	Dimple	**.020 × .187** 0.51 × 4.75	**.020** 0.51	**.012** 0.30	63254-1
			Hole				63478-1
			Hole	**.020 × .187** 0.51 × 4.75	**.020** 0.51	**.012** 0.30	63447-1
	27–23[2]	0.36–0.57	Dimple	**.020 × .187** 0.51 × 4.75	**.020** 0.51	**.016** 0.41	63256-1†
D	22–20	0.64–0.81	Dimple	**.020 × .187** 0.51 × 4.75	**.020** 0.51	**.020** 0.51	63708-1
	19–17	0.91–1.15	Hole	**.020 × .187** 0.51 × 4.75	**.020** 0.51	**.020** 0.51	63643-1[6]
	17.5–16[3]	1.09–1.29	Dimple	**.020 × .187** 0.51 × 4.75	**.020** 0.51	**.020** 0.51	63667-1[4]
			Dimple	**.020 × .187** 0.51 × 4.75	**.020** 0.51	**.020** 0.51	63427-1
			Hole				63599-1[6]
	16–15[3]	1.29–1.45	Dimple	**.020 × .187** 0.51 × 4.75	**.020** 0.51	**.020** 0.51	63666-1[4]
			Dimple	**.020 × .187** 0.51 × 4.75	**.020** 0.51	**.020** 0.51	63762-1
			Dimple	**.020 × .187** 0.51 × 4.75	**.020** 0.51	**.020** 0.51	63353-1
	14.5–13[3]	1.54–1.83	Dimple	**.020 × .187** 0.51 × 4.75	**.020** 0.51	**.020** 0.51	63428-1
E	33–31[2]	0.81–0.23	Hole	**.020 × .187** 0.51 × 4.75	**.020** 0.51	**.010** 0.25	63018-1

[1]Strip part numbers shown.
[2]Two magnet wires may be terminated in the same terminal if diameters are equal.
[3]Single magnet wire only.
[4]Varnish resist coating.
[5]After insertion into plastic holder, tab portion must be bent over 45°–90° or potted in to prevent pullout when mating receptacle is disconnected.
[6]Loose piece part.
*Recognized under the Component Program of Underwriters Laboratories, Inc.
†These part numbers are available upon special request contact AMP Engineering for details.

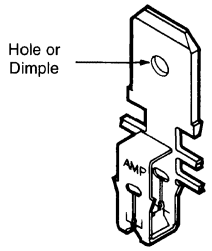
Note: .187 [4.75] Tab Terminals mate with compatible FASTON receptacles. Request Catalog 82004.

Standard MAG-MATE Tab Terminals

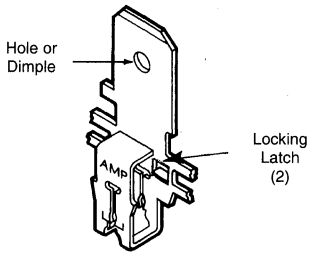
(Continued)

250 Series FASTON Terminals

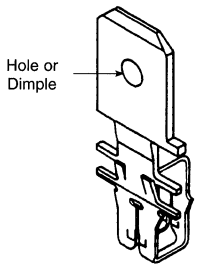
Note: .250 [6.35] tab terminals mate with compatible FASTON receptacles. Request Catalog 82004.



A[5]
.300 [7.62] Box
Cavity Size 2
(See page 1162)



B
.300 [7.62] Box Latch Type
Cavity Size 3
(See page 1162)



C
.300 [7.62] Box
Narrow Latch Type
Cavity Size 5
(See page 1162)

Type	Copper Magnet Wire Range AWG	Copper Magnet Wire Range mm	Tab Feature	Tab Size	Stock Thickness Tab Section	Stock Thickness Mag. Wire Section	Part Numbers Strip	Part Numbers Loose Piece[1]
A	33–31[2]	0.18–0.23	Dimple	.032 × .250 0.81 × 6.35	.032 0.81	.010 0.25	62600-1*	—
	30–27[2]	0.25–0.36	Dimple	.032 × .250 0.81 × 6.35	.032 0.81	.012 0.30	62651-1*	—
			Hole				63055-1	—
			Dimple and Hole				63328-1	—
	28–24[2]	0.32–0.51	Hole	.032 × .250 0.81 × 6.35	.032 0.81	.012 0.30	63607-1[6]	—
	27–23[2]	0.36–0.57	Dimple	.032 × .250 0.81 × 6.35	.032 0.81	.016 0.41	62652-1*	62657-1
			Dimple				62939-1[4,†]	—
			Hole				63159-1[†]	—
	22–20[3]	0.64–0.81	Dimple	.032 × .250 0.81 × 6.35	.032 0.81	.016 0.41	62653-1*	62658-1
	20-18	0.81-1.02	Hole	.032 × .250 0.81 × 6.35	.032 0.81	.020 0.51	63200-1	—
B	33–31[2]	0.18–0.23	Dimple	.032 × .250 0.81 × 6.35	.032 0.81	.010 0.25	63133-1	—
			Hole				63309-1	—
			Hole				63618-1	—
	31–28[2]	0.23–0.32	Hole	.032 × .250 0.81 × 6.35	.032 0.81	.010 0.25	63403-2	—
	30–27[2]	0.25–0.36	Dimple	.032 × .250 0.81 × 6.35	.032 0.81	.012 0.30	63132-1	—
			Hole				63499-1	—
	27–23[2]	0.36–0.57	Hole	.032 × .250 0.81 × 6.35	.032 0.81	.016 0.41	63571-1	—
		0.36–0.57	Dimple	.032 × .250 0.81 × 6.35	.032 0.81	.016 0.41	63128-1	—
	22–20[2]	0.64–0.81	Dimple	.032 × .250 0.81 × 6.35	.032 0.81	.016 0.41	63601-1	—
	19–17[2]	0.91–1.15	Hole	.032 × .250 0.81 × 6.35	.032 0.81	.016 0.41	63614-1	—
C	33-31	0.18–0.23	Dimple	.032 × .250 0.81 × 6.35	.032 0.81	.010 0.25	63026-1	—
	30-27	0.25–0.36	Dimple	.032 × .250 0.81 × 6.35	.032 0.81	.012 0.30	63027-1	—

[1]Use Hand Tool **Part No. 274282-1.**
[2]Two magnet wires may be terminated in the same terminal if diameters are equal.
[3]Single magnet wire only.
[4]Varnish resist coating.
[5]After insertion into plastic holder, tab portion must be bent over 45°–90° or potted in to prevent pullout when mating receptacle is disconnected.
[6]Special transition.
[†]These part numbers are available upon special request, contact AMP Engineering for details.
*Recognized under the Component Program of Underwriters Laboratories Inc.

SOURCE: Catalog 82221

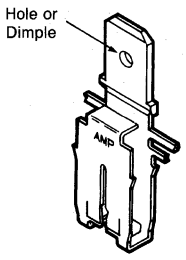
Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

Standard MAG-MATE Tab Terminals

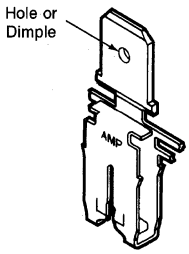
(Continued)

250 Series FASTON Terminals

(Continued)



C[6]
.500 [12.7] Box
Cavity Size 4
(See page 1162)



D[5]
.500 [12.7] Box
Cavity Size 4
(See page 1162)

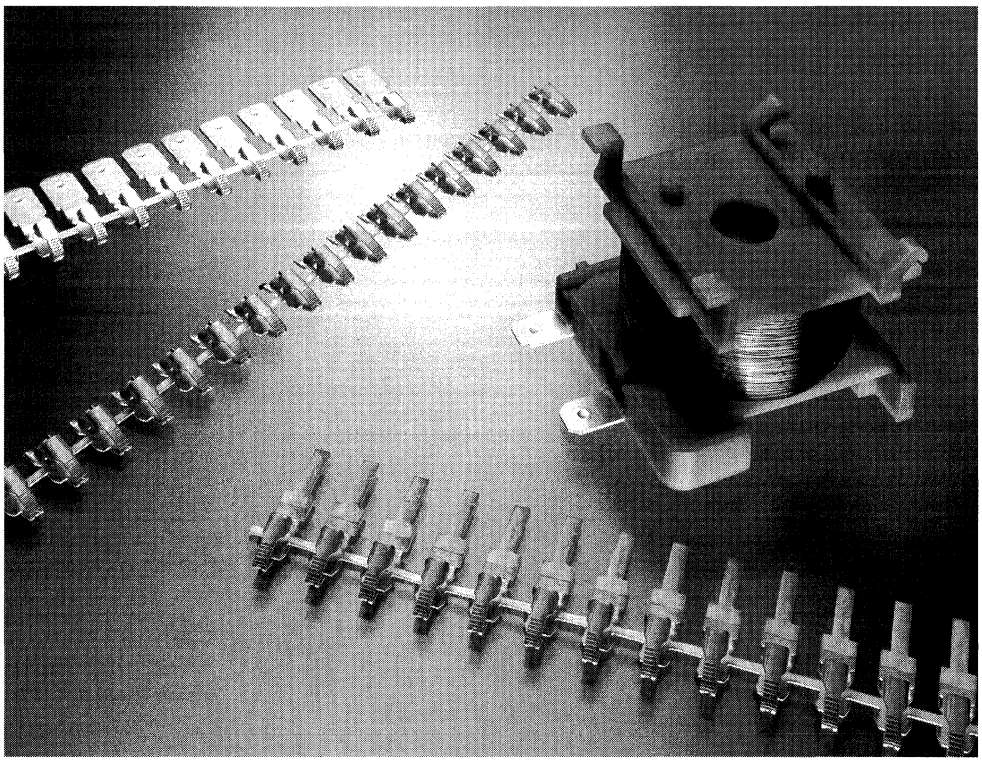
Type	Copper Magnet Wire Range AWG	Copper Magnet Wire Range mm	Tab Feature	Tab Size	Stock Thickness: Tab Section	Stock Thickness: Mag. Wire Section	Part Numbers: Strip	Part Numbers: Loose Piece
C	22–20[2]	0.64–0.81	Hole	**.032 × .250** 0.81 × 6.35	**.032** 0.81	**.020** 0.51	63495-1[4]	—
	19–17[2]	0.91–1.15	Hole	**.032 × .250** 0.81 × 6.35	**.032** 0.81	**.020** 0.51	63464-2 63464-3[4]	— 63598-1[7]
	16–15[2]	1.29–1.45	Hole	**.032 × .250** 0.81 × 6.35	**.032** 0.81	**.020** 0.51	63459-2 63459-3[4]	— —
	14–13[3]	1.61–1.83	Dimple	**.032 × .250** 0.81 × 6.35	**.032** 0.81	**.020** 0.51	63460-1[4]	—
D	22–20[2]	0.64–0.81	Dimple	**.032 × .250** 0.81 × 6.35	**.032** 0.81	**.020** 0.51	63155-1[4]	63336-1[1]
	19–17[2]	0.91–1.15	Dimple	**.032 × .250** 0.81 × 6.35	**.032** 0.81	**.020** 0.51	62923-1[4]	—
	16–15[2]	1.29–1.45	Dimple	**.032 × .250** 0.81 × 6.35	**.032** 0.81	**.020** 0.51	63064-1[4]	63263-1[1]
	14–13[3]	1.61–1.83	Dimple	**.032 × .250** 0.81 × 6.35	**.032** 0.81	**.020** 0.51	63465-1 63371-1[4]	— —
	12[3]	2.05	Dimple	**.032 × .250** 0.81 × 6.35	**.032** 0.81	**.020** 0.51	63425-1[†]	—

[1]Use Hand Tool **Part No. 274282-1.**
[2]Two magnet wires may be terminated in the same terminal if diameters are equal.
[3]Single magnet wire only.
[4]Varnish resist coating.
[5]After insertion into plastic holder, tab portion must be bent over 45°–90° or potted in to prevent pullout when mating receptacle is disconnected.
[6]After insertion into plastic holder, tab portion **cannot** be bent over. The body is potted in only.
[7]Use Hand Tool **Part No. 274278-1.**
[†]These part numbers are available upon special request, contact AMP Engineering for details.

Mini MAG-MATE Terminals

Product Facts

- **Terminates 52-30 AWG [0.254-0.0198 mm] diameter copper magnet wire**
- **Eliminates critical hand operations**
- **Mass termination possible**
- **Eliminates soldering**
- **Fast and simple terminations**
- **Reliable**
- **Eliminates post insulating**
- **Terminates all film insulation wire types**
- **Fast assembly rates**
- **Low terminal insertion force**
- **Accommodates 22–18 AWG [0.3–0.9 mm²] fused stranded or solid lead wire**
- **Available in both open and closed cavity systems**
- **Recognized under the Component Program of Underwriters Laboratories Inc., File No. E13288**



AMP Mini MAG-MATE Terminals are designed to terminate 52–30 AWG [0.254–0.0198 mm]* diameter copper magnet wire and will accept 22–18 AWG [0.3–0.9 mm²] fused stranded or solid lead wire.

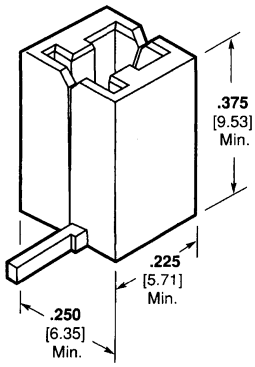
This system eliminates the critical hand operations usually associated with terminating fine gauge magnet wire. It is no longer necessary to prestrip the film insulation from the wire. Soldering, along with its associated negative aspects, such as wire embrittlement, flux contamination and terminal degradation are also eliminated. All of these have been replaced with a controlled mechanical termination system that adds safety and reliability not available in chemical or heat termination systems.

Molded cavity is an integral part of the customer's bobbin or assembly and placed into the fixture of a bench machine. A terminal is cut from the carrier strip and inserted into the cavity with a "dual ram insertion mechanism." The terminal is then pushed with both rams until the leading edge reaches a preset depth in the cavity. The lower ram continues to push, causing the terminal to transform into a rectangular shape which cams the serrations into the prepositioned magnet wire, penetrates the film insulation and provides a stable electrical termination.

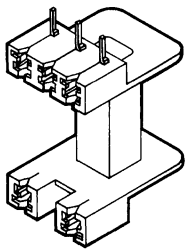
*Metric sizes define bare (uncoated) size.

Typical Plastic Cavity

Not for design, AMP will supply required dimensions of cavity for each customer application.



Typical Bobbin with Cavities



SOURCE: Catalog 82221

Specifications subject to change.

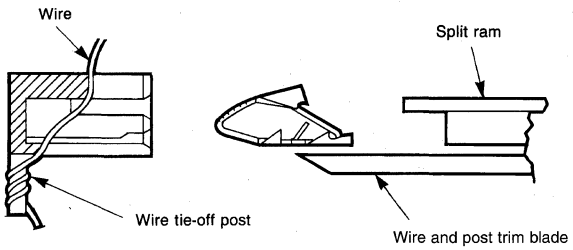
1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

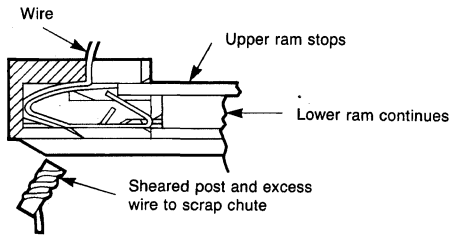
Mini MAG-MATE Terminals

(Continued)

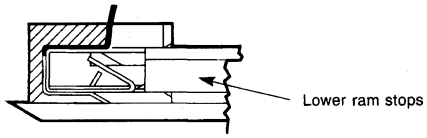
Termination Sequence



1. Terminal Removed from Carrier

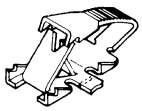


2. Terminal Inserted

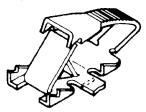


3. Termination Complete

Poke-In Tab Terminal



Type A



Type B

Magnet Wire Range		Type	Tab Size	Lead Wire Range[1]		Part Numbers
AWG	mm*			AWG	mm	
52–42	0.019–0.06	B	**.020 × .050** 0.51 × 1.27	—	—	63613-1[2]
		A	—	22–18	0.3–0.9	62781-1
44–36	0.05–0.13	B	**.020 × .060** 0.51 × 1.52	—	—	63795-1[3]
		A	—	22–18	0.3–0.9	62780-1
38–30	0.10–0.25	A	—	22–18	0.3–0.9	62606-1

[1]Solid or overcoated stranded lead wire only.
[2]Accepts post.
[3]Beam tip radius.
*Metric sizes define bare (uncoated) size.

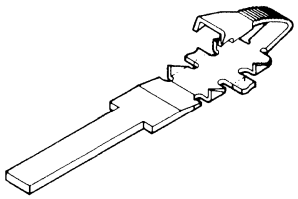
SOURCE: Catalog 82221

Mini MAG-MATE Terminals

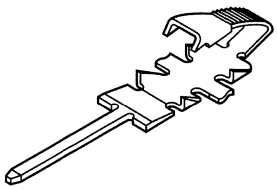
(Continued)

.070 x .020 [1.78 x 0.51] Posted Terminal

Magnet Wire Range
38–30 AWG [0.10–0.25 mm]



Part No. 63041-1

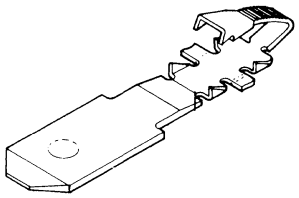


Part No. 63675-1

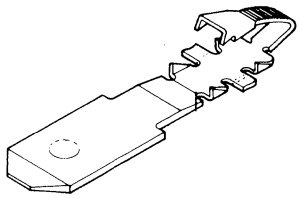
.187 [4.75] FASTON Tab Terminal

Magnet Wire Range
38–30 AWG [0.10–0.25 mm]

Tab Size
.020 x .187 [0.51 x 4.75]



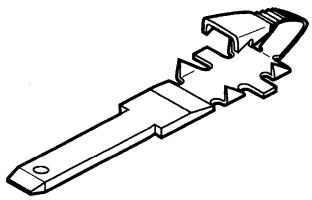
Part No. 62816-1



Part No. 63778-1

110 Series FASTON Tab

Magnet Wire Range
38–30 AWG [0.10–0.25 mm]

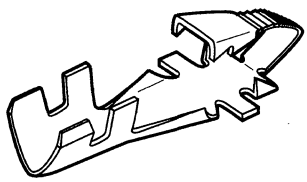


Part No. 63161-1†

Crimp Wire Barrel Terminal

Magnet Wire Range
38–30 AWG [0.10–0.25 mm]

Lead Wire Range
22–18 AWG [0.3–1.0 mm]



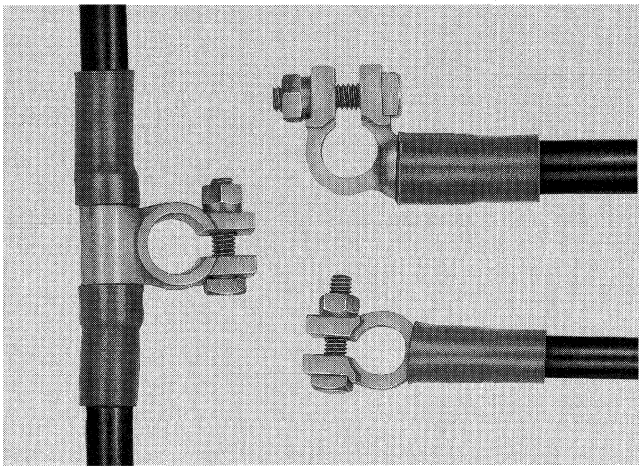
Part No. 63199-1†

†These part numbers are available upon special request, contact AMP Engineering for details.

SOURCE: Catalog 82221

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

CABLE MAKER Battery Terminals



Product Facts

- Cast copper construction (93% copper alloy) yields greater conductivity than brass or zinc terminals. Great for cold starting of heavy trucks
- Lead plating provides longer life in sulphuric acid fumes than tin plating
- Crimp terminals reduce applied cost compared to solder type
- Specific yoke dimensions fit positive or negative posts
- Universal type fits both positive and negative posts
- Standard barrel flag terminals provide either left- or right-hand wire exit. These are for single wires only
- Long barrel flag terminals provide two wire terminations required for series and parallel connections
- Closed flag terminals provide protection for end of cable which is exposed in the standard barrel flag type
- AMP tooling is available for maintenance and production applications

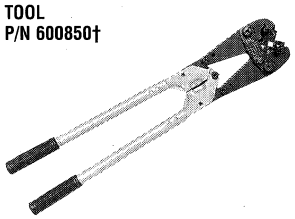
Nominal Wire Size	Polarity	Part Numbers				Yoke Dimension
		Straight Type	Closed Flag Type	Flag Type: Standard Barrel	Flag Type: Long Barrel	
6	UNIV	29253	—	—	—	.660-.670
4	UNIV	29251	—	29250	—	.660-.670
	NEG	608817-2	—	—	—	.635-.645
	POS	608818-2	—	—	—	.694-.704
2	UNIV	29249	—	—	—	.660-.670
	NEG	29249-3	—	—	—	.635-.645
	POS	29249-5	—	—	—	.695-.705
1/0	NEG	29245-3	—	29703	29717-1	.635-.645
	POS	29245-5	—	29704	29717-2	.695-.705
	NEG Lt.	—	601305-1	—	—	.635-.645
	NEG Rt.	—	601305-2	—	—	.635-.645
	POS Lt.	—	601305-3	—	—	.695-.705
	POS Rt.	—	601305-4	—	—	.695-.705
2/0	UNIV	29243	—	—	—	.660-.670
	NEG	29711	—	29705	29716-1	.635-.645
	POS	29712	—	29706	29716-2	.695-.705
	NEG Lt.	—	601306-1	—	—	.635-.645
	NEG Rt.	—	601306-2	—	—	.635-.645
	POS Lt.	—	601306-3	—	—	.695-.705
	POS Rt.	—	601306-4	—	—	.695-.705
3/0	NEG	29713	—	29707	29718-1	.635-.645
	POS	29702	—	29708	29718-2	.695-.705
	NEG Lt.	—	601307-1	—	—	.635-.645
	NEG Rt.	—	601307-2	—	—	.635-.645
	POS Lt.	—	601307-3	—	—	.695-.705
	POS Rt.	—	601307-4	—	—	.695-.705
4/0	NEG	29714	—	—	29709	.635-.645
	POS	29715	—	—	29710	.695-.705
	NEG Rt.	—	608792-4	—	—	.635-.645
	POS Rt.	—	608794-4	—	—	.695-.705

MARINE TYPE

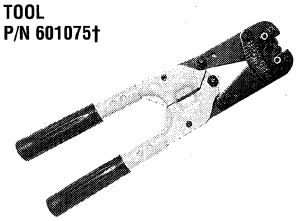
Stud	Polarity	Part Number	Yoke Dimension
5/16"	NEG	29104	.641-.703
3/8"	POS	29257	.703-.734

Tooling

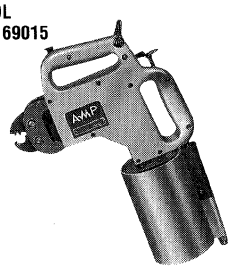
ROTA-CRIMP TOOL P/N 600850†



BANTAM ROTA-CRIMP TOOL P/N 601075†



PNEUMATIC TOOL P/N 69015

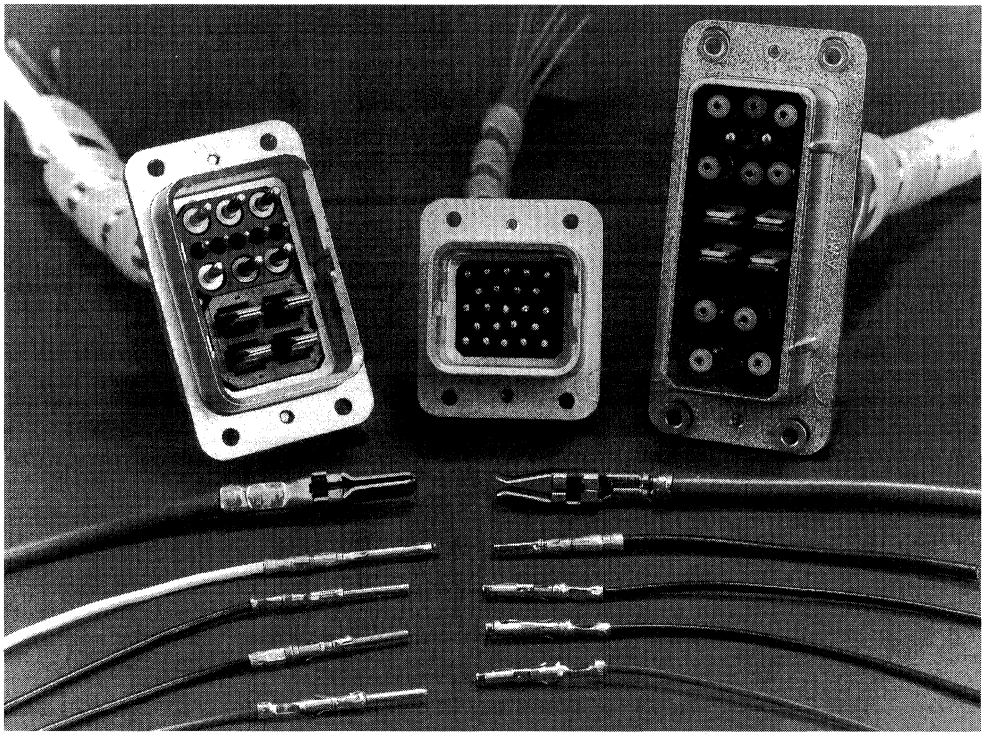


Terminal Part Number	Die Position	Die Position	Head Assembly Part Number
29250 thru 29253; 608817-2, 608818-2	J-H	4	600371
29245-3 thru 29249-5	E-A	1/0	600372
29243; 29702 thru 29708; 29711 thru 29713; 29716-1 thru 29717-2; 601305-1 thru 601307-4	A-C	—	600373
29718-1, 29718-2	A-B	—	600375
29709, 29710, 29714, 29715, 608792-4, 608794-4	A-A	—	600649-1

†Also available with CERTI-CRIMP ratchet, order Part No. with "-1" suffix. **NOTE:** Two crimps are required for 2 thru 4/0 AWG wire.

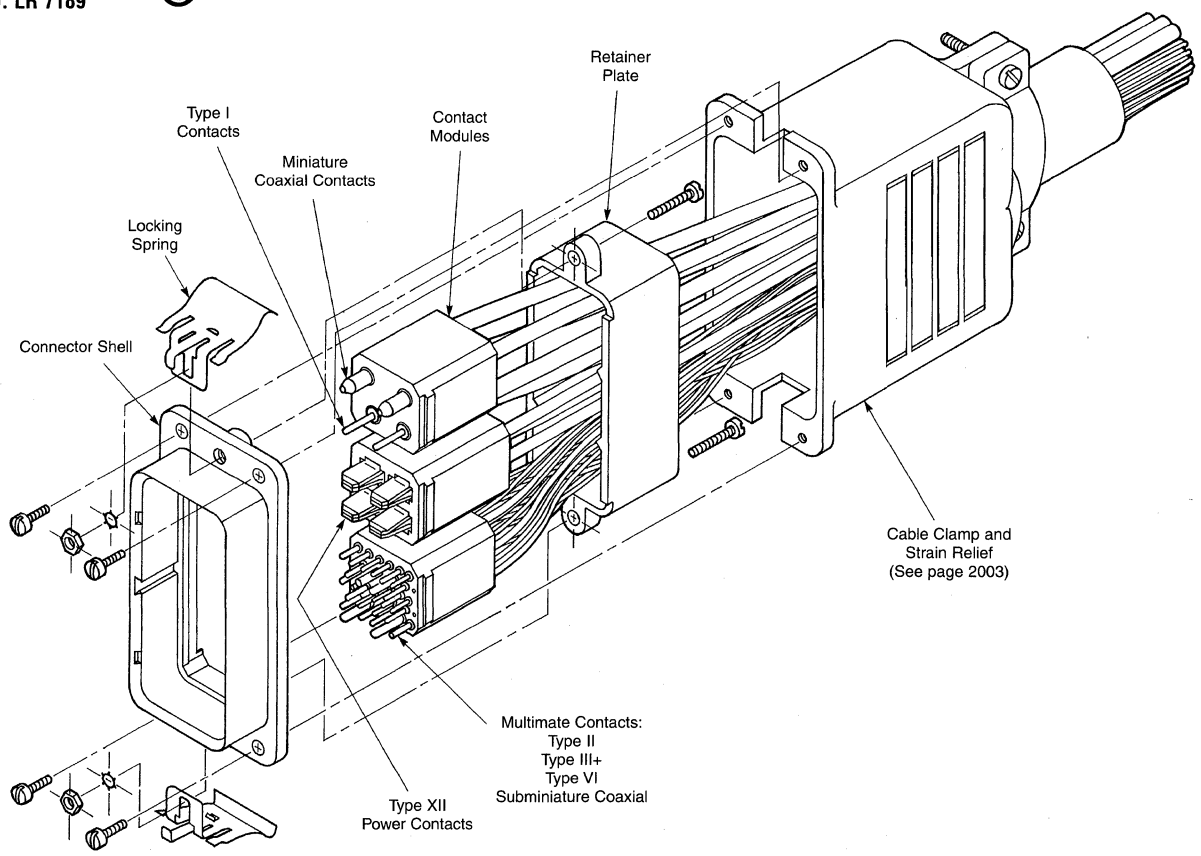
SOURCE: Catalog 82268

"G" Series Modular Connectors (A Multimate Product)



Product Facts

- Modular versatility with Multimate contact capabilities permit multiple combinations of power, signal, coaxial and fiber optic circuits in one basic connector configuration
- Choice of shell sizes for housing one, two or three contact modules
- Modules available accommodating various circuit arrangements
- Polarized shells, with and without floating bushings
- Machine-applied terminations provide high production rates at low applied cost
- Recognized under the Component Program of Underwriters Laboratories Inc., File No. E28476
- Certified by Canadian Standards Association, File No. LR 7189



SOURCE: Catalog 82046

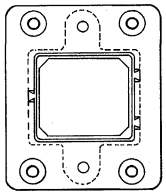
Specifications subject to change.

1-800-522-6752
Product Information Center/ AMP FAX Service

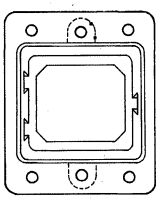
1-800-722-1111
Tooling/Technical Assistance Center

Shells

One-Module Shell

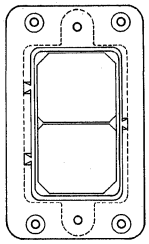


Plug

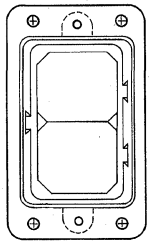


Receptacle

Two-Module Shell

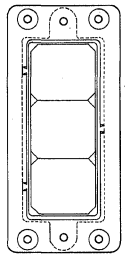


Plug

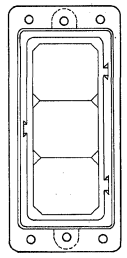


Receptacle

Three-Module Shell



Plug



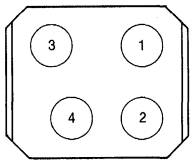
Receptacle

Note: Two-Module Receptacle Shell Dim. (Typ.)—2.429 [61.7] L x 1.509 [38.33] W x 1.421 [36.1] H

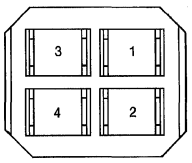
Shell Type	Part Number					
	For Pin Module(s)			For Socket Module(s)		
	One-Module Shell	Two-Module Shell	Three-Module Shell	One-Module Shell	Two-Module Shell	Three-Module Shell
Receptacle	202279-3	202681-2	202287-3	202279-4	202681-3	202287-4
Plug (with Floating Bushings)	202275-4	202680-3	202283-4	202275-3	202680-2	202283-3
Plug (without Floating Bushings)	202786-2	202789-2	202795-2	202786-1	202789-1	202795-1

Notes:
1. Plugs for pin modules mate with receptacles for socket modules, and plugs for socket modules mate with receptacles for pin modules.
2. Completely assembled connectors are available upon request. Consult AMP for part numbers of specific arrangements desired.

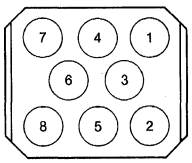
Contact Modules



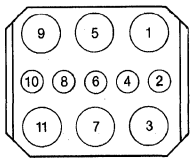
4 Position (Type I and/or Miniature COAXICON Contacts)



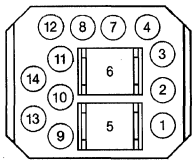
4 Position (Type XII Power Contacts)



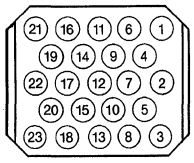
8 Position (Type I and/or Miniature COAXICON Contacts)



11 Position (Type I and/or Miniature COAXICON Contacts and Multimate Contacts)



14 Position (Type XII and Multimate Contacts)



23 Position (Multimate Contacts)

Note: Mating face of Pin Module shown. Socket Module is mirror image.

No. of Positions	Module Will Accommodate These Contact Variations†	Part Numbers			
		Phenolic		Diallyl Phthalate	
		Pin Module	Socket Module	Pin Module	Socket Module
4	4 Type XII Contacts	202624-2	202625-2	—	—
4	4 Miniature COAXICON Contacts or Type I (Size 12) Contacts	—	—	213092-2	213093-2
8	8 Any combination of Miniature COAXICON Contacts and Type I (Size 12) Contacts	—	—	213090-4* 213090-2	213091-4* 213091-2
11	6 Miniature COAXICON Contacts or Type I (Size 12) Contacts and 5 Type II (Size 16), Type III+ (Size 16), Type VI (Size 16) or Subminiature COAXICON Contacts	202648-4	202649-4	202648-2	202649-2
14	2 Type XII Contacts and 12 Type II (Size 16), Type III+ (Size 16), Type VI (Size 16), or Subminiature COAXICON Contacts	202759-2	202760-2	202759-4	202760-4
23	23 Type II (Size 16), Type III+ (Size 16), Type VI (Size 16) or Subminiature COAXICON Contacts	202650-4	202651-4	202650-2	202651-2

*Type I contacts cannot be used in cavities 1, 2, 7 and 8.
†Order contacts separately, see pages 2004 thru 2010.

SOURCE: Catalog 82046

Accessories

Cable Clamps

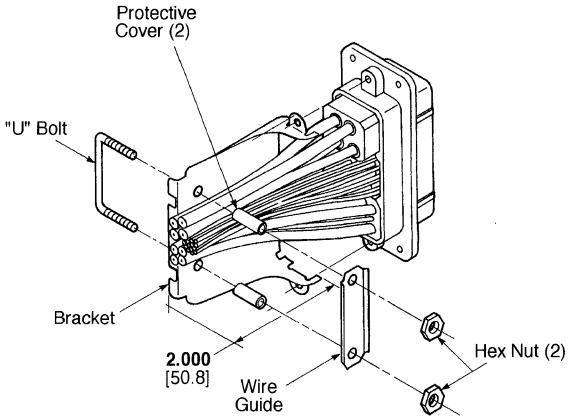
Shell Size (No. of Modules)	Cable Exit Style	Cable Dia. (Max.)	Cable Bushings	Part Number
1	90°	.562 14.27	Without	206132-1
	Straight	.750 19.05	With	202764-1*
			Without	202764-2
		.563 14.3	Without	202305-3
2	Straight	.875 22.23	With	202617-1*
			Without	202617-2
3	Straight	1.156 29.37	With	1-202301-1**
			Without	1-202301-0

*Two cable bushings are included to provide .625 [15.88] and .250 [6.35] diameter cable outlets.
**Four cable bushings are included to provide .938 [23.83], .750 [19.05], .625 [15.88] and .250 [6.35] diameter cable outlets.
Note: These cable clamps can be used on either a plug or receptacle shell of the appropriate size.

Strain Relief (for Three-Module Shell)

Part No. 202567-1

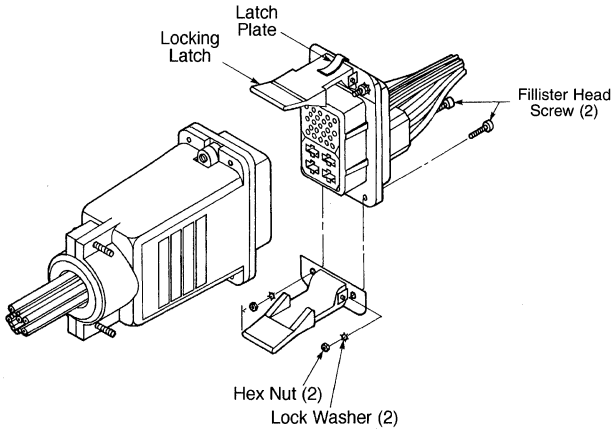
Note: This strain relief can be used on either a plug or receptacle shell, three-module size only, refer to page 2002.



Locking Latch Assembly

Part No. 202832-1
(without mounting hardware)
Part No. 202832-2
(with mounting hardware*)
*Mounting hardware includes four lock washers, 4-40 hex nuts and fillister head screws.

Notes:
1. Locking Latch Assemblies are packaged two per unit.
2. Locking Latch Assemblies can be used on either a plug or receptacle shell. They cannot be used with shells having floating bushings.
3. Locking Latch Assemblies must be used with a cable clamp.



Locking Spring

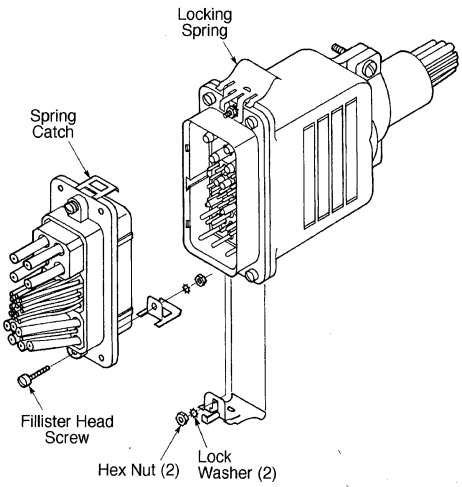
Part No. 202577-1
(without mounting hardware)
Part No. 202577-2
(with mounting hardware*)

Spring Catch

Part No. 202576-1
(without mounting hardware)
Part No. 202576-2
(with mounting hardware*)

*Mounting hardware includes two lock washers, 4-40 hex nuts and screws.

Notes:
1. Locking springs and spring catches are packaged two per kit.
2. Locking springs and spring catches can be used on either a plug or receptacle shell. They cannot be used with shells having floating bushings.



Alignment Bushing for Use with Miniature COAXICON Pins or Sockets

Part No. 225449-1
(for 4-Position contact modules)
Part No. 225447-1
(for 8- and 11-Position contact modules)

SOURCE: Catalog 82046

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

Multimate Contacts

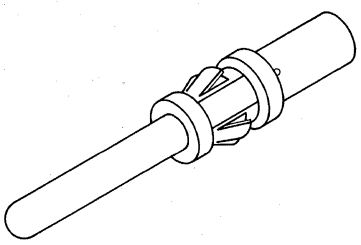
Type I Contacts

Contact size—12
Pin diameter—.094 [2.39]
Test current—23 amperes*
Materials:
Contact Body—Copper alloy
Spring—Stainless steel
Finish—.000030 [0.00076] gold over .000030 [0.00076] nickel

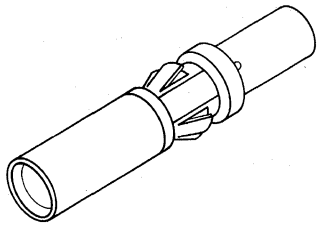
Type II Contacts

Contact size—16
Pin diameter—.062 [1.57]
Test current—13 amperes*
Materials:
Contact body—Copper alloy
Spring—Stainless steel
Finish—.000030 [0.00076] gold over .000030 [0.00076] nickel

***Note:** Current carrying capability depends on wire size, connector size and ambient temperature.



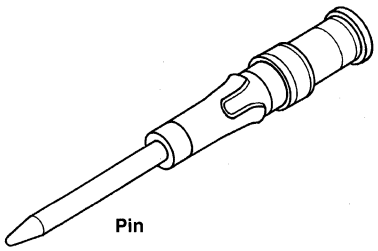
Pin



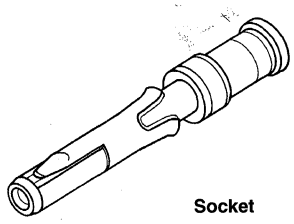
Socket

Wire Size Range AWG	Wire Size Range [mm²]	Wire Strip Length	Ins. Dia. Range	Loose Piece Contact Part No. Pin	Loose Piece Contact Part No. Socket	Tooling Part Number Ferrule Hand Tool	Tooling Part Number Ferrule Dies for Pneumatic Tool 69365	Tooling Part Number Contact Hand Tool	Tooling Part Number Contact Dies for Pneumatic Tool 69365
18-16	0.8-1.4	**.234** 5.95	No Ins. Support	202421-1	202418-1	—	—	90121	90122
14-12	2-3	**.234** 5.95	No Ins. Support	202422-1	202417-1				

Extraction Tool **Part No. 305183-8.**



Pin



Socket

Wire Size Range AWG	Wire Size Range [mm²]	Wire Strip Length	Ins. Dia. Range[1]	Tape Mounted Contact Part No.[2] Pin	Tape Mounted Contact Part No.[2] Socket	Loose Piece Contact Part No. Pin	Loose Piece Contact Part No. Socket	Contact Color Code	Tooling Part Number Loose Piece Hand Tool	Tooling Part Number Loose Piece Dies for Pneumatic Tool 69365	Tooling Part Number Tape Mounted Dies for AMP-TAPETRONIC Machine 69875
32-30	0.03-0.05	**.203** 5.16	**.030-.048** 0.76-1.22	—	—	201555-1[4]	201554-1[5]	White/Red	58305-1 90118[8] 601967-1[9]	90230-1	90249-2
28-24	0.08-0.2		**.035-.055** 0.89-1.4	201611-4	—	201611-1[4]	201613-1[5]	Red/Red			
			.048-.065 1.22-1.65	—	201332-3	201334-1[4]	201332-1[5]	Red/Red			
			.095-.110 2.41-2.79	—	—	202410-1[4]	202411-1[5]	Green	90093 601967-1[9]		
24-20	0.2-0.6		**.040-.062** 1.02-1.57	201578-4	201580-4	201578-1[4]	201580-1[5]	Yellow/Red	58305-1 90118[8] 601967-1[9] 58541-1[6]		
			.055-.085 1.4-2.16	201330-6	201328-9	201330-1[4]	201328-1[5]	Yellow/Red			
18 (Two)	0.8-0.9 (Two)	**.250** 6.35	No Ins. Support	—	—	202725-1[4]	202726-1[4]	Blue	45098 601967-1[9]	90231-2	—
18-16	.08-1.4		**.080-.105** 2.03-2.67	202507-2	205508-2	202507-1[4]	202508-1[5]	—	90136-1 601967-1[9]	—	90408-1
			No Ins. Support	200336-6	200333-8	200336-1[4]	200333-1[4]	Blue/Blue	45098 58541-1[6]	90231-2	90250-1
				—	—	204219-1[5]	—	—	601967-1[9]	90231-2	—
14	2	—	No Ins. Support	201570-2	201568-3	201570-1[4]	201568-1[5]	Violet/Blue	45098 58541-1[6] 601967-1[9]	90231-2	90250-1
				212618-2[3]	—	212618-1[3,7]	—				

[1] Overall insulation crimp diameter, including crimp barrel, must not exceed .125 [3.18].
[2] For AMP-TAPETRONIC Machine **Part No. 69875**, order contacts by Tape Mounted Contact No. plus packaging code "1M REEL" (1000 parts per reel), or "5M REEL" (5000 parts per reel).
[3] Grounding pin is used to provide a make-first/break-last condition when mating and unmating connector halves.
[4] Use turret TH502 **(1-601967-6)** with hand tool **Part No. 601967-1**.
[5] Use turret TH501 **(1-601967-5)** with hand tool **Part No. 601967-1**.
[6] Economy Hand Tool for field repair use only.
[7] Does not use Hand Tool **Part No. 601967-1**.
[8] Does not crimp insulation barrel.
[9] Standard 8-indent crimp military-type tool.
Insertion Tool **Part No. 200893-2** (for insulation diameters .070 [1.78] or less).
Extraction Tool **Part No. 305183**.

SOURCE: Catalog 82046

Multimate Contacts
(Continued)

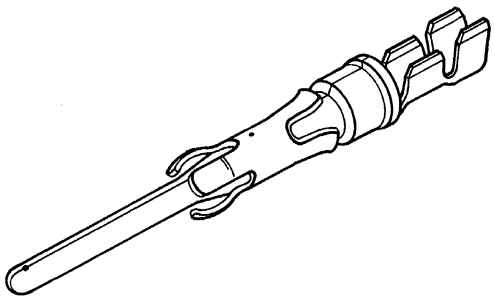
Type III+ Contacts

Contact size—16
Pin diameter—.062 [1.57]
Test current—13 amperes*

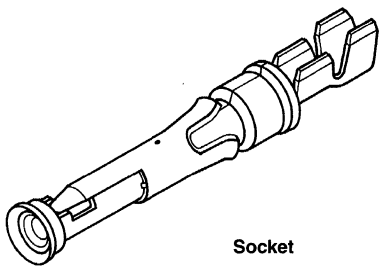
Material:
Contact body—Brass
Spring—Stainless steel

Contact Finish:
A—Bright tin lead
B—.000015 [0.00038] gold in the mating area over .000050 [0.00127] nickel
C—.000030 [0.00076] gold in mating area over .000050 [0.00127] nickel

***Note:** Current carrying capability depends on wire size, connector size and ambient temperature.



Pin



Socket

Wire Size Range AWG	Wire Size Range [mm²]	Ins. Dia. Range[1]	Contact Finish	Strip Form Contact Part Number Pin	Strip Form Contact Part Number Socket	Loose Piece Contact Part Number Pin	Loose Piece Contact Part Number Socket	Tooling Part Number Strip Form Applicator	Tooling Part Number Loose Piece Hand Tool
30-26	0.05-0.15	**.040-.060** 1.02-1.52	A	66425-6	66424-6	—	—	466598-2[2] 466598-3[5]	90066-7
			B	66425-7	66424-7	66429-3	66428-3		
			C	66425-8	66424-8	66429-4	66428-4		
		.014-.030 0.36-0.76	B	66393-7	66394-7	—	—	466585-3[2]	90225-2
			C	66393-8	66394-8	66406-4	66405-4		
26-24	0.12-0.2	**.035-.055** 0.89-1.4	A	66106-6	66108-6	66107-2	66109-2	466321-4[2] 466908-2[3] 466321-6[5]	90066-7 58495-1[4]
			B	66106-7	66108-7	66107-3	66109-3		
			C	66106-8	66108-8	66107-4	66109-4		
24-20	0.2-0.6	**.040-.080** 1.02-2.03	A	66102-7	66104-7	66103-2	66105-2	466323-4[2] 466907-2[3]	90066-7 90067-4 58495-1[4]
			B	66102-8	66104-8	66103-3	66105-3		
			C	66102-9	66104-9	66103-4	66105-4		
		.080-.100 2.03-2.54	A	66332-5	66331-5	66400-1	66399-1	466324-2[2] 466942-1[3]	90067-5 90225-2 58495-1[4]
			B	66332-7	66331-7	66400-3	66399-3		
			C	66332-8	66331-8	66400-4	66399-4		
18-16	0.8-1.4	**.080-.100** 2.03-2.54	A	66098-7	66100-7	66099-2	66101-2	466325-2[2] 466906-1[3] 466325-5[5]	90067-4 90067-5 58495-1[4]
			B	66098-8	66100-8	66099-3	66101-3		
			C	66098-9	66100-9	66099-4	66101-4		
18-14	0.8-2	**.080-.100** 2.03-2.54	A	66359-6	66358-6	66361-2	66360-2	466326-4[2] 466923-2[3] 466326-5[5]	90310-3
			B	66359-9	66358-9	66361-3	66360-3		
			C	1-66359-0	1-66358-0	66361-4	66360-4		

[1]Overall insulation crimp diameter, including crimp barrel, must not exceed .125 [3.18]
[2]These applicators are used in the AMP-O-LECTRIC "Model K" Terminating Machine.
[3]These applicators are used in the AMP-O-MATIC Stripper/Crimper Model II Machine.
[4] Economy Hand Tool for field repair use only.
[5]These applicators are used in the AMP-O-LECTRIC "Model G" Terminating Machine.
Insertion Tool **Part No. 91002-1** (for insulation diameters .070 [1.78] or less); **Part No. 211300-1** (for insulation diameter .095 [2.41] max.); **Part No. 211300-2** (for insulation diameter .065 [1.65] max.).
Extraction Tool **Part No. 305183.**

SOURCE: Catalog 82046

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

Multimate Contacts

(Continued)

Type VI Contacts

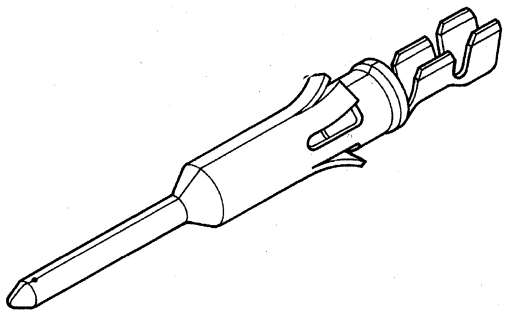
Contact size—16
Pin diameter—.062 [1.57]
Test current—13 amperes*
Material—Copper alloy

Contact Finish:

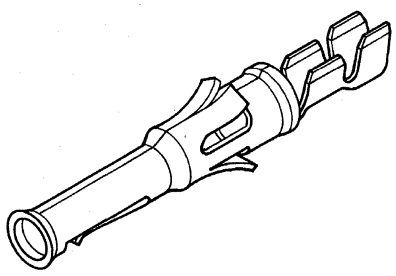
A—Tin

B—Gold flash over .000050 [0.00127] nickel on entire contact with .000030 [0.00076] selective gold plating on contact area

***Note:** Current carrying capability depends on wire size, connector size and ambient temperature.



Pin



Socket

Wire Size Range[1] AWG	Wire Size Range[1] [mm²]	Ins. Dia. Range	Contact Finish	Contact Part Number (reeled for AMP Standard Applicator) Pin	Contact Part Number (reeled for AMP Standard Applicator) Socket	Contact Part Numbers (reeled for AMP Quick-Change Applicator) Pin	Contact Part Numbers (reeled for AMP Quick-Change Applicator) Socket	Loose Piece Contact Part No. Pin	Loose Piece Contact Part No. Socket	Tooling Part Numbers Hand Tool
28-26	0.08-0.15	**.035-.055** 0.89-1.4	A	66585-1	66586-1	66585-2	66586-2	66595-1	66596-1	90066-7
			B	66585-3	66586-3	66585-4	66586-4	66595-2	66596-2	58495-1[3]
24-20	0.2-0.6	**.040-.080** 1.02-2.03	A	66583-1	66584-1	66583-2	66584-2	66593-1	66594-1	90066-7
			B	66583-3	66584-3	66583-4	66584-4	66593-2	66594-2	58495-1[3]
22-18	0.3-0.9	**.055-.110** 1.40-2.79	A	66581-1	66582-1	66581-2	66582-2	66591-1	66592-1	90327-1
			B	66581-3	66582-3	66581-4	66582-4	66591-2	66592-2	
18-16	0.8-1.4	**.080-.100** 2.03-2.54	A	66579-1	66580-1	66579-2	66580-2	66589-1	66590-1	90066-7
			B	66579-3	66580-3	66579-4	66580-4	66589-2	66590-2	58495-1[3]
14	2	**.080-.135**[2] 2.03-3.43	A	66577-1	66578-1	66577-2	66578-2	66587-1	66588-1	90310-1
			B	66577-3	66578-3	66577-4	66578-4	66587-2	66588-2	

[1]Wire strip length—.156 [.396] (all wire sizes).
[2]Maximum insulation diameter recommended for "G" Series connectors with Multimate contact cavities is .110 [2.79].
[3]Economy Hand Tool for field repair only.
Insertion Tool **Part No. 91002-1** for insulation diameters .070 [1.78] or less.
Extraction Tool **Part No. 305183.**

Applicator Nos. for Terminating Machines

Wire Size Range AWG	Wire Size Range mm²	Model K	Model T	Model G	Model Stripper/Crimper
28-26	0.08-0.15	466321-4	466321-3	466321-6	466908-2
24-20	0.2-0.6	466323-4	466323-3	—	466907-2
22-18	0.3-0.9	466384-4	466384-3	—	466914-1
18-16	0.8-1.4	466325-2	466325-1	466325-5	—
14	2	687997-2[4] 687997-4[4]	—	—	—

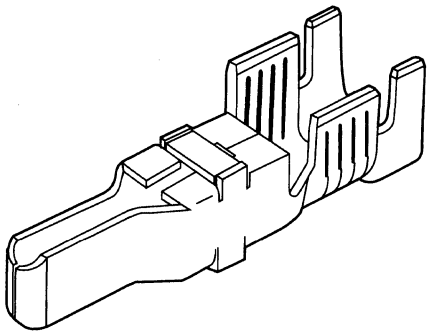
[4]Insulation Dia. Range—**Part No. 687997-2**, .080-.105 [2.03-2.67]; **Part No. 687997-4**, .105-.135 [2.67-3.43].

Multimate Contacts
(Continued)

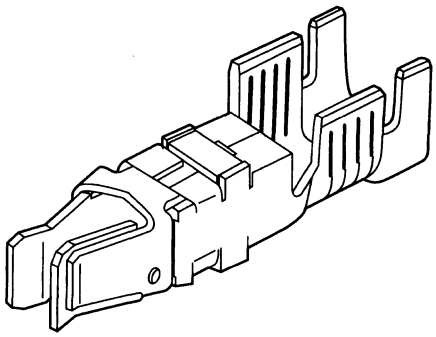
Type XII Power Contacts

Continuous Operating
Current: Silver or gold—
25 amperes max.;
Tin-lead—15 amperes max.
Material—Copper

Contact Finish
A—Tin-Lead
B—.000030 [0.00076] selective gold over .000030 [0.00076] nickel
C—.000100 [0.00254] silver plated contacts with lubricant added



Male



Female

Wire Size Range[1] AWG	Wire Size Range[1] [mm²]	Ins. Dia. Range	Contact Finish	Strip Form Contact Part Number for Standard Applicator Male	Strip Form Contact Part Number for Standard Applicator Female	Strip Form Contact Part Number for Quick-Change Applicator* Male	Strip Form Contact Part Number for Quick-Change Applicator* Female	Loose Piece Contact Part No. Male	Loose Piece Contact Part No. Female	Die Insert Number for Hand Tool 69710-1, or Pneumatic Tools 69365-2 and 69365-3
16 and 14-12	1.25-1.4 and 2-3	**.135-.160** 3.43-4.06	A	66255-1	66740-7	66255-5	1-66740-2	66261-1	66740-8	90145-2[3] and 90145-1[4]
				66256-1[2]	—	66256-5[2]	—	66262-1[2]	—	
			B	66255-2	66740-5	66255-6	1-66740-1	66261-2	66740-6	
				66256-2[2]	—	66256-4[2]	—	66262-2[2]	—	
			C[5]	66255-7	66740-1	66255-8	66740-9	66261-4	66740-2	
				66256-6[2]	—	66256-7[2]	—	66262-4[2]	—	
10	5-6	**.190-.220** 4.83-5.59	A	66253-1	66741-7	66253-5	1-66741-2	66259-1	66741-8	90140-1
				66254-1[2]	—	—	—	66260-1[2]	—	
			B	66253-2	66741-5	66253-6	1-66741-1	66259-2	66741-6	
				66254-2[2]	—	—	—	66260-2[2]	—	
			C[5]	66253-4	66741-1	66253-8	66741-9	66259-4	66741-2	
				66254-4[2]	—	—	—	66260-4[2]	—	

[1]Wire strip length—.281 [7.14]
[2]Grounding Contact
[3]Die Insert **Part No. 90145-2** is for crimping 16 AWG [1.25-1.4 mm²] wire
[4]Die Insert **Part No. 90145-1** is for crimping 14-12 AWG [2-3 mm²] wire
[5]Recommended for high current/vibration applications where fretting corrosion is a problem.
Extraction Tool **Part No. 91019-3**
*Quick-Change Applicators for—
16-14-12 AWG:
Model K—**Part No. 567455-2**
Model T—**Part No. 567455-1**
Model G—**Part No. 567455-3**
10 AWG:
Model K—**Part No. 567021-2**
Model T—**Part No. 567021-1**
Model G—**Part No. 567021-4**

SOURCE: Catalog 82046

Multimate Contacts
(Continued)

Miniature COAXICON Contacts

Material:

Outer Shell—Brass per MIL-C-50

Center Conductor—Beryllium copper

Inner Dielectric—Polypropylene

Retention Spring—Passivated stainless steel

Ferrule—Copper

Finish:

Outer Shell, Center Conductor—.000030 [0.00076] gold over .000030 [0.00076] nickel

Retention Spring—Nickel per QQ-N-290

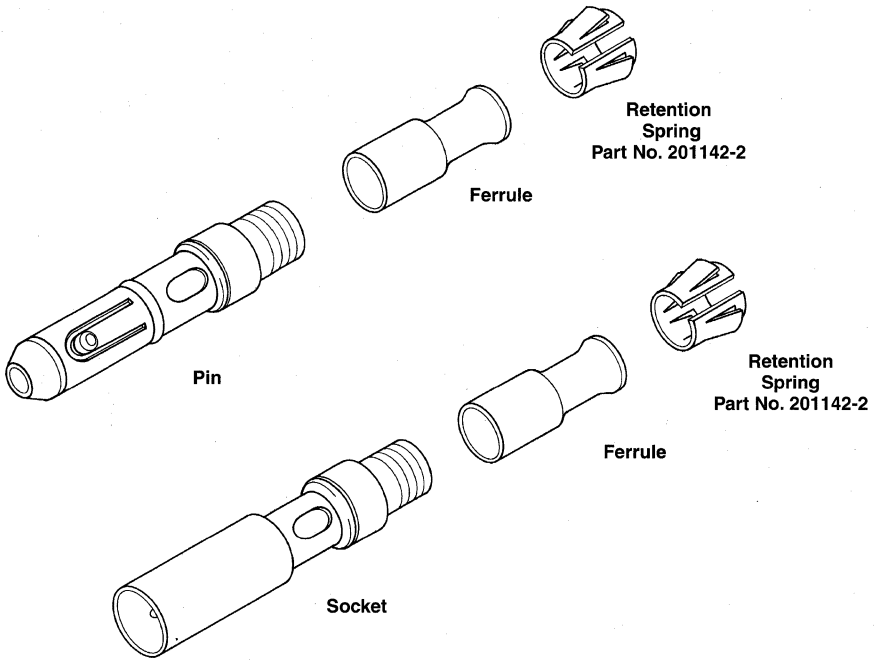
Ferrule—Bright tin-lead per MIL-T-10727

Contacts:

A—.000030 [0.00076] gold

B—.000100 [0.00254] gold

Test Method for Electronic and Electrical Component Parts: MIL-STD-202



Selection Chart for Coaxial Cable

Cable Size (RG/U)	Contact Finish	Loose Piece Contact Part Number		Ferrule Part Number	Tooling Part Number		Tool Handle, Die Insert and Plastic Collar Color Code**
		Pin	Socket		Die Insert for Hand Tool 69710, or Pneumatic Tools 69365-2 and 69365-3*	Hand Tool Number	
55, 55A, 55B, 141, 142, 223	A	201145-4	201146-4	330478	69315-4	69248-4	Blue & Orange
	B	201145-9	201146-9				
58, 58A, 58B, 58C	A	201145-4	201146-4	332663	69220-2	45470-2	Blue
	B	201145-9	201146-9				
59, 59A, 59B, 62, 62A, 62B 124, 140, 210 (4-Position Only)	A	201097-1	201098-1	329006	69675-1	45634-3	Yellow
179, 179A, 187, 21-598	A	201143-1	201144-1	328666	69227-2	45638-2	White
	B	201143-6	201144-6				
180, 180A, 195, 21-597	A	201145-2	201146-2	328664	69222-2	45639-2	Red
	B	1-201145-0	1-201146-0				
178, 178A, 196	A	201511-1	201512-1	328667	69373	69186-2	Brown
174, 188, 316	A	201143-5	201144-5	328666	69227-2	45638-2	White
	B	201143-7	201144-7				
122	A	201145-1	201146-1	328664	69222-2	45639-2	Red
	B	—	1-201146-5				

*Includes bench mount and foot control.
**Match Plastic Collar and Tool colors for application to cable, Inner Insulator color identifies Wire Barrel of Center Contact
Note: A ferrule and retention spring (**Part No. 201142-2**) are required for each pin and socket.
Extraction Tool **Part No. 305183-8**

Multimate Contacts
(Continued)

Selection Chart for Twisted Pair Leads

Wire Size Range AWG	Wire Size Range [mm²]	Max. Ins. Dia. (Two Wires Combined)	Contact Finish	Loose Piece Contact Part Number Pin	Loose Piece Contact Part Number Socket	Ferrule Part Number	Tooling Part Number: Die Inserts for Hand Tool 69710-1, or Pneumatic Tools 69365-2 & 69365-3*	Tooling Part Number: Hand Tool	Tool Handle, Die Insert and Plastic Collar Color Code **
28-26 (Solid)	0.08-0.15	**.080** 2.03	A	201511-1	201512-1	328667	69373	69186-2	Brown
24-22 (Stranded)	0.2-0.4	**.115** 2.92	A	201143-5	201144-5	328666	69672	45638-3	Gray and White
			B	201143-7	201144-7				
24-22 (Solid or Stranded)	0.2-0.4	**.160** .406	A	50079-1	50080-1	329029	69222-2	45639-2	Red

Selection Chart for Shielded Wire

Cable Size (RG/U)	Contact Finish	Loose Piece Contact Part Number Pin	Loose Piece Contact Part Number Socket	Ferrule Part No.	Tooling Part Number: Die Insert for Hand Tool 69710, or Pneumatic Tools 69365-2 & 69365-3*	Tooling Part Number: Hand Tool	Tool Handle, Die Insert and Plastic Collar Color Code**
No. 26, NAS-702, Class A & C No. 26, MIL-W-16878, Types E & EE No. 24, NAS-702, Class A & C No. 24, MIL-W-16878, Types E & EE No. 22, NAS 702, Class C No. 22, MIL-W-16878, Type E No. 22, MIL-C-7078 A, Type I No. 1 Dielectric, .068 [1.73] O.D.	A	201143-2	201144-2	328666	69230-1	69147-2	Gray
No. 22, NAS-702, Class A No. 22, MIL-C-7078 A, Type II	A	201143-3	201144-3	328666	69227-2	45638-2	White
No. 22, MIL-C-7078 A, Types I & II No. 2 Dielectric, .075 [1.91] O.D. No. 3 Dielectric, .085 [2.16] O.D.	A	201145-1	201146-1	2-328665-1	69222-2	45639-2	Red
No. 22, NAS-702, Class B	A	201145-4	201146-4	328663	69220-2	45740-2	Blue
	B	201145-9	201146-9				

Selection Chart for Various Manufacturers' Cables

Center Conductor Wire AWG/Type	Center Conductor Wire [mm²]	Dielectric O.D. (Max.)	Cable O.D. Range	Braid	Loose Piece Contact Part No. Pin	Loose Piece Contact Part No. Socket	Ferrule Part Number	Tooling Part Number: Die Inserts for Hand Tool 69710-1, or Pneumatic Tools 69365-2 & 69365-3*	Tooling Part Number: Hand Tool	Tool Handle, Die Insert and Plastic Collar Color Code**
Brand Rex T209A 29 AWG	0.7-0.08	**.076** 1.93	**.112-.122** 2.84-3.1	Single	201145-6	201146-6	330587	69440	69360-2	Orange
Brand Rex T5788A 26 AWG	0.12-0.15	**.106** 2.69	**.160** 4.06	Single	201145-2	201146-2	328664	69222-2	45639-2	Red
32-26	0.03-0.15	**.129** 3.28	**.122-.137** 3.1-3.48	Single	201145-6	201146-6	330587	69440	69360-2	Orange
Raychem 0030D1314										
Army Ordnance 11207177										

*Includes bench mount and foot control; requires Manual Take-Up Attachment **Part No. 69689**
**Match Plastic Collar and Tool colors for application to cable. Inner Insulator color identifies Wire Barrel of Center Contact.
Note: A ferrule and retention spring (**Part No. 201142-2**) are required for each pin and socket.
Extraction Tool **Part No. 305183-8**

SOURCE: Catalog 82046

Specifications subject to change.
1-800-522-6752 Product Information Center/ AMP FAX Service
1-800-722-1111 Tooling/Technical Assistance Center

Multimate Contacts
(Continued)

Subminiature COAXICON Contacts

Material:

Center contacts—Beryllium copper per QQ-C-530

Inner dielectric—Polypropylene

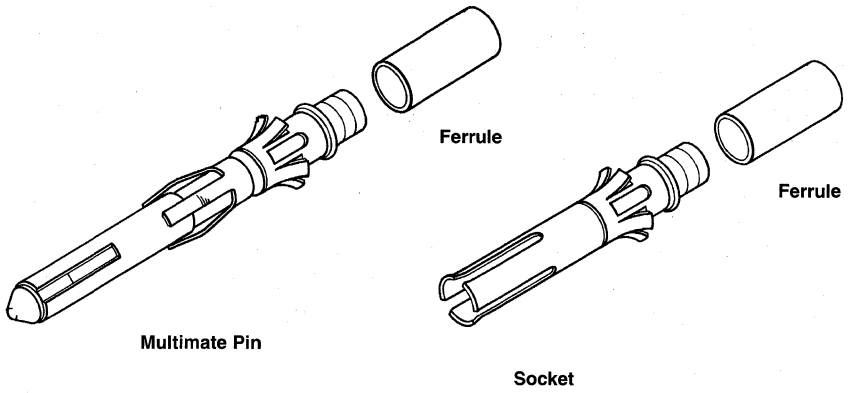
Retention springs—Passivated stainless steel

Ferrule—Copper

Finish:

Center contacts, outer shells—.000030 [0.00076] gold over .000050 [0.00127] nickel; gold plating per MIL-G-45204, nickel plating per QQ-N-290

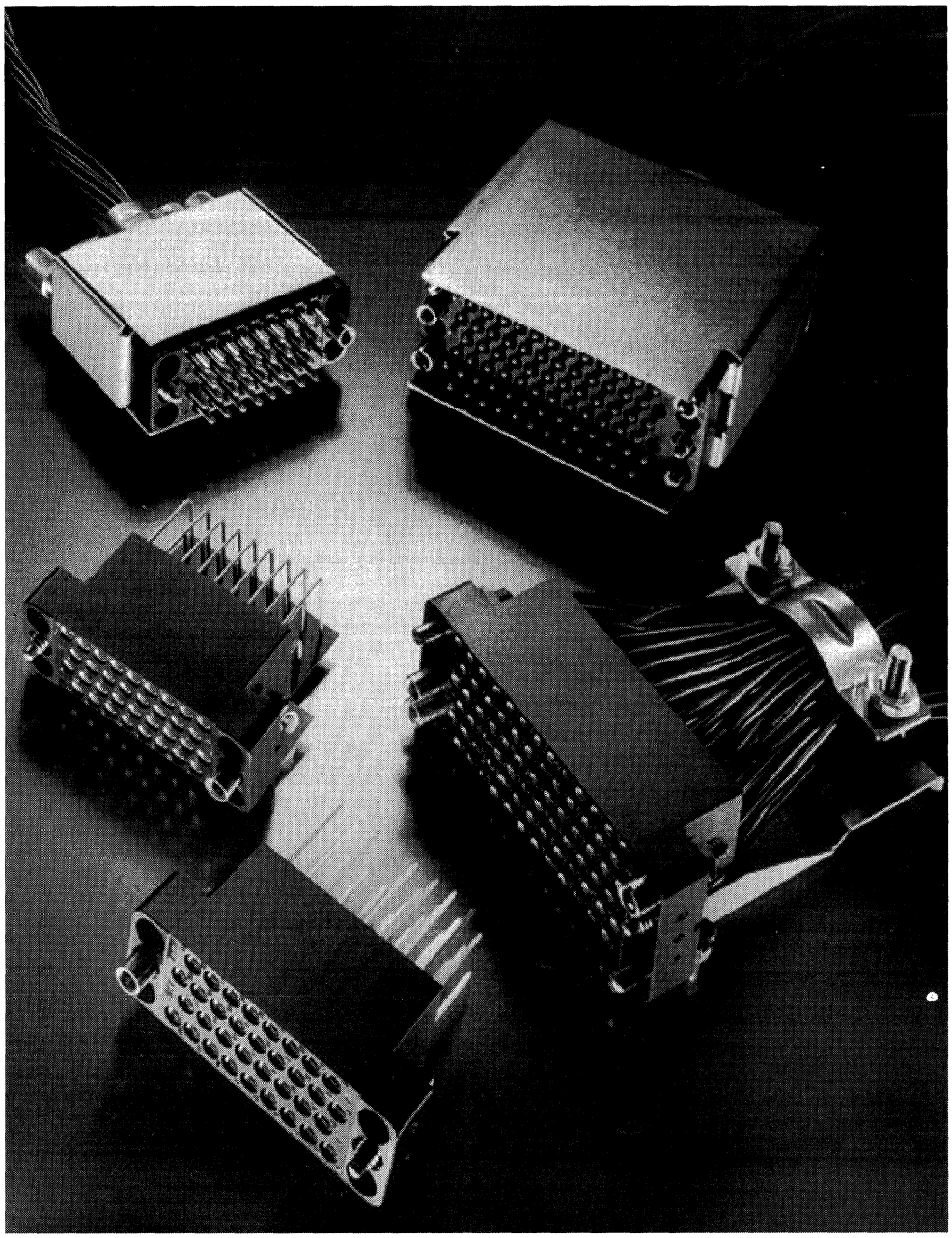
Ferrule—Tin plated per MIL-T-10727



Cable Size			Loose Piece Contact Part Number		Ferrule Part Number	Tooling Part Number	
RG/U or AWG		mm²	Pin	Socket		Hand Tool	Die Insert Numbers for Hand Tool 69710-1, or Pneumatic Tool 69365-2 and 69365-3**
RG/U-178, 196		—	226537-2	51565-2*	1-332057-0	69656-2	69690-2
RG/U-196 Double Braid		—	226537-2	51565-2*	225088-1	69656-9	—
RG/U-174, 188, 316		—	226537-1	51565-1	1-332056-0	69656	69690
RG/U-174 Double Braid		—	226537-1	51565-1	225088-3	69656-7	—
RG/U-179, 187		—	226537-1	51565-1	1-332056-0	69656-1	69690-1
RG/U-187 Double Braid		—	226537-1	51565-1	225088-1	69656-8	—
RG/U-161		—	226537-1	51565-1	1-332056-0	69656-5	—
26 AWG	Shielded **.075** [1.91] Max. O.D.	0.12-0.15	226537-1	51565-1	1-332057-0	69656-3	69690-3
	Twisted Pair, Solid or Stranded (7 str.), **.0063** [0.16] Dia.	0.12-0.15	226537-3	51565-3	1-332057-0	69656	69690
	Twisted Pair, Solid	0.08-0.09	226537-3	51565-3	1-332057-0	69656	69690
28 AWG	Twisted Pair, Stranded (7 str.), **.005** [0.13] Dia.	0.08-0.09	226537-3	51565-3	1-332057-0	69656-1 or 69656-2	69690-1 or 69690-2
30 AWG	Twisted Pair, Solid	0.05	226537-3	51565-3	1-332057-0	69656-2	69690-2

*These contacts have insulating liners inside support sleeve.
**Includes bench mount and foot control.
Extraction Tool **Part No. 305183.**

M Series Pin and Socket Connectors



Product Facts

- **Most connectors intermateable with competitive connectors made to MIL-C-28748 requirements**
- **Wide range of connector styles and sizes; standard connectors (unloaded), posted connectors (preloaded) and special application connectors (unloaded)**
- **Complete line of accessory hardware for fastening, protecting, guiding, shielding, strain relief and keying**
- **A variety of contacts: signal, power, coaxial and posted versions—many are interchangeable and can be intermixed in the same connector housing**
- **Full complement of application tooling for wire crimp and posted terminations—hand tools, semiautomatic tooling and fully automatic machines provide highly reliable, low cost terminations to meet all production requirements**
- **Recognized under the Component Program of Underwriters Laboratories Inc. for 250 volts, File No. E28476**
- **Certified by Canadian Standard Association, File No. LR 7189**

AMP M Series connectors. One of the most versatile and complete pin and socket connector lines available today.

From the basic molded plastic housing, a connector can be built up with a wide choice of contacts and hardware to serve in applications ranging from sophisticated computers, medical instrumentation and military ground support equipment to rugged truck transmissions.

Knowing what you need to meet your application is made easy.

Eight applications utilizing standard M Series connectors have been illustrated with selection charts. These charts will enable you to select the appropriate connector housing as well as the necessary hardware.

Contacts of various types provide different functions in M Series connector housings.

Included are contacts for signal and power applications, for coaxial cable and posted versions for backpanel wiring. A full complement of application tooling is available to meet any production requirement for terminating the crimp-type contacts and wiring posted contacts. A description of each contact type is presented.

Also available are posted connectors preloaded with post-type contacts that accept TERMI-POINT Clip or wrap-type terminations.

Connectors for special application are available in the following configurations.

V.35
Shallow Block
High Current
Mixed Contact Connectors
High Voltage
RFI/EMI Shielded
Grounding Blocks

SOURCE: Catalog 82003

Specifications subject to change.

1-800-522-6752
Product Information Center/ AMP FAX Service

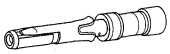
1-800-722-1111
Tooling/Technical Assistance Center

Signal Contacts

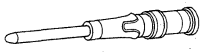
Type II, Crimp

Screw-machined in size 16. Pin and socket contacts are used in Multimate contact cavities of all Standard connectors and Special Application connectors—Mixed, High Voltage and RFI/EMI Shielded. Contact design offers a durable, solid pin and socket with closed-barrel confined "C" crimp for minimum distortion, high conductivity and firm seating.

Multimate Pin, Size 16 (with Insulation Support)



Socket, Size 16 (with Insulation Support)



Grounding Pin, Size 16 (without Insulation Support)

Size 16—Pin Diameter .062 [1.57]

Wire Range AWG	Wire Range [mm²]	Ins. Dia. Range[1]	Tape Mounted Contact No. Pin	Tape Mounted Contact No. Socket	Loose Piece Contact No. Pin	Loose Piece Contact No. Socket	Contact Color Code
28-24	0.08-0.2	**.035-.055** 0.89-1.4	201611-4	201613-4	201611-1	201613-1	Red/Red
		.048-.065 1.22-1.65	—	—	201334-1	201332-1	Red/Red
		.095-.110 2.41-2.79	—	—	202410-1	202411-1	Green
24-20	0.2-0.6	**.040-.062** 1.02-1.57	201578-4	—	201578-1	201580-1	Yellow/Red
		.055-.085 1.4-2.16	201330-6	201328-9	201330-1	201328-1	Yellow/Red
18 (Two)	0.8-0.9 (Two)	No. Ins. Support	—	—	202725-1	202726-1	Blue
18-16	0.8-1.4	**.080-.105** 2.03-2.67	—	—	202507-1	202508-1	—
		No Ins. Support	200336-6	200333-8	200336-1	200333-1	Blue/Blue
			—	—	204219-1	—	Blue/Blue
14	2	No Ins. Support	—	201568-3	201570-1	201568-1	Violet/Blue
			212618-2[2]	—	212618-1[2]	—	

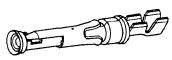
[1] Overall insulation crimp diameter, including crimp barrel, must not exceed .125 [3.18].
[2] Grounding pin is used to provide a make-first/break-last condition when mating and unmating connector halves.
Insertion Tool **Part No. 200893-2** (for insulation diameters .070 [1.78] or less).
Extraction Tool **Part No. 305183**.
Note: These contacts can be used in Multimate contact cavities of all connector housings.

Signal Contacts
(Continued)

Type III+, Crimp

Precision-formed in size 16. Pin and socket contacts are used in Multimate contact cavities of all Standard connectors and Special Application connectors—Mixed, High Voltage and RFI/EMI Shielded. Contact design offers advantages of open-barrel crimp and low cost application. A wrap-around version is also available for large insulation diameter wire.

Pin



Socket

Contact Size 16—Pin Diameter .062 [1.57]

Wire Range AWG	Wire Range [mm²]	Ins. Dia. Range[1]	Contact Finish	Strip Form Contact No. Pin	Strip Form Contact No. Socket	Loose Piece Contact No. Pin	Loose Piece Contact No. Socket
30-26	0.05-0.15	**.040-.060** 1.02-1.52	Bright Tin-Lead	66425-6	66424-6	—	—
			Gold/Nickel	66425-7	66424-7	66429-3	66428-3
			Sel. Gold/Nickel	66425-8	66424-8	66429-4	66428-4
		.014-.030 0.36-0.76	Gold/Nickel	66393-7	66394-7	—	—
			Sel. Gold/Nickel	66393-8	66394-8	66406-4	66405-4
26-24	0.12-0.2	**.035-.055** 0.89-1.4	Bright Tin-Lead	66106-6	66108-6	66107-2	66109-2
			Gold/Nickel	66106-7	66108-7	66107-3	66109-3
			Sel. Gold/Nickel	66106-8	66108-8	66107-4	66109-4
24-20	0.2-0.6	**.040-.080** 1.02-2.03	Bright Tin-Lead	66102-7	66104-7	66103-2	66105-2
			Gold/Nickel	66102-8	66104-8	66103-3	66105-3
			Sel. Gold/Nickel	66102-9	66104-9	66103-4	66105-4
		.080-.100 2.03-2.54	Bright Tin-Lead	66332-5	66331-5	66400-1	66399-1
			Gold/Nickel	66332-7	66331-7	66400-3	66399-3
			Sel. Gold/Nickel	66332-8	66331-8	66400-4	66399-4
18-16	0.8-1.4	**.080-.100** 2.03-2.54	Bright Tin-Lead	66098-7	66100-7	66099-2	66101-2
			Gold/Nickel	66098-8	66100-8	66099-3	66101-3
			Sel. Gold/Nickel	66098-9	66100-9	66099-4	66101-4
18-14	0.8-2.	**.080-.100** 2.03-2.54	Bright Tin-Lead	66359-6	66358-6	66361-2	66360-2
			Gold/Nickel	66359-9	66358-9	66361-3	66360-3
			Sel. Gold/Nickel	1-66359-0	1-66358-0	66361-4	66360-4

[1] Overall insulation crimp diameter, including crimp barrel, must not exceed .125 [3.18].
Insertion Tool **Part No. 91002-1** (for insulation diameters .070 [1.78] or less). **Part No. 211300-1** (for insulation diameter .095 [2.41] max. dia.); **Part No. 211300-2** (for insulation diameter .065 [1.65] max. dia.).
Extraction Tool **Part No. 305183**.
Note: These contacts can be used in Multimate contact cavities of all connector housings.

SOURCE: Catalog 82003

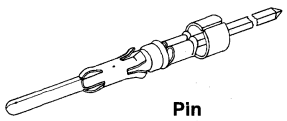
Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

Signal Contacts
(Continued)

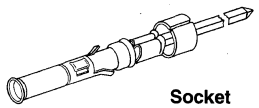
Posted Contacts

These contacts are used as replacement contacts for all posted connectors.

Precision-formed pin and socket contacts precrimped to post configurations that accept TERMI-POINT Clip or wrap-type terminations. Will accommodate up to three terminations per post. Size 16 contacts are used in the same cavities as all other Multimate contacts. They are preassembled in all Posted connectors.



Pin



Socket

Size 16—Pin Diameter .062 [1.57]

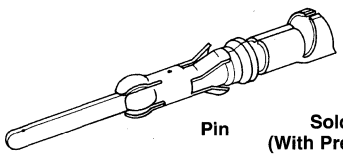
Termination Method	Post Configuration	Contact Finish	Loose Piece Contact No.					
			3 Termination High Post		2 Termination High Post		1 Termination High Post	
			Pin	Socket	Pin	Socket	Pin	Socket
Wrap-Type	.025 x .025 0.64 x 0.64	Sel. Gold/Nickel	66460-9	66461-9	66460-8	66461-8	66460-7	66461-7
		Gold/Nickel	66460-6	66461-6	66460-5	66461-5	66460-4	66461-4
		Bright Tin-Lead	66460-3	66461-3	66460-2	66461-2	66460-1	66461-1
	.045 x .045 1.14 x 1.14	Sel. Gold/Nickel	66471-9	66473-9	—	—	66471-7	66473-7
		Bright Tin-Lead	66471-3	66473-3	—	—	66471-1	66473-1
	.031 x .062 .079 x 1.57	Sel. Gold/Nickel	66470-9	66472-9	—	—	—	—
		Bright Tin-Lead	66470-3	—	—	—	—	—
TERMI-POINT Clip	.022 x .036 0.56 x 0.91	Sel. Gold/Nickel	66469-9	—	—	—	—	—
	.031 x .062 0.79 x 1.57	Sel. Gold/Nickel	66468-9	66459-9	—	—	—	—
		Bright Tin Lead	—	66459-3	—	—	—	—

Extraction Tool **Part No. 305183**
Insertion Tool **Part No. 200893-2**

Type III+, Solder Versions

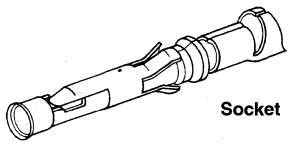
Solder-Type—precision-formed pin and socket contacts with wire and insulation barrels preformed to accept solid or stranded wire. Size 16 contacts are used in the same cavities as all other Multimate contacts.

Solder Tab—precision-formed pin and socket contacts precrimped to a solder tab (with slot) to accept various sizes of solid or stranded wire. Size 16 contacts are used in the same cavities as all other Multimate contacts.

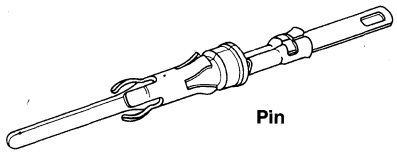


Pin

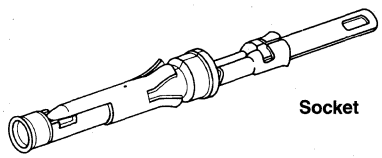
Solder Type (With Preformed Wire Barrel/Insulation Support)



Socket



Pin



Socket

Solder Tab

Size 16—Pin Diameter .062 [1.57]

Wire Size Range		Contact Finish	Loose Piece Contact No.	
AWG	[mm²]		Pin	Socket
26-20	0.12-0.6	Gold/Nickel	66182-1	66183-1
18-16	0.8-1.4	Gold/Nickel	66180-1	66181-1
Solder Tab	—	Duplex	202236-1	202237-1
		Bright Tin-Lead	202236-2	202237-2

Extraction Tool **Part No. 305183.**
Note: These contacts can be used in Multimate contact cavities of all connector housings.

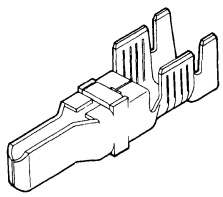
SOURCE: Catalog 82003

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

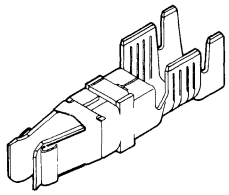
Power Contacts

Type XII, Crimp

Precision-formed contacts designed as male and female, rather than pin and socket. They are used in rectangular contact cavities specifically designed for Type XII contacts (Special Application connectors— 12-position High Current). Contacts are used for power applications with a maximum current rating of 35 amperes.



Male



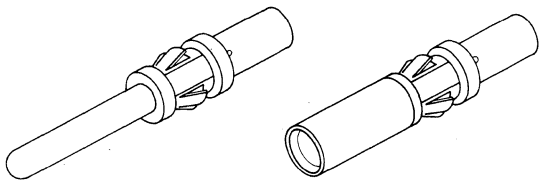
Female

Wire Size Range[1] AWG	Wire Size Range[1] [mm²]	Ins. Dia. Range	Contact Finish	Strip Form Contact Part Numbers: Standard Applicator Male	Standard Applicator Female	Quick-Change Applicator Male	Quick-Change Applicator Female	Loose Piece Contact Part Nos. Male	Loose Piece Contact Part Nos. Female	Die Insert Nos. Hand Tool 69710-1 or Pneumatic Tool 69365
16 and 14-12	1.25-1.4 and 2-3	**.135-.160** 3.43-4.06	Tin-Lead	66255-1	66740-7	66255-5	1-66740-2	66261-1	66740-8	90145-2[3] and 90145-1[4]
				66256-1[2]	—	66256-5[2]	—	66262-1[2]	—	
			Sel. Gold/Nickel	66255-2	66740-5	66255-6	1-66470-1	66261-2	66740-6	
				66256-2[2]	—	66256-4[2]	—	66262-2[2]	—	
			Silver[5]	66255-7	66740-1	66255-8	66470-9	66261-4	66740-2	
				66256-6[2]	—	66256-7[2]	—	66262-4[2]	—	
10-8	5-6	**.190-.220** 4.83-5.59	Tin-Lead	66253-1	66741-7	66253-5	1-66741-2	66259-1	66741-8	90140-1
				66254-1[2]	—	—	—	66260-1[2]	—	
			Sel. Gold/Nickel	66253-2	66741-5	66253-6	1-66741-1	66259-2	66741-6	
				66254-2[2]	—	—	—	66260-2[2]	—	
			Silver[5]	66253-4	66741-1	66253-8	66471-9	66259-4	66741-2	
				66254-4[2]	—	—	—	66260-4[2]	—	

[1]Wire strip length—.281 [7.14].
[2]Ground contact.
[3]Die insert **Part No. 90145-2** is for crimping 16 AWG [1.25-1.4 mm²] wire.
[4]Die insert **Part No. 90145-1** is for crimping 14-12 AWG [2-3 mm²] wire.
[5]Recommended for high current/vibration applications where fretting corrosion is a problem.
Extraction Tool **Part No. 91019-3.**

Type I, Crimp

Screw-machined in size 12. Pin and socket contacts can be used in same cavities as Miniature COAXICON contacts (Special Application connectors— 15-, 29- and 42-position Mixed). Contact design offers low resistance for critical circuit applications and also current ratings of up to 23 amperes.



Pin Socket

Size 12—Pin Diameter .094 [2.39]

Wire Size Range AWG	Wire Size Range [mm²]	Loose Piece Contact No. Pin	Loose Piece Contact No. Socket	Tooling No. Dies for Pneumatic Tool 69365	Tooling No. Hand Tool
18-16	0.8-1.4	202421-1	202418-1	90122	90121
14-12	2-3	202422-1	202417-1	90122	90121

Extraction Tool **Part No. 305183-8.**
Note: These contacts can be used in the larger circular contact cavities of special application connector housings; 15-, 29- and 42- position (mixed).

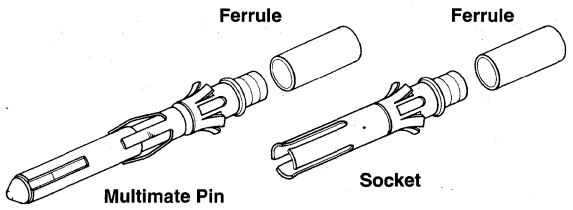
SOURCE: Catalog 82003

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

RF Contacts

Subminiature COAXICON, Crimp

Screw-machined pin and socket contacts. These contacts are used in Multimate contact cavities of all Standard connectors and Special Application connectors—Mixed, High Voltage and RFI/EMI Shielded. Contact design allows coaxial cable, shielded conductors and twisted pair wire to be mixed in the same housing with signal or power terminations.



Selection Chart for Coaxial Cable

Cable Size (RG/U)	Contact Finish	Loose Piece Contact No.		Ferrule No.
		Multimate Pin	Socket	
178, 196	Au/Ni, Au/Cu[1]	226537-2	51565-2	1-332057-0
	Au/Ni, Au/Cu[2]	—	51565-5	
196 (Double Braid)	Au/Ni, Au/Cu[1]	226537-2	51565-2	225088-1
	Au/Ni, Au/Cu[2]	—	51565-5	
174, 188, 316	Au/Ni, Au/Cu[1]	226537-1	51565-1	1-332056-0
	Au/Ni, Au/Cu[2]	226537-4	51565-4	
174 (Double Braid)	Au/Ni, Au/Cu[1]	226537-1	51565-1	225088-3
	Au/Ni, Au/Cu[2]	226537-4	51565-4	
179, 187	Au/Ni, Au/Cu[1]	226537-1	51565-1	1-332056-0
	Au/Ni, Au/Cu[2]	226537-4	51565-4	
187 (Double Braid)	Au/Ni, Au/Cu[1]	226537-1	51565-1	225088-1
	Au/Ni, Au/Cu[2]	226537-4	51565-4	
161	Au/Ni, Au/Cu[1]	226537-1	51565-1	1-332056-0
	Au/Ni, Au/Cu[2]	226537-4	51565-4	

[1] .000030 [0.00076] gold over .000050 [0.00127] nickel
[2] .000050 [0.00127] gold over .000050 [0.00127] nickel

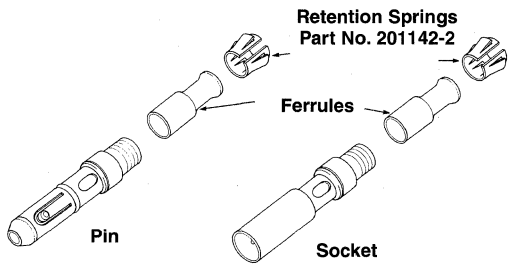
Selection Chart for Twisted Pairs and Shielded Wire

Wire Size		Contact Finish	Loose Piece Contact No.		Ferrule No.
AWG	mm²		Multimate Pin	Socket	
30 (Twisted Pair, Solid)	0.05	Au/Ni, Au/Cu[1]	226537-3	51565-3	1-332057-0
		Au/Ni, Au/Cu[2]	226537-6	51565-6	
28 (Twisted Pair, Solid)	0.08-0.09	Au/Ni, Au/Cu[1]	226537-3	51565-3	1-332057-0
		Au/Ni, Au/Cu[2]	226537-6	51565-6	
28 (Twisted Pair, Stranded; 7 Str., .005 [0.13] Dia.)	0.08-.0.09	Au/Ni, Au/Cu[1]	226537-3	51565-3	1-332057-0
		Au/Ni, Au/Cu[2]	226537-6	51565-6	
26 (Twisted Pair, Solid or Stranded; 7 Str., .0063 (0.16] Dia.)	0.12-0.15	Au/Ni, Au/Cu[1]	226537-3	51565-3	1-332057-0
		Au/Ni, Au/Cu[2]	226537-6	51565-6	
26 (Shielded, .075 [1.91] Max. O.D.)	0.12-0.15	Au/Ni, Au/Cu[1]	226537-1	51565-1	1-332057-0
		Au/Ni, Au/Cu[2]	226537-4	51565-4	

Note: A ferrule is required for each pin and socket.
Extraction Tool **Part No. 305183.**

Miniature COAXICON, Crimp

Screw-machined pin and socket contacts. They can be used in same contact cavities as Type I contacts (Special Application connectors—15-, 29- and 42-position Mixed). Contact design offers application of coaxial cable, shielded conductors and twisted pair wire with current ratings of up to 7.5 amperes.



Selection Chart for Coaxial Cable

Cable Size (RG/U)	Contact Finish	Loose Piece Contact No.		Ferrule No.
		Pin	Socket	
55, 55A, 55B, 141, 142, 223	Gold/Nickel	201145-4	201146-4	330478
	Gold/Copper	201145-9	201146-9	
58, 58A, 58B, 58C	Gold/Nickel	201145-4	201146-4	328663
	Gold/Copper	201145-9	201146-9	
174, 179A, 187, 21-598	Gold/Nickel	201143-1	201144-1	328666
	Gold/Copper	201143-6	201144-6	
180, 180A, 195, 21-597	Gold/Nickel	201145-2	201146-2	328664
	Gold/Copper	1-201145-0	1-201146-0	
178, 178A, 196	Gold/Nickel	201511-1	201512-1	328667
188	Gold/Nickel	201143-5	201144-5	328666
	Gold/Copper	201143-7	201144-7	
122	Gold/Nickel	201145-1	201146-1	328664
188 Double Braid, 316 Double Braid	Gold/Nickel	201143-5	201144-5	221848-3
	Gold/Copper	201143-7	201144-7	
Special .125, .100, .066, .012 DB	Gold/Nickel	201143-1	201144-1	221848-3

Selection Chart for Twisted Pairs

Wire Size		Max. Ins. Dia. (Two Wires Combined)	Contact Finish	Loose Piece Contact No.		Ferrule No.
AWG	[mm²]			Pin	Socket	
28-26 (Solid)	0.08-0.15	.080 2.03	Gold/Nickel	201511-1	201512-1	328667
24-22 (Stranded)	0.2-0.4	.115 2.92	Gold/Nickel	201143-5	201144-5	328666
			Gold/Copper	201143-7	201144-7	
24-22 (Solid or Stranded)	0.2-0.4	.160 4.06	Gold/Nickel	50079-1	50080-1	329029

Note: A ferrule and retention spring **(Part No. 201142-2)** are required for each pin and socket.
Extraction Tool **Part No. 305183-8**

SOURCE: Catalog 82003

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

RF Contacts
(Continued)

Miniature COAXICON, Crimp
(Continued)

Selection Chart for Shielded Wire

Shielded Wire No.	Contact Finish	Loose Piece Contact No.		Ferrule No.
		Pin	Socket	
22, NAS-702, Class A 22, MIL-C-7078A, Type II	Gold/Nickel	—	201144-3	328666
22, NAS-702, Class B	Gold/Nickel	201145-4	201146-4	328663
	Gold/Copper	201145-9	201146-9	

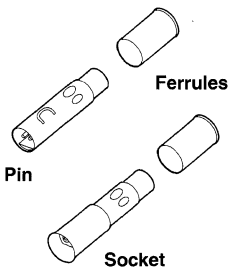
Selection Chart for Various Manufacturers' Cables

Cable Size AWG/Type	Cable Size [mm²]	Dielectric O.D. (Max.)	Cable O.D. Range	Braid	Contact Finish	Loose Piece Contact No. Pin	Loose Piece Contact No. Socket	Ferrule No.
Brand Rex T209A 29 AWG	0.08	**.076** 1.93	**.112-.122** 2.84-3.1	Single	Gold/Nickel	201145-6	201146-6	330587
Brand Rex T5788A 26 AWG	0.12-0.15	**.106** 2.69	**.160** 4.06	Single	Gold/Nickel Gold/Copper	201145-2 1-201145-0	201146-2 1-201146-0	328664
32-26 AWG Raychem 0030D1314 Army Ord. 11207177	0.03-0.15	**.129** 3.28	**.122-.137** 3.1-3.48	Single	Gold/Nickel	201145-6	201146-6	330587

Note: A ferrule and retention spring **(Part No. 201142-2)** are required for each pin and socket.
Extraction Tool **Part No. 305183-8.**

Twin Standard COAXICON, Crimp

Screw-machined pin and socket contacts. They are used in contact cavities specifically designed for Twin Standard COAXICON contacts (Special Application connectors—16-position Mixed). Contact design is exclusively for use with two-conductor coaxial or shielded cable, with current ratings of up to 7.5 amperes.



Cable Size/Type	Loose Piece Contact No. Pin	Loose Piece Contact No. Socket	Ferrule No.
Belden 8737 (Spiral Wrapped Shield) Trompeter TWC 124-2	329009	329010	329041
RG/U-108, RG/U-108A (Center Conductor Stranded 7 Str., .0126 [0.32] Dia.) Belden 8761, 8762, 8759, 9154, 8737, 8961	2-329009-1	2-329010-1	329041
Belden 8451, 8641, 8761 Trompeter TWC 78-1	329009	329010	329056
Microdot 202-3932 Microdot 202-3934	329054	329055	329056

Retention Spring
Part No. 329042

Alignment Bushings
Part No. 329053[2] **Part No. 330576[3]**

Retention Spring No.	Alignment Bushing No.	Used with Pin No.	Used with Socket No.	Extraction Tool No.
329042	329053	329009 2-329009-1	329010 2-329010-1	305141-2
	330576	329054 329009	329055 329010	

[2] Used with Ferrule **Part No. 329041**.
[3] Used with Ferrule **Part No. 329056**.

SOURCE: Catalog 82003

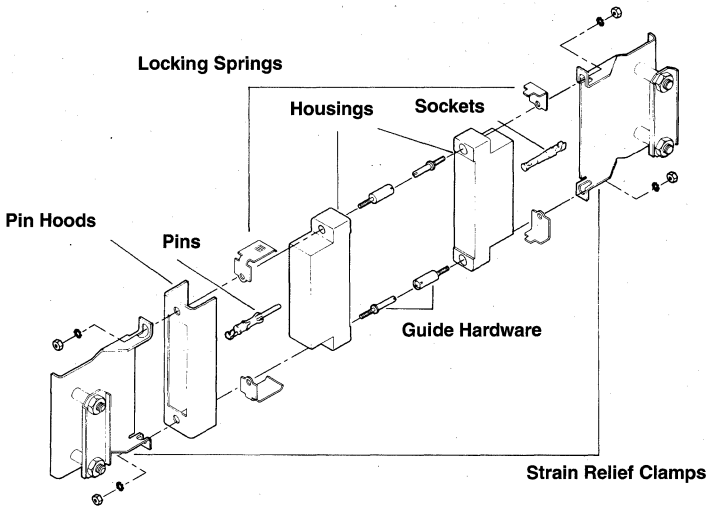
Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

Standard Housings

Cable-to-Cable Application A

Featured Hardware

- Strain Relief Clamps
- Locking Springs
- Pin Hoods
- Guide Hardware



Note: 50 Pos. Housing Dim. (Typ.)—2.595 [65.91] L x .915 [23.24] W x .750 [19.05] H

	Component Description		Number of Positions				
			6	14	20	26	34
HOUSINGS	Plug Block	Phenolic	202758-1	201355-1	201356-1	201359-1	201357-1
	Receptacle Block	Phenolic	202757-1	201298-1	200346-2	200512-2	200838-2
	Plug Block	Diallyl Phthalate	202758-3	201355-3	201356-3	201359-3	201357-3
	Receptacle Block	Diallyl Phthalate	202757-3	201298-3	200346-4	200512-3	200838-3
SHIELDS	180° Two-Piece Long	Al Anodized	—	—	—	—	—
		Zinc Plated Steel	—	—	—	—	—
	180° Two-Piece Short	Al Anodized	—	—	—	—	—
		Zinc Plated Steel	—	—	—	—	—
		Zinc Plated Cast Al	—	—	—	—	—
	90° Two-Piece Long	Zinc Plated Steel	—	—	—	—	—
	90° Two-Piece Short	Zinc Plated Steel	—	—	—	—	—
	45° Two-Piece Short	Zinc Plated Steel	—	—	—	—	—
	45° Two-Piece Deep	Zinc Plated Steel	—	—	—	—	—
	180° One-Piece Long	Zinc Plated Steel	—	—	—	—	—
	180° One-Piece Short	Zinc Plated Steel	—	—	—	—	—
	90° One-Piece Short	Zinc Plated Steel	—	—	—	—	—
STRAIN RELIEF CLAMPS	Long	Zinc Plated Steel	—	201843-1	—	201845-1	201846-1
	Short	Zinc Plated Steel	203432-1	200686-1	—	201229-1	—
	Long	Stainless Steel	—	—	—	—	—
	Short	Stainless Steel	—	—	201237-1	—	201224-1
JACKSCREWS	Fixed Male	Stainless Steel	—	—	—	—	—
	Fixed Female	Stainless Steel	—	—	—	—	—
	Long Long Male	Tip: Stainless Steel; Body: Die Cast Zinc	—	—	—	—	—
	Long Long Female	Tip: Stainless Steel; Body: Die Cast Zinc	—	—	—	—	—
	Long Male	Tip: Stainless Steel; Body: Die Cast Zinc	—	—	—	—	—
	Long Female	Tip: Stainless Steel; Body: Die Cast Zinc	—	—	—	—	—
	Short Short Male	Tip: Stainless Steel; Body: Die Cast Zinc	—	—	—	—	—
	Short Short Female	Tip: Stainless Steel; Body: Die Cast Zinc	—	—	—	—	—
GUIDE HARDWARE	Center Male	Stainless Steel	200389-2	200389-2	200389-2	200389-2	200389-2
	Center Female	Stainless Steel	200390-2[A]	200390-2[A]	200390-2[A]	200390-2[A]	200390-2[A]
	Corner Male	Stainless Steel	—	—	—	—	200833-2
	Corner Female	Stainless Steel	—	—	—	—	200835-2[B]
LOCKING SPRINGS[1]	Male—Nickel Plated Spring Steel		201921-1	201921-1	201921-1	201923-1	201925-1
	Female—Stainless Steel		201922-1	201922-1	201922-1	201924-1	201926-1
PIN HOODS	Internal Open End	Zinc Plated Steel	204258-6	201363-4	201362-4	201785-4	201786-4
	Internal Closed End	Zinc Plated Steel	—	—	—	—	—
	External Closed End	Al Iridite	—	—	—	—	—
	External Closed End	Zinc Plated Steel	—	—	—	—	—

[1] Each part number contains two locking springs. Order one male and one female for each mated pair of connectors.
Alternate Part Numbers:
[A] **207619-1*[2]**
[B] **203964-1***
*These Corner or Center Guide Sockets (**.880** [22.35] long) are to be used when housings are loaded with subminiature COAXICON contacts
[2] Hex Nut Stainless Steel

SOURCE: Catalog 82003

Standard Housings
(Continued)

Cable-to-Cable

Application A
(Continued)

1. Choose the application that most closely meets your requirements.
2. Find the appropriate column for the number of positions required.
3. Select part numbers required for the application listed in the column below the number of positions.

If a part number is not listed for a particular item, it is not available.

If more than one part number is listed for a particular hardware item, choose the one which best fits your application.

4. Select Contacts: Type II, Type III+, Subminiature COAXICON.

Special application housings may be substituted for these standard housings. See Special Application Section.

This cable-to-cable application utilizes locking springs, strain relief clamps, a pin hood for pin protection and guide hardware.

The 34- and 50-position connectors can be used with either center or corner guide hardware. If center guide hardware is used, an additional four 4-40 screws, nuts and lockwashers are required to secure the locking springs. Corner guides require four guide pins and four guide sockets for each mated pair of connectors.

Number of Positions						Component Description		
41	50	75	104	104CF	160CF			
202135-2	201358-1	—	—	—	—	Plug Block Receptacle Block	Phenolic	HOUSINGS
201302-1	200277-2	—	—	—	—			
202135-4	201358-3	—	—	—	—	Plug Block Receptacle Block	Diallyl Phthalate	
201302-3	200277-4	—	—	—	—			
—	—	—	—	—	—	180° Two-Piece Long	Al Anodized	SHIELDS
—	—	—	—	—	—		Zinc Plated Steel	
—	—	—	—	—	—	180° Two-Piece Short	Al Anodized	
—	—	—	—	—	—		Zinc Plated Steel	
—	—	—	—	—	—		Zinc Plated Cast Al	
—	—	—	—	—	—	90° Two-Piece Long	Zinc Plated Steel	
—	—	—	—	—	—	90° Two-Piece Short		
—	—	—	—	—	—	45° Two-Piece Short		
—	—	—	—	—	—	45° Two-Piece Deep		
—	—	—	—	—	—	180° One-Piece Long		
—	—	—	—	—	—	180° One-Piece Short		
—	—	—	—	—	—	90° One-Piece Short		
—	—	—	—	—	—	Long Short	Zinc Plated Steel	STRAIN RELIEF CLAMPS
—	201182-1	—	—	—	—			
201766-1	201847-1	—	—	—	—	Long Short	Stainless Steel	
—	—	—	—	—	—			
—	—	—	—	—	—	Fixed Male Fixed Female	Stainless Steel	JACKSCREWS
—	—	—	—	—	—			
—	—	—	—	—	—	Long Long Male	Tip: Stainless Steel Body: Die Cast Zinc	
—	—	—	—	—	—	Long Long Female		
—	—	—	—	—	—	Long Male		
—	—	—	—	—	—	Long Female		
—	—	—	—	—	—	Short Short Male		
—	—	—	—	—	—	Short Short Female		
200389-2	200389-2	—	—	—	—	Center Male Center Female Corner Male Corner Female	Stainless Steel	GUIDE HARDWARE
200390-2[A]	200390-2[A]	—	—	—	—			
—	200833-2	—	—	—	—			
—	200835-2[B]	—	—	—	—			
201921-1	201925-1	—	—	—	—	Male—Nickel Plated Spring Steel		LOCKING SPRINGS[1]
201922-1	201926-1	—	—	—	—	Female—Stainless Steel		
—	201317-4	—	—	—	—	Internal Open End	Zinc Plated Steel	PIN HOODS
—	—	—	—	—	—	Internal Closed End	Zinc Plated Steel	
—	—	—	—	—	—	External Closed End	Al Iridite	
—	—	—	—	—	—	External Closed End	Zinc Plated Steel	

SOURCE: Catalog 82003

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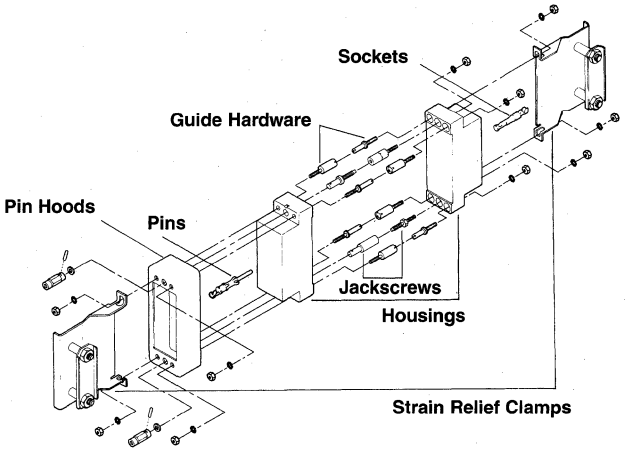
Standard Housings
(Continued)

Cable-to-Cable
Application B

Featured Hardware
- Strain Relief Clamps
- Pin Hoods
- Jackscrews
- Guide Hardware



	Component Description		Number of Positions				
			6	14	20	26	34
HOUSINGS	Plug Block	Phenolic	202758-1	201355-1	201356-1	201359-1	201357-1
	Receptacle Block	Phenolic	202757-1	201298-1	200346-2	200512-2	200838-2
	Plug Block	Diallyl Phthalate	202758-3	201355-3	201356-3	201359-3	201357-3
	Receptacle Block	Diallyl Phthalate	202757-3	201298-3	200346-4	200512-3	200838-3
SHIELDS	180° Two-Piece Long	Al Anodized	—	—	—	—	—
		Zinc Plated Steel	—	—	—	—	—
	180° Two-Piece Short	Al Anodized	—	—	—	—	—
		Zinc Plated Steel	—	—	—	—	—
		Zinc Plated Cast Al	—	—	—	—	—
	90° Two-Piece Long	Zinc Plated Steel	—	—	—	—	—
	90° Two-Piece Short	Zinc Plated Steel	—	—	—	—	—
	45° Two-Piece Short	Zinc Plated Steel	—	—	—	—	—
	45° Two-Piece Deep	Zinc Plated Steel	—	—	—	—	—
	180° One-Piece Long	Zinc Plated Steel	—	—	—	—	—
	180° One-Piece Short	Zinc Plated Steel	—	—	—	—	—
	90° One-Piece Short	Zinc Plated Steel	—	—	—	—	—
STRAIN RELIEF CLAMPS	Long	Zinc Plated Steel	—	201843-1	—	201845-1	201846-1
	Short	Zinc Plated Steel	203432-1	200686-1	—	201229-1	—
	Long	Stainless Steel	—	—	—	—	—
	Short	Stainless Steel	—	—	201237-1	—	201224-1
JACKSCREWS[1]	Fixed Male	Stainless Steel	201092-1	201092-1	201092-1	201092-1	201092-1
	Fixed Female	Stainless Steel	201089-1	201089-1	201089-1	201089-1	201089-1
	Long Long Male	Tip: Stainless Steel; Body: Die Cast Zinc	—	—	—	—	—
	Long Long Female	Tip: Stainless Steel; Body: Die Cast Zinc	—	—	—	—	—
	Long Male	Tip: Stainless Steel; Body: Die Cast Zinc	—	—	—	—	—
	Long Female	Tip: Stainless Steel; Body: Die Cast Zinc	—	—	—	—	—
	Short Short Male	Tip: Stainless Steel; Body: Die Cast Zinc	201827-1	201827-1	201827-1	201827-1	201827-1
	Short Short Female	Tip: Stainless Steel; Body: Die Cast Zinc	201828-1	201828-1	201828-1	201828-1	201828-1
GUIDE HARDWARE	Center Male	Stainless Steel	—	—	—	—	—
	Center Female	Stainless Steel	—	—	—	—	—
	Corner Male	Stainless Steel	—	—	—	—	200833-2
	Corner Female	Stainless Steel	—	—	—	—	200835-2[B]
LOCKING SPRINGS	Male—Nickel Plated Spring Steel		—	—	—	—	—
	Female—Stainless Steel		—	—	—	—	—
PIN HOODS	Internal Open End	Zinc Plated Steel	204258-6	201363-4	201362-4	201785-4	201786-4
	Internal Closed End	Zinc Plated Steel	—	—	—	—	202434-4
	External Closed End	Al Iridite	—	—	—	201349-2	201350-2
	External Closed End	Zinc Plated Steel	—	201347-2	—	—	—

[1] Listed jackscrews have 6-32 single-lead threads. For corresponding jackscrews with 6-32 double-lead threads, refer to page 2046.
Alternate Part Numbers:
[B] **203964-1***
[C] **203966-1***
* These Corner or Center Guide Sockets (**.880** [22.35] long) are to be used when housings are loaded with subminiature COAXICON contacts

SOURCE: Catalog 82003

Specifications subject to change.
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Standard Housings
(Continued)

Cable-to-Cable

Application B
(Continued)

1. Choose the application that most closely meets your requirements.
2. Find the appropriate column for the number of positions required.
3. Select part numbers required for the application listed in the column below the number of positions.

If a part number is not listed for a particular item, it is not available.

If more than one part number is listed for a particular hardware item, choose the one which best fits your application.

4. Select Contacts: Type II, Type III+, Subminiature COAXICON.

Special application housings may be substituted for these standard housings. See Special Application Section.

This cable-to-cable application utilizes jackscrews, strain relief clamps and guide hardware. A pin hood is provided for pin protection. Sizes 6, 14, 20, 26, and 41 **do not** use guide hardware with this application.

Number of Positions						Component Description		
41	50	75	104	104CF	160CF			
202135-2	201358-1	201310-1	201345-1	—	—	Plug Block, Receptacle Block	Phenolic	HOUSINGS
201302-1	200277-2	201311-1	201037-1	—	—			
202135-4	201358-3	201310-3	201345-2	—	—	Plug Block, Receptacle Block	Diallyl Phthalate	
201302-3	200277-4	201311-3	201037-2	—	—			
—	—	—	—	—	—	180° Two-Piece Long	Al Anodized	SHIELDS
—	—	—	—	—	—		Zinc Plated Steel	
—	—	—	—	—	—	180° Two-Piece Short	Al Anodized	
—	—	—	—	—	—		Zinc Plated Steel	
—	—	—	—	—	—		Zinc Plated Cast Al	
—	—	—	—	—	—	90° Two-Piece Long, 90° Two-Piece Short, 45° Two-Piece Short, 45° Two-Piece Deep, 180° One-Piece Long, 180° One-Piece Short, 90° One-Piece Short	Zinc Plated Steel	
—	—	—	201849-1	—	—	Long, Short	Zinc Plated Steel	STRAIN RELIEF CLAMPS
—	201182-1	200730-1	—	—	—			
201766-1	201847-1	201848-1	—	—	—	Long, Short	Stainless Steel	
—	—	—	201221-1	—	—			
201092-1	201092-1	201092-1	201092-1	—	—	Fixed Male, Fixed Female	Stainless Steel	
201089-1	201089-1	201089-1	201089-1	—	—			
—	—	—	—	—	—	Long Long Male, Long Long Female, Long Male, Long Female, Short Short Male, Short Short Female	Tip: Stainless Steel; Body: Die Cast Zinc	JACKSCREWS[1]
—	—	—	—	—	—			
—	—	—	—	—	—			
—	—	—	—	—	—			
201827-1	201827-1	201827-1	201827-1	—	—			
201828-1	201828-1	201828-1	201828-1	—	—			
—	—	—	—	—	—	Center Male, Center Female, Corner Male, Corner Female	Stainless Steel	GUIDE HARDWARE
—	—	—	—	—	—			
—	200833-2	201046-2	201046-2	—	—			
—	200835-2[B]	201047-2[C]	201047-2[C]	—	—			
—	—	—	—	—	—	Male—Nickel Plated Spring Steel		LOCKING SPRINGS
—	—	—	—	—	—	Female—Stainless Steel		
—	201317-4	—	—	—	—	Internal Open End	Zinc Plated Steel	PIN HOODS
—	202394-2	201369-4	201364-4	—	—	Internal Closed End	Zinc Plated Steel	
—	—	—	—	—	—	External Closed End	Al Iridite	
—	201390-5	201368-4	201346-4	—	—	External Closed End	Zinc Plated Steel	

SOURCE: Catalog 82003

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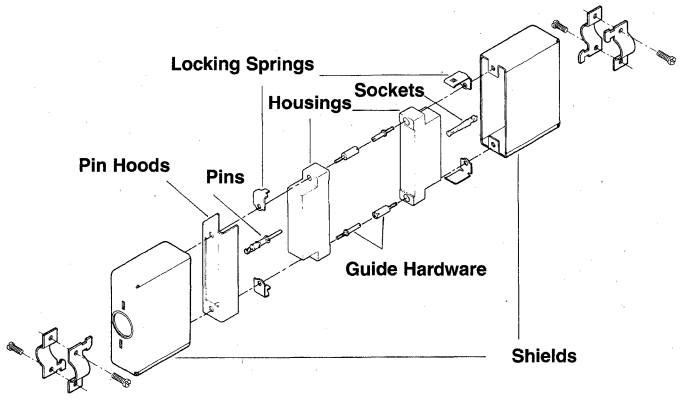
Standard Housings
(Continued)
Cable-to-Cable
Application C



Featured Hardware
- Shields (One-piece)
- Pin Hoods
- Locking Springs
- Guide Hardware

	Component Description		Number of Positions				
			6	14	20	26	34
HOUSINGS	Plug Block	Phenolic	—	201355-1	201356-1	201359-1	201357-1
	Receptacle Block	Phenolic	—	201298-1	200346-2	200512-2	200838-2
	Plug Block	Diallyl Phthalate	—	201355-3	201356-3	201359-3	201357-3
	Receptacle Block	Diallyl Phthalate	—	201298-3	200346-4	200512-3	200838-3
SHIELDS	180° Two-Piece Long	Al Anodized	—	—	—	—	—
		Zinc Plated Steel	—	—	—	—	—
	180° Two-Piece Short	Al Anodized	—	—	—	—	—
		Zinc Plated Steel	—	—	—	—	—
		Zinc Plated Cast Al	—	—	—	—	—
	90° Two-Piece Long	Zinc Plated Steel	—	—	—	—	—
	90° Two-Piece Short	Zinc Plated Steel	—	—	—	—	—
	45° Two-Piece Short	Zinc Plated Steel	—	—	—	—	—
	45° Two-Piece Deep	Zinc Plated Steel	—	—	—	—	—
	180° One-Piece Long	Zinc Plated Steel	—	201378-2	201380-2	201382-2	201384-2
	180° One-Piece Short	Zinc Plated Steel	—	201360-2	201227-2	201169-2	201165-2
	90° One-Piece Short	Zinc Plated Steel	—	201467-2	201460-2	201468-2	201469-2
STRAIN RELIEF CLAMPS	Long	Zinc Plated Steel	—	—	—	—	—
	Short	Zinc Plated Steel	—	—	—	—	—
	Long	Stainless Steel	—	—	—	—	—
	Short	Stainless Steel	—	—	—	—	—
JACKSCREWS	Fixed Male	Stainless Steel	—	—	—	—	—
	Fixed Female	Stainless Steel	—	—	—	—	—
	Long Long Male	Tip: Stainless Steel; Body: Die Cast Zinc	—	—	—	—	—
	Long Long Female	Tip: Stainless Steel; Body: Die Cast Zinc	—	—	—	—	—
	Long Male	Tip: Stainless Steel; Body: Die Cast Zinc	—	—	—	—	—
	Long Female	Tip: Stainless Steel; Body: Die Cast Zinc	—	—	—	—	—
	Short Short Male	Tip: Stainless Steel; Body: Die Cast Zinc	—	—	—	—	—
	Short Short Female	Tip: Stainless Steel; Body: Die Cast Zinc	—	—	—	—	—
GUIDE HARDWARE	Center Male	Stainless Steel	—	200389-2	200389-2	200389-2	200389-2
	Center Female	Stainless Steel	—	200390-2[A]	200390-2[A]	200390-2[A]	200390-2[A]
	Corner Male	Stainless Steel	—	—	—	—	200833-2
	Corner Female	Stainless Steel	—	—	—	—	200835-2[B]
LOCKING SPRINGS[1]	Male—Nickel Plated Spring Steel		—	201921-1	201921-1	201923-1	201925-1
	Female—Stainless Steel		—	201922-1	201922-1	201924-1	201926-1
PIN HOODS	Internal Open End	Zinc Plated Steel	—	201363-4	201362-4	201785-4	201786-4
	Internal Closed End	Zinc Plated Steel	—	—	—	—	—
	External Closed End	Al Iridite	—	—	—	—	—
	External Closed End	Zinc Plated Steel	—	—	—	—	—

[1] Each part number contains two locking springs. Order one male and one female for each mated pair of connectors.
Alternate Part Nos.
[A] **207619-1**[*2]
[B] **203964-1***
* These Corner or Center Guide Sockets (**.880** [22.35] long) are to be used when housings are loaded with subminiature COAXICON contacts
[2] Hex Nut Stainless Steel

SOURCE: Catalog 82003

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Standard Housings
(Continued)

Cable-to-Cable

Application C
(Continued)

1. Choose the application that most closely meets your requirements.
2. Find the appropriate column for the number of positions required.
3. Select part numbers required for the application listed in the column below the number of positions.

If a part number is not listed for a particular item, it is not available.

If more than one part number is listed for a particular item, choose the one which best fits your application.

4. Select contacts: Type II, Type III+, Subminiature COAXICON.

Special application housings may be substituted for these standard housings. See Special Application Section.

This cable-to-cable application utilizes locking springs, one-piece shields, a pin hood for pin protection and guide hardware. The shields are available with both 180° and 90° cable exits. The 180° shields are available in a long version which provides pin protection in lieu of a pin hood.

A short shield and a pin hood or a long shield can be used on one side only of a mated pair of connectors. The mating connector must use a short shield.

The 34- and 50-position connectors can be used with either center or corner guide hardware. If center guides are used, an additional four 4-40 screws are required to secure the locking springs. If corner guides are used, an additional two 4-40 screws will be required to attach the shield. Corner guides require four guide pins and four guide sockets for each mated pair of connectors.

Number of Positions						Component Description		
41	50	75	104	104CF	160CF			
202135-2	201358-1	—	—	—	—	Plug Block, Receptacle Block	Phenolic	HOUSINGS
201302-1	200277-2	—	—	—	—			
202135-4	201358-3	—	—	—	—	Plug Block, Receptacle Block	Diallyl Phthalate	
201302-3	200277-4	—	—	—	—			
—	—	—	—	—	—	180° Two-Piece Long	Al Anodized	SHIELDS
—	—	—	—	—	—		Zinc Plated Steel	
—	—	—	—	—	—	180° Two-Piece Short	Al Anodized	
—	—	—	—	—	—		Zinc Plated Steel	
—	—	—	—	—	—		Zinc Plated Cast Al	
—	—	—	—	—	—	90° Two-Piece Long, 90° Two-Piece Short, 45° Two-Piece Short, 45° Two-Piece Deep, 180° One-Piece Long, 180° One-Piece Short, 90° One-Piece Short	Zinc Plated Steel	
—	—	—	—	—	—			
—	—	—	—	—	—			
—	—	—	—	—	—			
—	201386-2	—	—	—	—			
—	201173-2	—	—	—	—			
201486-2	201470-2	—	—	—	—			
—	—	—	—	—	—	Long, Short	Zinc Plated Steel	STRAIN RELIEF CLAMPS
—	—	—	—	—	—			
—	—	—	—	—	—	Long, Short	Stainless Steel	
—	—	—	—	—	—			
—	—	—	—	—	—	Fixed Male, Fixed Female	Stainless Steel	JACKSCREWS
—	—	—	—	—	—			
—	—	—	—	—	—	Long Long Male, Long Long Female, Long Male, Long Female, Short Short Male, Short Short Female	Tip: Stainless Steel; Body: Die Cast Zinc	
—	—	—	—	—	—			
—	—	—	—	—	—			
—	—	—	—	—	—			
—	—	—	—	—	—			
200389-2	200389-2	—	—	—	—	Center Male, Center Female, Corner Male, Corner Female	Stainless Steel	GUIDE HARDWARE
200390-2[A]	200390-2[A]	—	—	—	—			
—	200833-2	—	—	—	—			
—	200835-2[B]	—	—	—	—			
201921-1	201925-1	—	—	—	—	Male—Nickel Plated Spring Steel		LOCKING SPRINGS[1]
201922-1	201926-1	—	—	—	—	Female—Stainless Steel		
—	201317-4	—	—	—	—	Internal Open End	Zinc Plated Steel	PIN HOODS
—	—	—	—	—	—	Internal Closed End	Zinc Plated Steel	
—	—	—	—	—	—	External Closed End	Al Iridite	
—	—	—	—	—	—	External Closed End	Zinc Plated Steel	

SOURCE: Catalog 82003

Specifications subject to change.
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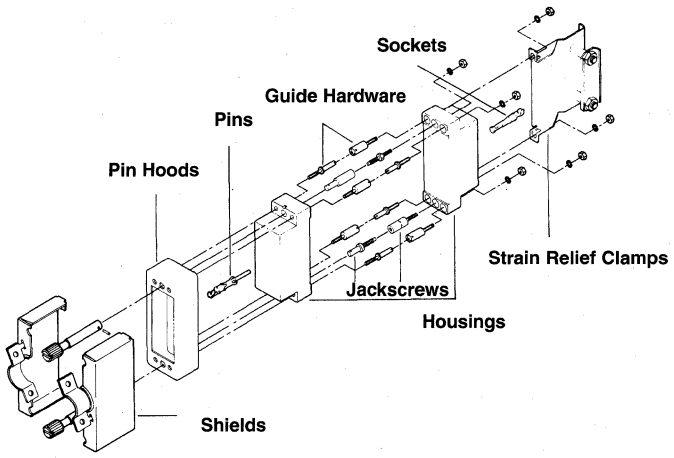
Standard Housings
(Continued)
Cable-to-Cable
Application D



Featured Hardware
- Shields (Two-piece)
- Pin Hoods
- Jackscrews
- Strain Relief Clamps
- Guide Hardware

	Component Description		Number of Positions				
			6	14	20	26	34
HOUSINGS	Plug Block	Phenolic	—	—	201356-1	201359-1	201357-1
	Receptacle Block	Phenolic	—	—	200346-2	200512-2	200838-2
	Plug Block	Diallyl Phthalate	—	—	201356-3	201359-3	201357-3
	Receptacle Block	Diallyl Phthalate	—	—	200346-4	200512-3	200838-3
SHIELDS	180° Two-Piece Long	Al Anodized	—	—	—	201576-1	201571-1
		Zinc Plated Steel	—	—	—	201576-2	201571-2
	180° Two-Piece Short	Al Anodized	—	—	—	200514-1	200517-1
		Zinc Plated Steel	—	—	204087-1	200514-2	200517-2
		Zinc Plated Cast Al	—	—	—	—	—
	90° Two-Piece Long	Zinc Plated Steel	—	—	—	—	—
	90° Two-Piece Short	Zinc Plated Steel	—	—	—	—	—
	45° Two-Piece Short	Zinc Plated Steel	—	—	—	—	—
	45° Two-Piece Deep	Zinc Plated Steel	—	—	—	—	—
	180° One Piece Long	Zinc Plated Steel	—	—	—	—	—
	180° One-Piece Short	Zinc Plated Steel	—	—	—	—	—
	90° One-Piece Short	Zinc Plated Steel	—	—	—	—	—
STRAIN RELIEF CLAMPS	Long	Zinc Plated Steel	—	—	—	201845-1	201846-1
	Short	Zinc Plated Steel	—	—	—	201229-1	—
	Long	Stainless Steel	—	—	—	—	—
	Short	Stainless Steel	—	—	201237-1	—	201224-1
JACKSCREWS[1]	Fixed Male	Stainless Steel	—	—	201092-1	201092-1	201092-1
	Fixed Female	Stainless Steel	—	—	201089-1	201089-1	201089-1
	Long Long Male	Tip: Stainless Steel / Body: Die Cast Zinc	—	—	—	—	—
	Long Long Female	Tip: Stainless Steel / Body: Die Cast Zinc	—	—	—	—	—
	Long Male	Tip: Stainless Steel / Body: Die Cast Zinc	—	—	201413-1	201413-1	201413-1
	Long Female	Tip: Stainless Steel / Body: Die Cast Zinc	—	—	201414-1	201414-1	201414-1
	Short Short Male	Tip: Stainless Steel / Body: Die Cast Zinc	—	—	—	—	—
	Short Short Female	Tip: Stainless Steel / Body: Die Cast Zinc	—	—	—	—	—
GUIDE HARDWARE	Center Male	Stainless Steel	—	—	—	—	—
	Center Female	Stainless Steel	—	—	—	—	—
	Corner Male	Stainless Steel	—	—	—	—	200833-2
	Corner Female	Stainless Steel	—	—	—	—	200835-2[B]
LOCKING SPRINGS	Male—Nickel Plated Spring Steel		—	—	—	—	—
	Female—Stainless Steel		—	—	—	—	—
PIN HOODS	Internal Open End	Zinc Plated Steel	—	—	—	—	201786-4
	Internal Closed End	Zinc Plated Steel	—	—	—	—	202434-4
	External Closed End	Al Iridite	—	—	—	—	201350-2
	External Closed End	Zinc Plated Steel	—	—	—	—	—

[1] Listed jackscrews have 6-32 single-lead threads. For corresponding jackscrews with 6-32 double-lead threads, refer to page 2046.
Alternate Part Numbers:
[B] **203964-1***
[C] **203966-1***
* These Corner or Center Guide Sockets (**.880** [22.35] long) are to be used when housings are loaded with subminiature COAXICON contacts

SOURCE: Catalog 82003

Specifications subject to change.
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Standard Housings
(Continued)

Cable-to-Cable

Application D
(Continued)

1. Choose the application that most closely meets your requirements.
2. Find the appropriate column for the number of positions required.
3. Select part numbers required for the application listed in the column below the number of positions.

If a part number is not listed for a particular item, it is not available.

If more than one part number is listed for a particular hardware item, choose the one which best fits your application.

4. Select Contacts: Type II, Type III+, Subminiature COAXICON.

Special application housings may be substituted for these standard housings. See Special Application Section.

This cable-to-cable application utilizes jackscrews, a two-piece short shield, a strain relief clamp, a pin hood for pin protection and guide hardware.

Do not use a pin hood in combination with the shield for sizes 20, 26 and 41. A long shield may be used in lieu of pin hood for pin protection for all sizes except the 20 position. Shields are available with 180° cable exit and for the 50 thru 104 position connectors a 90° cable exit. Select the appropriate jackscrew length for the type of shield chosen as indicated by symbol (△▲).

Number of Positions						Component Description		
41	50	75	104	104CF	160CF			
202135-2	201358-1	201310-1	201345-1	—	—	Plug Block Receptacle Block	Phenolic	HOUSINGS
201302-1	200277-2	201311-1	201037-1	—	—			
202135-4	201358-3	201310-3	201345-2	—	—	Plug Block Receptacle Block	Diallyl Phthalate	
201302-3	200277-4	201311-3	201037-2	—	—			
—	201443-1△	—	—	—	—	180° Two-Piece Long	Al Anodized Zinc Plated Steel	SHIELDS
202383-2	201443-2△	202713-2▲	204173-2▲	—	—			
—	200532-1△	—	—	—	—	180° Two-Piece Short	Al Anodized Zinc Plated Steel Zinc Plated Cast Al	
202383-1	200532-2△	202713-1▲	204173-1▲	—	—			
—	—	204209-1△	201131-1△	—	—			
—	203975-2▲	202711-3▲	205316-2▲	—	—	90° Two-Piece Long 90° Two-Piece Short 45° Two-Piece Short 45° Two-Piece Deep 180° One-Piece Long 180° One-Piece Short 90° One-Piece Short	Zinc Plated Steel	
—	203975-1▲	202711-1▲	205316-1▲	—	—			
—	—	—	—	—	—			
—	—	—	—	—	—			
—	—	—	—	—	—			
—	—	—	—	—	—			
—	—	—	—	—	—			
—	—	—	201849-1	—	—	Long Short	Zinc Plated Steel	STRAIN RELIEF CLAMPS
—	201182-1	200730-1	—	—	—			
201766-1	201847-1	201848-1	—	—	—	Long Short	Stainless Steel	
—	—	—	201221-1	—	—			
201092-1	201092-1	201092-1	201092-1	—	—	Fixed Male Fixed Female	Stainless Steel	JACKSCREWS[1]
201089-1	201089-1	201089-1	201089-1	—	—			
—	207234-1▲	207234-1▲	207234-1▲	—	—	Long Long Male Long Long Female Long Male Long Female Short Short Male Short Short Female	Tip: Stainless Steel Body: Die Cast Zinc	
—	207235-1▲	207235-1▲	207235-1▲	—	—			
201413-1	201413-1△	201413-1△	201413-1△	—	—			
201414-1	201414-1△	201414-1△	201414-1△	—	—			
—	—	—	—	—	—			
—	—	—	—	—	—			
—	—	—	—	—	—	Center Male Center Female Corner Male Corner Female	Stainless Steel	GUIDE HARDWARE
—	—	—	—	—	—			
—	200833-2	201046-2	201046-2	—	—			
—	200835-2[B]	201047-2[C]	201047-2[C]	—	—			
—	—	—	—	—	—	Male—Nickel Plated Spring Steel		LOCKING SPRINGS
—	—	—	—	—	—	Female—Stainless Steel		
—	201317-4	—	—	—	—	Internal Open End	Zinc Plated Steel	PIN HOODS
—	202394-2	201369-4	201364-4	—	—	Internal Closed End	Zinc Plated Steel	
—	—	—	—	—	—	External Closed End	Al Iridite	
—	201390-5	201368-4	201346-4	—	—	External Closed End	Zinc Plated Steel	

SOURCE: Catalog 82003

Specifications subject to change.
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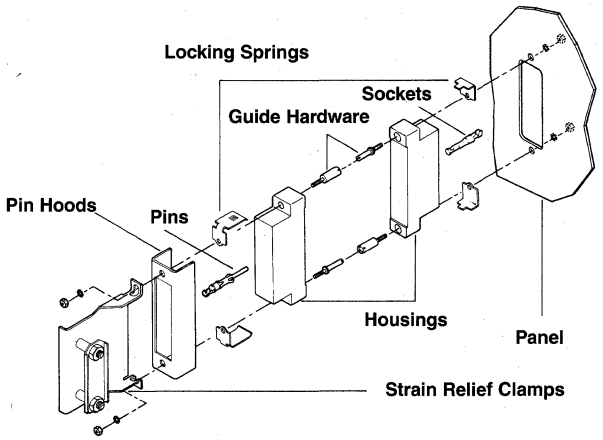
Standard Housings
(Continued)

Cable-to-Panel
Application E



Featured Hardware
- Strain Relief Clamps
- Locking Springs
- Pin Hoods
- Guide Hardware

	Component Description		Number of Positions				
			6	14	20	26	34
HOUSINGS	Plug Block	Phenolic	202758-1	201355-1	201356-1	201359-1	201357-1
	Receptacle Block	Phenolic	202757-1	201298-1	200346-2	200512-2	200838-2
	Plug Block	Diallyl Phthalate	202758-3	201355-3	201356-3	201359-3	201357-3
	Receptacle Block	Diallyl Phthalate	202757-3	201298-3	200346-4	200512-3	200838-3
SHIELDS	180° Two-Piece Long	Al Anodized	—	—	—	—	—
		Zinc Plated Steel	—	—	—	—	—
	180° Two-Piece Short	Al Anodized	—	—	—	—	—
		Zinc Plated Steel	—	—	—	—	—
		Zinc Plated Cast Al	—	—	—	—	—
	90° Two-Piece Long	Zinc Plated Steel	—	—	—	—	—
	90° Two-Piece Short	Zinc Plated Steel	—	—	—	—	—
	45° Two-Piece Short	Zinc Plated Steel	—	—	—	—	—
	45° Two-Piece Deep	Zinc Plated Steel	—	—	—	—	—
	180° One-Piece Long	Zinc Plated Steel	—	—	—	—	—
	180° One-Piece Short	Zinc Plated Steel	—	—	—	—	—
	90° One-Piece Short	Zinc Plated Steel	—	—	—	—	—
STRAIN RELIEF CLAMPS	Long	Zinc Plated Steel	—	201843-1	—	201845-1	201846-1
	Short	Zinc Plated Steel	203432-1	200686-1	—	201229-1	—
	Long	Stainless Steel	—	—	—	—	—
	Short	Stainless Steel	—	—	201237-1	—	201224-1
JACKSCREWS	Fixed Male	Stainless Steel	—	—	—	—	—
	Fixed Female	Stainless Steel	—	—	—	—	—
	Long Long Male	Tip: Stainless Steel; Body: Die Cast Zinc	—	—	—	—	—
	Long Long Female	Tip: Stainless Steel; Body: Die Cast Zinc	—	—	—	—	—
	Long Male	Tip: Stainless Steel; Body: Die Cast Zinc	—	—	—	—	—
	Long Female	Tip: Stainless Steel; Body: Die Cast Zinc	—	—	—	—	—
	Short Short Male	Tip: Stainless Steel; Body: Die Cast Zinc	—	—	—	—	—
	Short Short Female	Tip: Stainless Steel; Body: Die Cast Zinc	—	—	—	—	—
GUIDE HARDWARE	Center Male	Stainless Steel	200389-2	200389-2	200389-2	200389-2	200389-2
	Center Female	Stainless Steel	200390-2[A]	200390-2[A]	200390-2[A]	200390-2[A]	200390-2[A]
	Corner Male	Stainless Steel	—	—	—	—	200833-2
	Corner Female	Stainless Steel	—	—	—	—	200835-2[B]
LOCKING SPRINGS[1]	Male—Nickel Plated Spring Steel		201921-1	201921-1	201921-1	201923-1	201925-1
	Female—Stainless Steel		201922-1	201922-1	201922-1	201924-1	201926-1
PIN HOODS	Internal Open End	Zinc Plated Steel	204258-6	201363-4	201362-4	201785-4	201786-4
	Internal Closed End	Zinc Plated Steel	—	—	—	—	—
	External Closed End	Al Iridite	—	—	—	—	—
	External Closed End	Zinc Plated Steel	—	—	—	—	—

[1] Each part number contains two locking springs. Order one male and one female for each mated pair of connectors.
Alternate Part Numbers:
[B] **207619-1*[2]**
[C] **203964-1***
* These Corner or Center Guide Sockets (**.880** [22.35] long) are to be used when housings are loaded with subminiature COAXICON contacts
[2] Hex Nut Stainless Steel

SOURCE: Catalog 82003

Specifications subject to change.
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Standard Housings
(Continued)

Cable-to-Panel

Application E
(Continued)

1. Choose the application that most closely meets your requirements.
2. Find the appropriate column for the number of positions required.
3. Select part numbers required for the application listed in the column below the number of positions.

If a part number is not listed for a particular item, it is not available.

If more than one part number is listed for a particular hardware item, choose the one which best fits your application.

5. Select Contacts: Type II, Type III+, Subminiature COAXICON.

Special application housings and posted housings may be substituted for these standard housings. See Special Application and Posted Application Sections.

This cable-to-panel application utilizes locking springs, strain relief clamps, a pin hood for pin protection and guide hardware.

The 34 and 50 position connectors can be used with either center or corner guide hardware. If center guide hardware is used, an additional four 4-40 screws, nuts and lockwashers are required to secure the locking springs. Corner guides require four guide pins and four guide sockets for each mated pair of connectors.

Number of Positions						Component Description		
41	50	75	104	104CF	160CF			
202135-2	201358-1	—	—	—	—	Plug Block, Receptacle Block	Phenolic	HOUSINGS
201302-1	200277-2	—	—	—	—			
202135-4	201358-3	—	—	—	—	Plug Block, Receptacle Block	Diallyl Phthalate	
201302-3	200277-4	—	—	—	—			
—	—	—	—	—	—	180° Two-Piece Long	Al Anodized	SHIELDS
—	—	—	—	—	—		Zinc Plated Steel	
—	—	—	—	—	—	180° Two-Piece Short	Al Anodized	
—	—	—	—	—	—		Zinc Plated Steel	
—	—	—	—	—	—		Zinc Plated Cast Al	
—	—	—	—	—	—	90° Two-Piece Long	Zinc Plated Steel	
—	—	—	—	—	—	90° Two-Piece Short		
—	—	—	—	—	—	45° Two-Piece Short		
—	—	—	—	—	—	45° Two-Piece Deep		
—	—	—	—	—	—	180° One-Piece Long		
—	—	—	—	—	—	180° One-Piece Short		
—	—	—	—	—	—	90° One-Piece Short		
—	—	—	—	—	—	Long, Short	Zinc Plated Steel	STRAIN RELIEF CLAMPS
—	201182-1	—	—	—	—			
201766-1	201847-1	—	—	—	—	Long, Short	Stainless Steel	
—	—	—	—	—	—			
—	—	—	—	—	—	Fixed Male, Fixed Female	Stainless Steel	JACKSCREWS
—	—	—	—	—	—			
—	—	—	—	—	—	Long Long Male	Tip: Stainless Steel; Body: Die Cast Zinc	
—	—	—	—	—	—	Long Long Female		
—	—	—	—	—	—	Long Male		
—	—	—	—	—	—	Long Female		
—	—	—	—	—	—	Short Short Male		
—	—	—	—	—	—	Short Short Female		
200389-2	200389-2	—	—	—	—	Center Male, Center Female, Corner Male, Corner Female	Stainless Steel	GUIDE HARDWARE
200390-2[A]	200390-2[A]	—	—	—	—			
—	200833-2	—	—	—	—			
—	200835-2[B]	—	—	—	—			
201921-1	201925-1	—	—	—	—	Male—Nickel Plated Spring Steel		LOCKING SPRINGS[1]
201922-1	201926-1	—	—	—	—	Female—Stainless Steel		
—	201317-4	—	—	—	—	Internal Open End	Zinc Plated Steel	PIN HOODS
—	—	—	—	—	—	Internal Closed End	Zinc Plated Steel	
—	—	—	—	—	—	External Closed End	Al Iridite	
—	—	—	—	—	—	External Closed End	Zinc Plated Steel	

SOURCE: Catalog 82003

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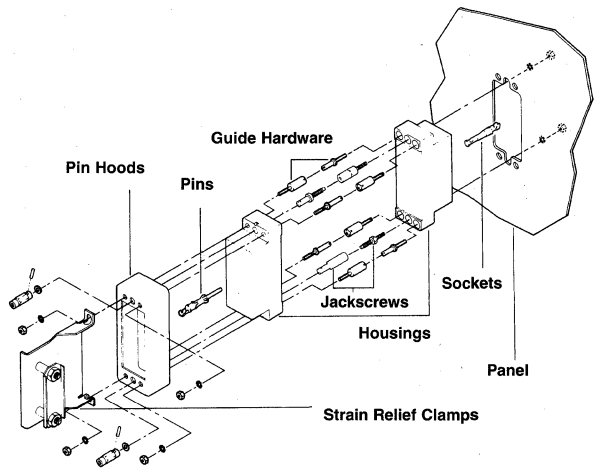
Standard Housings
(Continued)
Cable-to-Panel
Application F



Featured Hardware
- Strain Relief Clamps
- Pin Hoods
- Jackscrews
- Guide Hardware

	Component Description		Number of Positions				
			6	14	20	26	34
HOUSINGS	Plug Block	Phenolic	202758-1	201355-1	201356-1	201359-1	201357-1
	Receptacle Block	Phenolic	202757-1	201298-1	200346-2	200512-2	200838-2
	Plug Block	Diallyl Phthalate	202758-3	201355-3	201356-3	201359-3	201357-3
	Receptacle Block	Diallyl Phthalate	202757-3	201298-3	200346-4	200512-3	200838-3
SHIELDS	180° Two-Piece Long	Al Anodized	—	—	—	—	—
		Zinc Plated Steel	—	—	—	—	—
	180° Two-Piece Short	Al Anodized	—	—	—	—	—
		Zinc Plated Steel	—	—	—	—	—
		Zinc Plated Cast Al	—	—	—	—	—
	90° Two-Piece Long	Zinc Plated Steel	—	—	—	—	—
	90° Two-Piece Short	Zinc Plated Steel	—	—	—	—	—
	45° Two-Piece Short	Zinc Plated Steel	—	—	—	—	—
	45° Two-Piece Deep	Zinc Plated Steel	—	—	—	—	—
	180° One-Piece Long	Zinc Plated Steel	—	—	—	—	—
	180° One-Piece Short	Zinc Plated Steel	—	—	—	—	—
	90° One-Piece Short	Zinc Plated Steel	—	—	—	—	—
STRAIN RELIEF CLAMPS	Long	Zinc Plated Steel	—	201843-1	—	201845-1	201846-1
	Short	Zinc Plated Steel	203432-1	200686-1	—	201229-1	—
	Long	Stainless Steel	—	—	—	—	—
	Short	Stainless Steel	—	—	201237-1	—	201224-1
JACKSCREWS[1]	Fixed Male	Stainless Steel	201092-1	201092-1	201092-1	201092-1	201092-1
	Fixed Female	Stainless Steel	201089-1	201089-1	201089-1	201089-1	201089-1
	Long Long Male	Tip: Stainless Steel; Body: Die Cast Zinc	—	—	—	—	—
	Long Long Female	Tip: Stainless Steel; Body: Die Cast Zinc	—	—	—	—	—
	Long Male	Tip: Stainless Steel; Body: Die Cast Zinc	—	—	—	—	—
	Long Female	Tip: Stainless Steel; Body: Die Cast Zinc	—	—	—	—	—
	Short Short Male	Tip: Stainless Steel; Body: Die Cast Zinc	201827-1	201827-1	201827-1	201827-1	201827-1
	Short Short Female	Tip: Stainless Steel; Body: Die Cast Zinc	201828-1	201828-1	201828-1	201828-1	201828-1
GUIDE HARDWARE	Center Male	Stainless Steel	—	—	—	—	—
	Center Female	Stainless Steel	—	—	—	—	—
	Corner Male	Stainless Steel	—	—	—	—	200833-2
	Corner Female	Stainless Steel	—	—	—	—	200835-2[B]
LOCKING SPRINGS	Male—Nickel Plated Spring Steel		—	—	—	—	—
	Female—Stainless Steel		—	—	—	—	—
PIN HOODS	Internal Open End	Zinc Plated Steel	204258-6	201363-4	201362-4	201785-4	201786-4
	Internal Closed End	Zinc Plated Steel	—	—	—	—	202434-4
	External Closed End	Al Iridite	—	—	—	201349-2	201350-2
	External Closed End	Zinc Plated Steel	—	201347-2	—	—	—

[1] Listed jackscrews have 6-32 single-lead threads. For corresponding jackscrews with 6-32 double-lead threads, refer to page 2046.
Alternate Part Numbers:
[B] **203964-1***
[C] **203966-1***
* These Corner or Center Guide Sockets (**.880** [22.35] long) are to be used when housings are loaded with subminiature COAXICON contacts

SOURCE: Catalog 82003

Specifications subject to change.
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Standard Housings
(Continued)

Cable-to-Panel

Application F
(Continued)

1. Choose the application that most closely meets your requirements.
2. Find the appropriate column for the number of positions required.
3. Select part numbers required for the application listed in the column below the number of positions.

If a part number is not listed for a particular item, it is not available.

If more than one part number is listed for a particular hardware item, choose the one which best fits your application.

4. Select Contacts: Type II, Type III+, Subminiature COAXICON.

Special application housings and posted housings may be substituted for these standard housings. See Special Application and Posted Application Sections.

This cable-to-panel application utilizes jackscrews, strain relief clamps and guide hardware. A pin hood is provided for pin protection. Sizes 6, 14, 20, 26, and 41 **do not** use guide hardware for this application.

Number of Positions						Component Description		
41	50	75	104	104CF	160CF			
202135-2	201358-1	201310-1	201345-1	—	—	Plug Block / Receptacle Block	Phenolic	HOUSINGS
201302-1	200277-2	201311-1	201037-1	—	—			
202135-4	201358-3	201310-3	201345-2	—	—	Plug Block / Receptacle Block	Diallyl Phthalate	
201302-3	200277-4	201311-3	201037-2	—	—			
—	—	—	—	—	—	180° Two-Piece Long	Al Anodized	SHIELDS
—	—	—	—	—	—		Zinc Plated Steel	
—	—	—	—	—	—	180° Two-Piece Short	Al Anodized	
—	—	—	—	—	—		Zinc Plated Steel	
—	—	—	—	—	—		Zinc Plated Cast Al	
—	—	—	—	—	—	90° Two-Piece Long	Zinc Plated Steel	
—	—	—	—	—	—	90° Two-Piece Short		
—	—	—	—	—	—	45° Two-Piece Short		
—	—	—	—	—	—	45° Two-Piece Deep		
—	—	—	—	—	—	180° One-Piece Long		
—	—	—	—	—	—	180° One-Piece Short		
—	—	—	—	—	—	90° One-Piece Short		
—	—	—	201849-1	—	—	Long / Short	Zinc Plated Steel	STRAIN RELIEF CLAMPS
—	201182-1	200730-1	—	—	—			
201766-1	201847-1	201848-1	—	—	—	Long / Short	Stainless Steel	
—	—	—	201221-1	—	—			
201092-1	2010921	201092-1	201092-1	—	—	Fixed Male / Fixed Female	Stainless Steel	JACKSCREWS[1]
201089-1	201089-1	201089-1	201089-1	—	—			
—	—	—	—	—	—	Long Long Male	Tip: Stainless Steel; Body: Die Cast Zinc	
—	—	—	—	—	—	Long Long Female		
—	—	—	—	—	—	Long Male		
—	—	—	—	—	—	Long Female		
201827-1	201827-1	201827-1	201827-1	—	—	Short Short Male		
201828-1	201828-1	201828-1	201828-1	—	—	Short Short Female		
—	—	—	—	—	—	Center Male	Stainless Steel	GUIDE HARDWARE
—	—	—	—	—	—	Center Female		
—	200833-2	201046-2	201046-2	—	—	Corner Male		
—	200835-2[B]	201047-2[C]	201047-2[C]	—	—	Corner Female		
—	—	—	—	—	—	Male—Nickel Plated Spring Steel		LOCKING SPRINGS
—	—	—	—	—	—	Female—Stainless Steel		
—	201317-4	—	—	—	—	Internal Open End	Zinc Plated Steel	PIN HOODS
—	202394-2	201369-4	201364-4	—	—	Internal Closed End	Zinc Plated Steel	
—	—	—	—	—	—	External Closed End	Al Iridite	
—	201390-5	201368-4	201346-4	—	—	External Closed End	Zinc Plated Steel	

SOURCE: Catalog 82003

Specifications subject to change.
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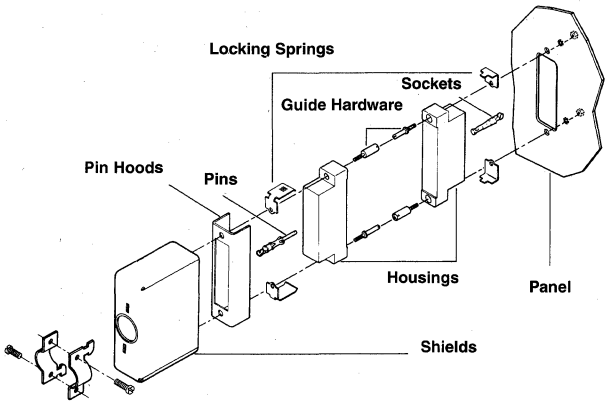
Standard Housings
(Continued)

Cable-to-Panel
Application G



Featured Hardware
- Shields (One-piece)
- Pin Hoods
- Locking Springs
- Guide Hardware

	Component Description		Number of Positions				
			6	14	20	26	34
HOUSINGS	Plug Block	Phenolic	—	201355-1	201356-1	201359-1	201357-1
	Receptacle Block		—	201298-1	200346-2	200512-2	200838-2
	Plug Block	Diallyl Phthalate	—	201355-3	201356-3	201359-3	201357-3
	Receptacle Block		—	201298-3	200346-4	200512-3	200838-3
SHIELDS	180° Two-Piece Long	Al Anodized	—	—	—	—	—
		Zinc Plated Steel	—	—	—	—	—
	180° Two-Piece Short	Al Anodized	—	—	—	—	—
		Zinc Plated Steel	—	—	—	—	—
		Zinc Plated Cast Al	—	—	—	—	—
	90° Two-Piece Long	Zinc Plated Steel	—	—	—	—	—
	90° Two-Piece Short		—	—	—	—	—
	45° Two-Piece Short		—	—	—	—	—
	45° Two-Piece Deep		—	—	—	—	—
	180° One-Piece Long		—	201378-2	201380-2	201382-2	201384-2
	180° One-Piece Short		—	201360-2	201227-2	201169-2	201165-2
	90° One-Piece Short		—	201467-2	201460-2	201468-2	201469-2
STRAIN RELIEF CLAMPS	Long	Zinc Plated Steel	—	—	—	—	—
	Short		—	—	—	—	—
	Long	Stainless Steel	—	—	—	—	—
	Short		—	—	—	—	—
JACKSCREWS	Fixed Male	Stainless Steel	—	—	—	—	—
	Fixed Female		—	—	—	—	—
	Long Long Male	Tip: Stainless Steel Body: Die Cast Zinc	—	—	—	—	—
	Long Long Female		—	—	—	—	—
	Long Male		—	—	—	—	—
	Long Female		—	—	—	—	—
	Short Short Male		—	—	—	—	—
	Short Short Female		—	—	—	—	—
GUIDE HARDWARE	Center Male	Stainless Steel	—	200389-2	200389-2	200389-2	200389-2
	Center Female		—	200390-2[A]	200390-2[A]	200390-2[A]	200390-2[A]
	Corner Male		—	—	—	—	200833-2
	Corner Female		—	—	—	—	200835-2[B]
LOCKING SPRINGS[1]	Male—Nickel Plated Spring Steel		—	201921-1	201921-1	201923-1	201925-1
	Female—Stainless Steel		—	201922-1	201922-1	201924-1	201926-1
PIN HOODS	Internal Open End	Zinc Plated Steel	—	201363-4	201362-4	201785-4	201786-4
	Internal Closed End	Zinc Plated Steel	—	—	—	—	—
	External Closed End	Al Iridite	—	—	—	—	—
	External Closed End	Zinc Plated Steel	—	—	—	—	—

[1] Each part number contains two locking springs. Order one male and one female for each mated pair of connectors.
Alternate Part Numbers:
[A] **207619-1***[2]
[B] **203964-1***
* These Corner or Center Guide Sockets (**.880** [22.35] long) are to be used when housings are loaded with subminiature COAXICON contacts

SOURCE: Catalog 82003

Specifications subject to change.
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Standard Housings
(Continued)

Cable-to-Panel

Application G
(Continued)

1. Choose the application that most closely meets your requirements.
2. Find the appropriate column for the number of positions required.
3. Select part numbers required for the application listed in the column below the number of positions.

If a part number is not listed for a particular item, it is not available.

If more than one part number is listed for a particular hardware item, choose the one which best fits your application.

4. Select Contacts: Type II, Type III+, Subminiature COAXICON.

Special application housings and posted housings may be substituted for these standard housings. See Special Application and Posted Application Sections.

This cable-to-panel application utilizes locking springs, one-piece shields, a pin hood for pin protection and guide hardware. The shields are available with both 180° and 90° cable exits. The 180° shields are available in a long version which provides pin protection in lieu of a pin hood.

Do not select a long shield and a pin hood.

The 34- and 50-position connectors can be used with either center or corner guide hardware. If center guides are used, an additional four 4-40 screws are required to secure the locking springs. If corner guides are used, an additional two 4-40 screws will be required to attach the shield. Corner guides require four guide pins and four guide sockets for each mated pair.

Number of Positions						Component Description		
41	50	75	104	104CF	160CF			
202135-2	201358-1	—	—	—	—	Plug Block Receptacle Block	Phenolic	HOUSINGS
201302-1	200277-2	—	—	—	—			
202135-4	201358-3	—	—	—	—	Plug Block Receptacle Block	Diallyl Phthalate	
201302-3	200277-4	—	—	—	—			
—	—	—	—	—	—	180° Two-Piece Long	Al Anodized Zinc Plated Steel	SHIELDS
—	—	—	—	—	—			
—	—	—	—	—	—	180° Two-Piece Short	Al Anodized Zinc Plated Steel Zinc Plated Cast Al	
—	—	—	—	—	—			
—	—	—	—	—	—			
—	—	—	—	—	—	90° Two-Piece Long	Zinc Plated Steel	
—	—	—	—	—	—	90° Two-Piece Short		
—	—	—	—	—	—	45° Two-Piece Short		
—	—	—	—	—	—	45° Two-Piece Deep		
—	201386-2	—	—	—	—	180° One-Piece Long		
—	201173-2	—	—	—	—	180° One-Piece Short		
201486-2	201470-2	—	—	—	—	90° One-Piece Short		
—	—	—	—	—	—	Long Short	Zinc Plated Steel	STRAIN RELIEF CLAMPS
—	—	—	—	—	—			
—	—	—	—	—	—	Long Short	Stainless Steel	
—	—	—	—	—	—			
—	—	—	—	—	—	Fixed Male Fixed Female	Stainless Steel	JACKSCREWS
—	—	—	—	—	—			
—	—	—	—	—	—	Long Long Male	Tip: Stainless Steel Body: Die Cast Zinc	
—	—	—	—	—	—	Long Long Female		
—	—	—	—	—	—	Long Male		
—	—	—	—	—	—	Long Female		
—	—	—	—	—	—	Short Short Male		
—	—	—	—	—	—	Short Short Female		
200389-2	200389-2	—	—	—	—	Center Male Center Female Corner Male Corner Female	Stainless Steel	GUIDE HARDWARE
200390-2[A]	200390-2[A]	—	—	—	—			
—	200833-2	—	—	—	—			
—	200835-2[B]	—	—	—	—			
201921-1	201925-1	—	—	—	—	Male—Nickel Plated Spring Steel		LOCKING SPRINGS[1]
201922-1	201926-1	—	—	—	—	Female—Stainless Steel		
—	201317-4	—	—	—	—	Internal Open End	Zinc Plated Steel	PIN HOODS
—	—	—	—	—	—	Internal Closed End	Zinc Plated Steel	
—	—	—	—	—	—	External Closed End	Al Iridite	
—	—	—	—	—	—	External Closed End	Zinc Plated Steel	

SOURCE: Catalog 82003

Specifications subject to change.
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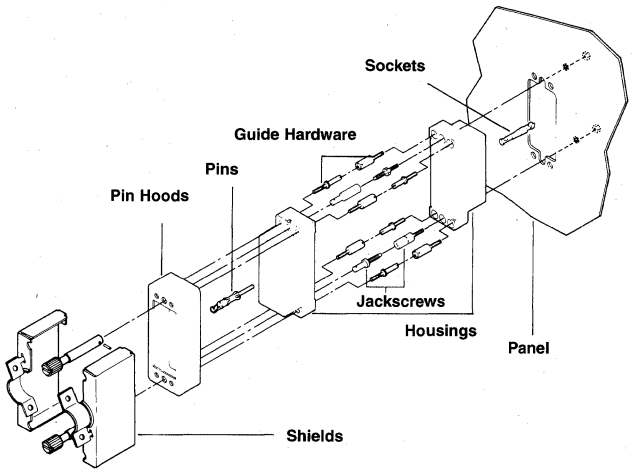
Standard Housings
(Continued)

Cable-to-Panel
Application H



Featured Hardware
- Shields (Two-piece)
- Pin Hoods
- Guide Hardware
- Jackscews

	Component Description		Number of Positions				
			6	14	20	26	34
HOUSINGS	Plug Block	Phenolic	—	—	201356-1	201359-1	201357-1
	Receptacle Block	Phenolic	—	—	200346-2	200512-2	200838-2
	Plug Block	Diallyl Phthalate	—	—	201356-3	201359-3	201357-3
	Receptacle Block	Diallyl Phthalate	—	—	200346-4	200512-3	200838-3
SHIELDS	180° Two-Piece Long	Al Anodized	—	—	—	201576-1	201571-1
		Zinc Plated Steel	—	—	—	201576-2	201571-2
	180° Two-Piece Short	Al Anodized	—	—	—	200514-1	200517-1
		Zinc Plated Steel	—	—	204087-1	200514-2	200517-2
		Zinc Plated Cast Al	—	—	—	—	—
	90° Two-Piece Long	Zinc Plated Steel	—	—	—	—	—
	90° Two-Piece Short	Zinc Plated Steel	—	—	—	—	—
	45° Two-Piece Short	Zinc Plated Steel	—	—	—	—	—
	45° Two-Piece Deep	Zinc Plated Steel	—	—	—	—	—
	180° One-Piece Long	Zinc Plated Steel	—	—	—	—	—
	180° One-Piece Short	Zinc Plated Steel	—	—	—	—	—
	90° One-Piece Short	Zinc Plated Steel	—	—	—	—	—
STRAIN RELIEF CLAMPS	Long	Zinc Plated Steel	—	—	—	—	—
	Short	Zinc Plated Steel	—	—	—	—	—
	Long	Stainless Steel	—	—	—	—	—
	Short	Stainless Steel	—	—	—	—	—
JACKSCREWS[1]	Fixed Male	Stainless Steel	—	—	201092-1	201092-1	201092-1
	Fixed Female	Stainless Steel	—	—	201089-1	201089-1	201089-1
	Long Long Male	Tip: Stainless Steel / Body: Die Cast Zinc	—	—	—	—	—
	Long Long Female	Tip: Stainless Steel / Body: Die Cast Zinc	—	—	—	—	—
	Long Male	Tip: Stainless Steel / Body: Die Cast Zinc	—	—	201413-1	201413-1	201413-1
	Long Female	Tip: Stainless Steel / Body: Die Cast Zinc	—	—	201414-1	201414-1	201414-1
	Short Short Male	Tip: Stainless Steel / Body: Die Cast Zinc	—	—	—	—	—
	Short Short Female	Tip: Stainless Steel / Body: Die Cast Zinc	—	—	—	—	—
GUIDE HARDWARE	Center Male	Stainless Steel	—	—	—	—	—
	Center Female	Stainless Steel	—	—	—	—	—
	Corner Male	Stainless Steel	—	—	—	—	200833-2
	Corner Female	Stainless Steel	—	—	—	—	200835-2[B]
LOCKING SPRINGS	Male—Nickel Plated Spring Steel		—	—	—	—	—
	Female—Stainless Steel		—	—	—	—	—
PIN HOODS	Internal Open End	Zinc Plated Steel	—	—	—	—	201786-4
	Internal Closed End	Zinc Plated Steel	—	—	—	—	202434-4
	External Closed End	Al Iridite	—	—	—	—	201350-2
	External Closed End	Zinc Plated Steel	—	—	—	—	—

[1] Listed jackscrews have 6-32 single-lead threads. For corresponding jackscrews with 6-32 double-lead threads, refer to page 2046.
Alternate Part Numbers:
[B] **203964-1***; [C] **203966-1***; [D] **204099-2****
* These Corner or Center Guide Sockets (**.880** [22.35] long) are to be used when housings are loaded with subminiature COAXICON contacts
Corner Socket, **Part No. 204099-2 (**.838** [21.29] long) is to be used when housings are loaded with subminiature COAXICON contacts

SOURCE: Catalog 82003

Specifications subject to change.
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Standard Housings
(Continued)

Cable-to-Panel

Application H
(Continued)

1. Choose the application that most closely meets your requirements.
2. Find the appropriate column for the number of positions required.
3. Select part numbers required for the application listed in the column below the number of positions.

If a part number is not listed for a particular item, it is not available.

If more than one part number is listed for a particular hardware item, choose the one which best fits your application.

4. Select Contacts: Type II, Type III+, Subminiature COAXICON.

Special application housings and posted housings may be substituted for these standard housings. See Special Application and Posted Applications Sections.

This cable-to-panel application utilizes jackscrews, a two-piece short shield, a strain relief clamp, a pin hood for pin protection and guide hardware.

Do not use a pin hood in combination with the shield for sizes 20, 26 and 41. A long shield may be used in lieu of pin hood for pin protection for all sizes except the 20 position. Shields are available with 180° cable exit and for the 50 thru 104 position connectors a 90° cable exit. 104CF has 90° and 45° cable exits. 160CF has 45° cable exit.

Select the appropriate jackscrew length for the type of shield chosen as indicated by symbol (△▲).

Number of Positions						Component Description		
41	50	75	104	104CF†	160CF			
202135-2	201358-1	201310-1	201345-1	201692-4	202799-2	Plug Block Receptacle Block	Phenolic	HOUSINGS
201302-1	200277-2	201311-1	201037-1	201532-4	202800-2			
202135-4	201358-3	201310-3	201345-2	201692-3	202799-1	Plug Block Receptacle Block	Diallyl Phthalate	
201302-3	200277-4	201311-3	201037-2	201532-2	202800-1			
—	201443-1△	—	—	—	—	180° Two-Piece Long	Al Anodized	SHIELDS
202383-2	201443-2△	202713-2▲	204173-2▲	—	—		Zinc Plated Steel	
—	200532-1△	—	—	—	—	180° Two-Piece Short	Al Anodized	
202383-1	200532-2△	202713-1▲	204173-1▲	—	—		Zinc Plated Steel	
—	—	204209-1△	201131-1△	—	—		Zinc Plated Cast Al	
—	203975-2▲	202711-3▲	205316-2▲	—	—	90° Two-Piece Long 90° Two-Piece Short 45° Two-Piece Short 45° Two-Piece Deep 180° One-Piece Long 180° One-Piece Short 90° One-Piece Short	Zinc Plated Steel	
—	203975-1▲	202711-1▲	205316-1▲	202395-1	—			
—	—	—	—	202110-1	202798-1			
—	—	—	—	202169-1	—			
—	—	—	—	—	—			
—	—	—	—	—	—			
—	—	—	—	—	—			
—	—	—	—	—	—	Long Short	Zinc Plated Steel	STRAIN RELIEF CLAMPS
—	—	—	—	—	—			
—	—	—	—	—	—	Long Short	Stainless Steel	
—	—	—	—	—	—			
201092-1	2010921	201092-1	201092-1	—	—	Fixed Male Fixed Female	Stainless Steel	JACKSCREWS[1]
201089-1	201089-1	201089-1	201089-1	—	—			
—	207234-1▲	207234-1▲	207234-1▲	—	—	Long Long Male Long Long Female Long Male Long Female Short Short Male Short Short Female	Tip: Stainless Steel Body: Die Cast Zinc	
—	207235-1▲	207235-1▲	207235-1▲	—	—			
201413-1	201413-1△	201413-1△	201413-1△	—	—			
201414-1	201414-1△	201414-1△	201414-1△	—	—			
—	—	—	—	—	—			
—	—	—	—	—	—			
—	—	—	—	—	—	Center Male Center Female Corner Male Corner Female	Stainless Steel	GUIDE HARDWARE
—	—	—	—	—	—			
—	200833-2	201046-2	201046-2	202173-5	201046-2			
—	200835-2[B]	201047-2[C]	201047-2[C]	202174-1[D]	201047-2[C]			
—	—	—	—	—	—	Male—Nickel Plated Spring Steel		LOCKING SPRINGS
—	—	—	—	—	—	Female—Stainless Steel		
—	201317-4	—	—	—	—	Internal Open End	Zinc Plated Steel	PIN HOODS
—	202394-2	201369-4	201364-4	—	203743-4	Internal Closed End	Zinc Plated Steel	
—	—	—	—	—	—	External Closed End	Al Iridite	
—	201390-5	201368-4	201346-4	202119-2	203744-4	External Closed End	Zinc Plated Steel	

†Other plug housings available with slotted hex center fasteners: **Part No. 201692-6** (Phenolic, with long center fastener); **Part No. 201692-2** (Phenolic, with short center fastener); **Part No. 201692-5** (Diallyl Phthalate, with long center fastener)

SOURCE: Catalog 82003

Specifications subject to change.
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1-800-722-1111
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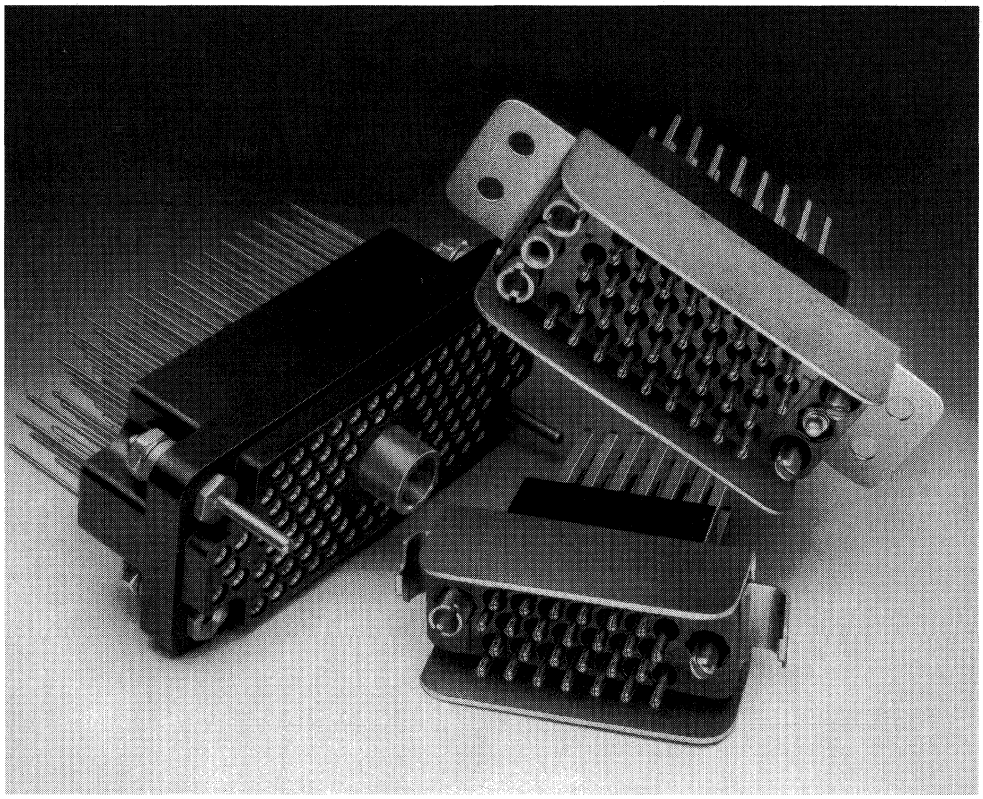
Posted Connectors



Posted connectors are furnished preloaded with size 16, posted contacts (See page 2014) and are specifically designed to be wired with hand tools and semi-automatic machines. The cavity centerline spacing is too close to accommodate the heads and mandrels of fully automatic machines. Post configurations of the preloaded contacts are available for accepting TERMI-POINT Clip and wrap-type terminations.

Posted connector housings are made of black phenolic and are available in sizes ranging from 6 thru 160 positions. They will mate with correspondingly sized standard connector (except .200 [5.08] grid) housings loaded with size 16 crimp-type contacts. It is not recommended to mate two posted connectors. Since the preloaded posted contacts are rigid in the housing, mating two posted connectors, particularly of the larger sizes, would be difficult.

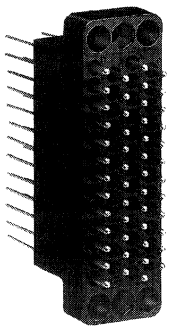
Posted connector can be substituted for standard connectors.

AMP does not recommend the use of shields or strain relief clamps with posted connectors because of the danger of shorting.

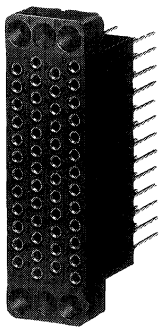
SOURCE: Catalog 82003

Posted Connectors
(Continued)

Plug and Receptacle Assemblies

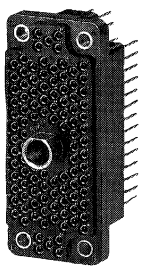


Plug Assembly

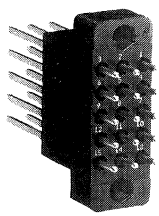


Receptacle Assembly

Receptacle Assemblies with Center Fasteners



Receptacle Assembly



Plug Assembly

Note: 50 Pos. Housing Dim. (Typ.)—2.595 [65.91] L x .915 [23.24] W x .750 [19.05] H

No. of Pos.	Termination Method	Post Configuration	Contact Finish	Part Numbers: Plug Assembly	Part Numbers: Receptacle Assembly
6	Wrap-Type	**.025 x .025** 0.64 x 0.64	Sel. Gold/Nickel	205507-1	205506-1
14	Wrap-Type	**.025 x .025** 0.64 x 0.64	Sel. Gold/Nickel	205317-1	205508-1
				—	3-205508-1
20	Wrap-Type	**.025 x .025** 0.64 x 0.64	Sel. Gold/Nickel	205509-1	205452-1
				—	3-205452-1
	TERMI-POINT Clip	**.022 x .036** 0.56 x 0.91	Sel. Gold/Nickel	1-205509-0	—
26	Wrap-Type	**.025 x .025** 0.64 x 0.64	Sel. Gold/Nickel	205512-1	205511-1
	TERMI-POINT Clip	**.031 x .062** 0.79 x 1.57	Sel. Gold/Nickel	1-205512-3	1-205511-3
34	Wrap-Type	**.025 x .025** 0.64 x 0.64	Sel. Gold/Nickel	205361-1	205505-1
			Bright Tin-Lead	205361-3	205505-3
			Sel. Gold/Nickel	—	3-205505-1
	TERMI-POINT Clip	**.022 x .036** 0.56 x 0.91	Sel. Gold/Nickel	1-205361-0	1-205505-0
		.031 x .062 0.79 x 1.57		1-205361-3	1-205505-3
41	Wrap-Type	**.025 x .025** 0.64 x 0.64	Sel. Gold/Nickel	205510-1	205513-1
				—	3-205513-1
50	Wrap-Type	**.025 x .025** 0.64 x 0.64	Sel. Gold/Nickel	205156-1	205514-1
				—	3-205514-1
	TERMI-POINT Clip	**.022 x .036** 0.56 x 0.91		1-205156-0	1-205514-0
		.031 x .062 0.79 x 1.57		1-205156-3	1-205514-3
75	Wrap-Type	**.025 x .025** 0.64 x 0.64	Sel. Gold/Nickel	205157-1	205515-1
104	Wrap-Type	**.025 x .025** 0.64 x 0.64	Sel. Gold/Nickel	205158-1	205359-1

Notes: 1. Posted connectors listed above have black phenolic housings.
2. Replacement contacts are shown on page 2014.
3. These posted connectors mate with standard connector housings.

104CF	Wrap-Type	**.025 x .025** 0.64 x 0.64	Sel. Gold/Nickel	—	205720-2

Notes: 1. Posted connectors listed above have black phenolic housings.
2. Replacement contacts are shown on page 2014.
3. These posted connectors mate with standard connector housings.

Extraction Tool **Part No. 305183.**

.200 [5.08] Grid

15	TERMI-POINT Clip	**.031 x .062** 0.79 x 1.57	Sel. Gold/Nickel	205628-1△	205698-1 ○
36				205629-1▲	205609-1●
50				205630-1△△	205608-1○○

Notes: 1. Gold flash over .000050 [0.00127] nickel on entire contact wtih .000030 [0.00076] gold to a distance of .200 [5.08] from mating end. Posts are plated tin-lead over copper.
2. Post length .810 [20.57] will accommodate up to 3 terminations.

Extraction Tool —**Part No. 305183**

Refer to pages 2013 and 2014 for contact specifications (Type III+ Size 16).
△ 205606-3 Mating block using crimp snap-in contacts.
○ 205607-2 Mating block using crimp snap-in contacts.
▲ 203956-2 Mating block using crimp snap-in contacts.
● 205076-2 Mating block using crimp snap-in contacts.
△△ 203622-2 Mating block using crimp snap-in contacts.
○○ 205058-2 Mating block using crimp snap-in contacts.

Note: 15 position connector uses standard 26 position hardware.
36 position connector uses standard 50 position hardware.
50 position connector uses standard 75 position hardware.

SOURCE: Catalog 82003

Specifications subject to change.
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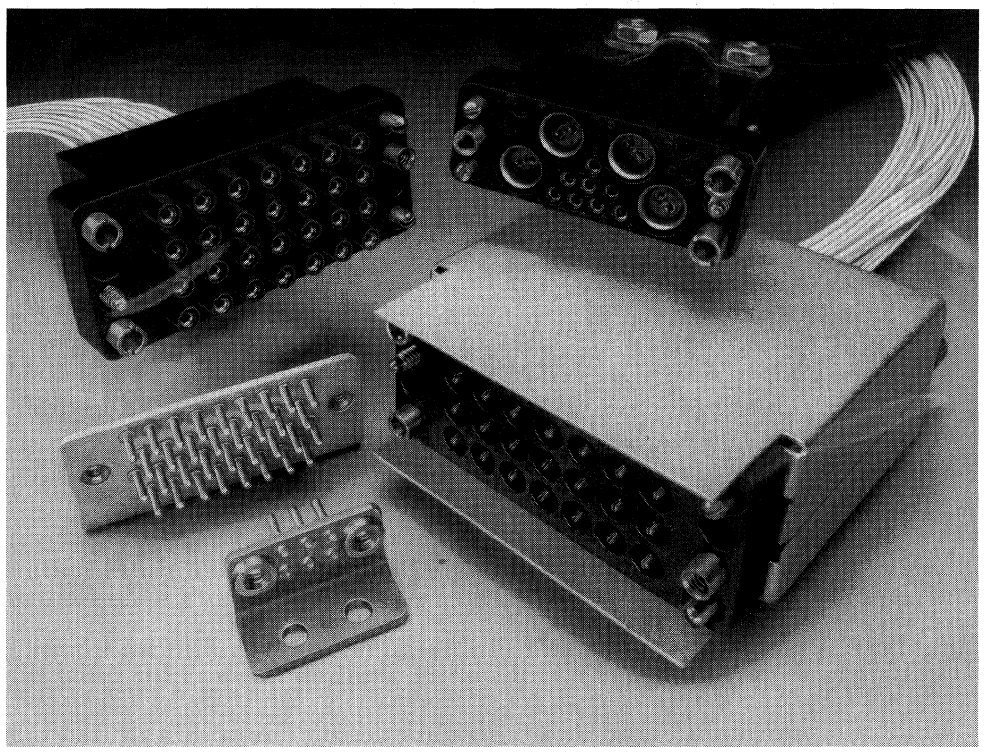
Special Application Connectors



Special Application Connectors are available in the following configurations:

V.35 Connector

The 34 position V.35 Connector is fully assembled and ready for placement on printed circuit board. They are also available in kit form for cable assembly. These AMP V.35 connectors meet the requirements of ISO 2593 for CCITT V.35 interfacing.

Shallow Block Connectors

Designed for use where short depth is required, these shallow block connectors use a short Type II, Size 16, Size 20 and coaxial pin contact. All other block dimensions are the same as the standard block dimensions.

High current connectors are designed for applications requiring up to 25 amperes of current. They are available in 12-position male and female housings which have rectangular contact cavities for accepting Type XII contacts.

Mixed connectors are designed for applications that require intermixing signal, power and/or coaxial circuits in the same connector housing. Housings are available in 15-, 16-, 29 CF- (center fastener) and 42-position sizes and, depending upon the specific configuration, will accept Multimate contacts, Type I and Miniature, Twin Standard COAXICON contacts. The rectangular contact cavities accept Type XII contacts.

High voltage connectors are designed for high voltage applications using Multimate contacts. The cavity centerline spacings and the silo construction of the contact cavities increase the current creepage path for higher voltage ratings. Housing sizes include 20 and 28 positions.

RFI/EMI shielding kits provide shielding capabilities against radio frequency and electro-magnetic interferences. Special 104-position housings accept Multimate contacts and are especially designed for use with shielding hardware. These shielding kits cannot be used with the standard 104-position connector housings.

Grounding blocks are ideally suited for aircraft applications, where shielded cable is to be grounded to an airframe. The ground wires of shielded cable are pigtailed off with ferrules and are crimped to size 16 socket contacts. The contacts are loaded into a standard 14- or 34-position connector housing. This connector then can be mated to the grounding block which is fastened to the aircraft frame. Grounding blocks have size 16 screw-machined pin contacts which are staked, riveted and soldered into the L-shaped metal bracket. The bracket has fixed jackscrew receptacles that will accept the special turnable jackscrews fastened to the mating socket connector half.

Specifications subject to change.
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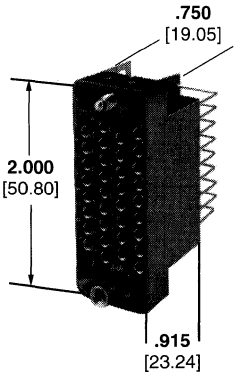
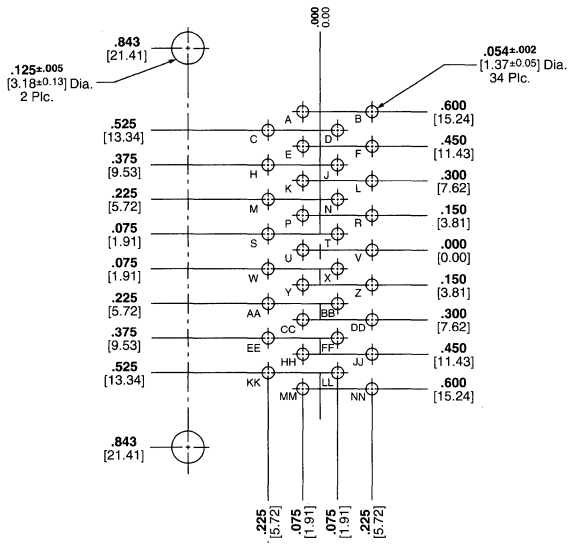
Special Application Connectors
(Continued)

V.35 Printed Circuit Connectors

Right-Angle Receptacles



Right-Angle Receptacle Assembly



Recommended PC Board Hole Pattern
(All dimensions typical)

Note: Pc board layouts and connector dimensions illustrated above serve as a guide only; they are not to be used for actual design or construction of customer equipment. Consult AMP customer drawings for latest detailed pc board layout and connector dimension requirements.

No. of Positions	Boardlocks	Select Load Pattern	Part Numbers
34	No	Fully Loaded	212810-2
19	No	B, C, D, E, F, H, L, M, N, P, R, S, T, U, V, W, X, Y, AA	212810-4
17	No	A, B, C, D, E, F, H, P, R, S, T, U, V, W, X, Y, AA	1-212810-0
14	No	B, C, D, E, F, H, P, R, S, T, V, X, Y, AA	1-212810-1
27	No	A, B, C, D, E, F, H, J, P, R, S, T, U, V, W, X, Y, AA, BB, CC, DD, FF, HH, JJ, KK, LL, NN	1-212810-5
21	Yes	B, C, D, E, F, H, L, N, P, R, S, T, U, V, W, Y, AA, HH, KK, NN	213574-1
34	Yes	Fully Loaded	213574-2
22	Yes	A, B, C, D, E, F, H, J, L, M, N, P, R, S, T, U, V, W, X, Y, AA, NN	213574-3
17	Yes	A, B, C, D, E, F, H, P, R, S, T, U, V, W, X, Y, AA	213574-4
23	Yes	A, B, C, D, E, F, H, J, K, L, N, P, R, S, T, U, V, W, X, Y, AA, BB, NN	213574-6
22	Yes	A, B, C, D, E, F, H, K, L, N, P, R, S, T, U, V, W, X, Y, AA, BB, NN	213574-7
22	Yes	A, B, C, D, E, F, H, J, L, N, P, R, S, T, U, V, W, X, Y, AA, HH, NN	213574-8

Note: Other select loaded configurations can be made available, consult AMP.

SOURCE: Catalog 82003

Specifications subject to change.
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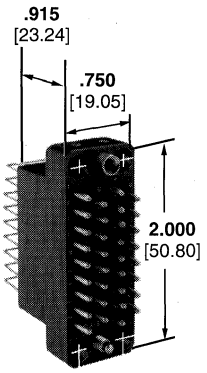
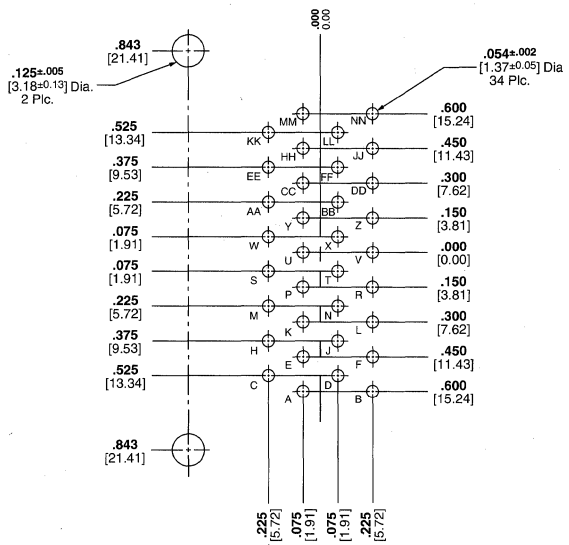
Special Application Connectors
(Continued)

V.35 Printed Circuit Connectors
(Continued)

Right-Angle Plugs



Right-Angle Plug Assembly



Recommended PC Board Hole Pattern
(All dimensions typical)

Note: Pc board layouts and connector dimensions illustrated above serve as a guide only; they are not to be used for actual design or construction of customer equipment. Consult AMP customer drawings for latest detailed pc board layout and connector dimension requirements.

No. of Positions	Boardlocks	Select Load Pattern	Part Numbers
34	No	Fully Loaded	213289-1
34	Yes	Fully Loaded	213513-2
16	Yes	A, B, C, D, E, F, P, R, S, T, U, V, W, Y, AA	213513-3

Note: Other select loaded configurations can be made available, consult AMP.

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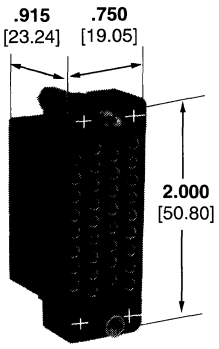
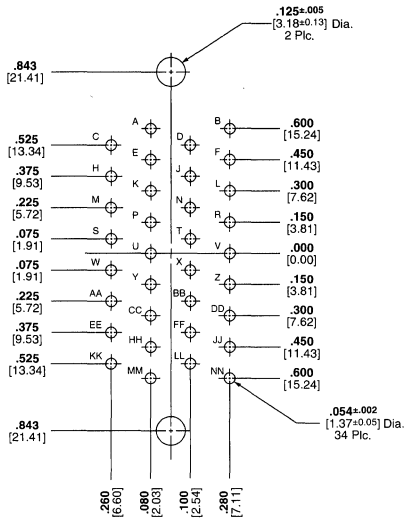
Special Application Connectors
(Continued)

V.35 Printed Circuit Connectors
(Continued)

Vertical Receptacles



Vertical Receptacle Assembly



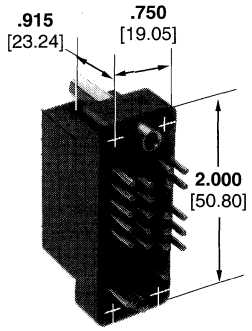
Recommended PC Board Hole Pattern (All dimensions typical)

No. of Positions	Mounting Hardware	Select Load Pattern	Part Numbers
34	None	Fully Loaded	213473-1
34	Spacers	Fully Loaded	213524-1
13	Nuts & Lockwashers	B, C, D, E, F, P, R, S, T, V, W, X, Y, AA	213524-2

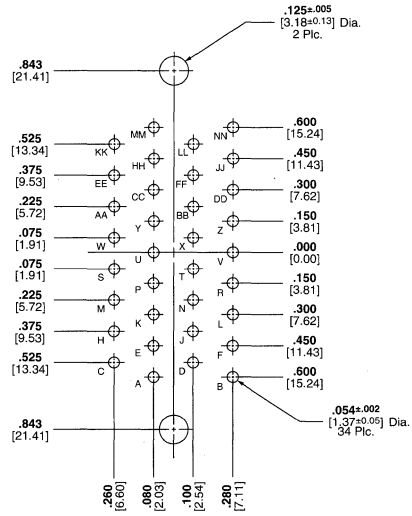
Note: Other select loaded configurations can be made available, consult AMP.

Note: Pc board layouts and connector dimensions illustrated above serve as a guide only; they are not to be used for actual design or construction of customer equipment. Consult AMP customer drawings for latest detailed pc board layout and connector dimension requirements.

Vertical Plugs



Vertical Plug Assembly



Recommended PC Board Hole Pattern (All dimensions typical)

No. of Positions	Mounting Hardware	Select Load Pattern	Part Numbers
22	Spacers	A, B, C, D, E, F, H, J, L, N, P, R, S, T, U, V, W, X, Y, AA, HH, NN	213619-1
19	Spacers*	A, B, C, D, E, F, K, L, N, P, R, S, T, U, V, W, X, Y, AA	213550-1
17	Nuts & Lockwashers	B, C, D, E, F, H, J, P, R, S, T, U, V, W, X, Y, AA	213550-2

*Jackscrews and spacers are provided unassembled.
Note: Other select loaded configurations can be made available, consult AMP.

Note: Pc board layouts and connector dimensions illustrated above serve as a guide only; they are not to be used for actual design or construction of customer equipment. Consult AMP customer drawings for latest detailed pc board layout and connector dimension requirements.

SOURCE: Catalog 82003

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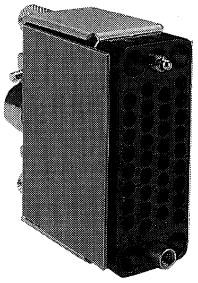
Special Application Connectors
(Continued)

V.35 Cable Connector Kits

Kit includes:
- Housing
- One-piece shield
- One-piece turnable jackscrews
- Strain relief clamp
- Mounting screws



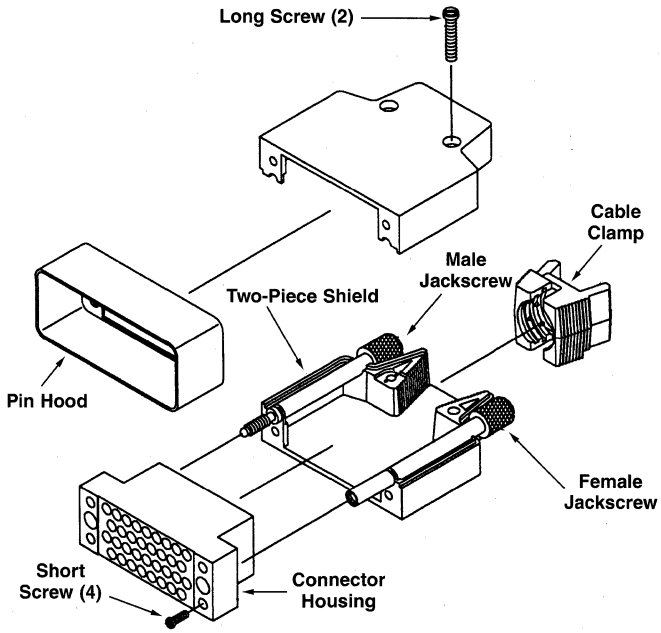
Receptacle

Plug

Shield Size	Cable Dia. (Max.)	Part Numbers	
		Receptacle	Plug
Short	**.500** [12.70]	—	213300-1
Short	**.415** [10.54]	—	213300-2
Long	**.500** [12.70]	—	213300-3
Long	**.415** [10.54]	—	213300-4
Short	**.500** [12.70]	213522-1	—
Short	**.415** [10.54]	213522-2	—

Notes:
1. Plug and receptacle connector kits come partially assembled.
2. Plug connector kits are available with long and short shields (long shield provides pin protection), and two different size cable clamps.
3. Housings are keyed to assure the proper location of the male and female jackscrew as defined by ISO 2593.
4. Short shield kit, **Part No. 213753-1,** available with all accessories except housing block and jackscrews. Part number for blocks are found on page 2041.
5. Pin and socket contacts sold separately. Size 16, Type III+ contacts are listed on page 2013 and 2014.

Kits include:
- Housing
- Two-piece shield
- One-piece turnable jackscrews
- Two cable clamp inserts
- Mounting screws



Notes:
1. Plug and receptacle connector kits come unassembled.
2. Plug connector kits are available with or without pin hoods.
3. Housings are keyed to assure the proper location of the male and female jackscrew as defined by ISO 2593.
4. Choice of stainless steel or zinc die cast one-piece jackscrews.
5. Pin and socket contacts sold separately. Size 16, Type III+ contacts are listed on page 2013 and 2014.

Pin Hood	Cable Range	Jackscrew Type	Part Numbers	
			Receptacle	Plug
No	**.400-.600** [10.16-15.24]	Zinc	—	213684-1
No	**.250-.400** [6.35-10.16]	Zinc	—	213684-2
Yes	**.400-.600** [10.16-15.24]	Zinc	—	213684-3
Yes	**.250-.400** [6.35-10.16]	Zinc	—	213684-4
Yes	**.400-.600** [10.16-15.24]	Stainless Steel	—	213684-5
Yes	**.250-.400** [6.35-10.16]	Stainless Steel	—	213684-6
No	**.400-.600** [10.16-15.24]	Stainless Steel	—	213684-7
No	**.250-.400** [6.35-10.16]	Stainless Steel	—	213684-8
No	**.400-.600** [10.16-15.24]	Zinc	213685-1	—
No	**.250-.400** [6.35-10.16]	Zinc	213685-2	—
No	**.400-.600** [10.16-15.24]	Stainless Steel	213685-3	—
No	**.250-.400** [6.35-10.16]	Stainless Steel	213685-4	—

SOURCE: Catalog 82003

Specifications subject to change.
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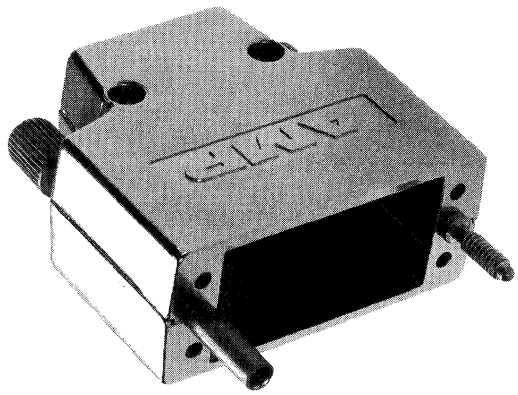
Special Application Connectors
(Continued)

V.35 Shield Kits

Kits include:

- **Two-piece shield**
- **One-piece turnable jackscrews**
- **Mounting screws**

Notes:
1. Shield kits come assembled.
2. Choice of stainless steel or zinc die cast one-piece jackscrews.
3. Pin and socket blocks, cable clamp inserts, and pin hoods sold separately.



Jackscrew	Description	Part Numbers
Zinc Die Cast	To be used without pin hood	213765-1
Zinc Die Cast	To be used with pin hood	213765-2
Stainless Steel	To be used without pin hood	213765-3
Stainless Steel	To be used with pin hood	213765-4

Housing Blocks:

Pin Block
Part No. 213294-2

Receptacle Block
Part No. 213523-2

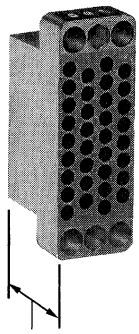
Cable Clamp Insert*	
Part No.	Cable Dia. Range
213621-3	.400-.600 10.16-15.24
213621-4	.250-.400 6.35-10.16

*Seating fixture **Part No. 91296-1** required to fully seat cable clamp inserts.

Pin Hood
Part No. 1-202434-0

Note: Pin and socket contacts sold separately. Size 16, Type III+ contacts, page 2013 and 2014.

Shallow Pin Housings



Note: 34 Pos. Housing Dim. (Typ.)—.750 [19.05] L x .757 [19.23] W x 2.000 [50.8] H

No. of Positions	Part Numbers	
	Phenolic Housings	Diallyl Phthalate Housings
6	202756-1	202756-3
14	201297-1	—
20	200345-2	—
26	200513-2	200513-3
34	200837-2	200837-3
41	201301-1	201301-3
50	200276-2	200276-4
75	201622-1	201622-3
104	201036-1	201036-2

Note: Use same hardware as similar size Standard Housings.

SOURCE: Catalog 82003

Specifications subject to change.
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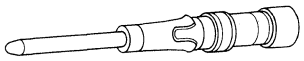
Special Application Connectors
(Continued)

Signal Contacts
Type II, Crimp



Pin
(with Insulation Support)

Socket
(with Insulation Support)

Contact Size 16—Pin Diameter .062 [1.57]

Wire Range AWG	Wire Range [mm²]	Ins. Dia. Range	Tape Mounted Part Numbers Pin*	Tape Mounted Part Numbers Socket**	Loose Piece Contact Numbers Pin*	Loose Piece Contact Numbers Socket**	Contact Color Code
28-24	0.08-0.2	**.035-.055** 0.89-1.4	—	201613-4	201649-1	201613-1	Red/Red
24-20	0.2-0.6	**.040-.062** 1.02-1.57	201647-2	201580-4	201647-1	201580-1	Yellow/Red
		.055-.085 1.4-2.16	200679-5	201328-9	200679-1	201328-1	Yellow/Red
18-16	0.8-1.4	No Insulation Support	200681-3	200333-8*	200681-1	200333-1	Blue/Blue
14	2	No Insulation Support	—	201568-3	201645-1	201568-1	Violet/Blue

Insertion Tool **Part No. 200893-2** for .070 [1.78] ins. dia. or less.
Extraction Tool **Part No. 305183**.
*Use in Shallow Pin Housings, page 2041.
** Use in all Standard Receptacle Housings

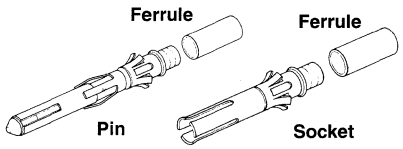
Contact Size 20—Pin Diameter .040 [1.02]

Wire Range AWG	Wire Range [mm²]	Ins. Dia. Range	Loose Piece Contact Numbers Pin*	Loose Piece Contact Numbers Socket**	Contact Color Code
28-24	0.08-0.2	**.035-.055** 0.89-1.4	201607-1	201609-1	Red/Red
		.048-.065 1.22-1.65	201354-1	201353-1	Red/Red
24-20	0.2-0.6	**.040-.062** 1.02-1.57	201582-1	201584-1	Yellow/Red
		.055-.075 1.4-1.91	200334-1	200331-1	Yellow/Red
18-16	0.8-1.4	No Insulation Support	201591-1	201589-1	Blue/Blue

*Use in Shallow Pin Housings, page 2041.
** Use in all Standard Receptacle Housings

RF Contacts

Subminiature COAXICON, Crimp



Selection Chart for Twisted Pairs and Shielded Wire

Wire AWG	Wire [mm²]	Contact Finish	Loose Piece Contact No. Pin	Loose Piece Contact No. Socket	Ferrule No.
30 (Twisted Pair, Solid)	0.05	Gold/Nickel Gold/Copper[1]	51563-3	51565-3	1-332057-0
		Gold/Nickel Gold/Copper[2]	51563-6	51565-6	1-332057-0
28 (Twisted Pair, Solid)	0.08-0.09	Gold/Nickel Gold/Copper[1]	51563-3	51565-3	1-332057-0
		Gold/Nickel Gold/Copper[2]	51563-6	51565-6	1-332057-0
28 (Twisted Pair, Standard; 7 Str., .005 [0.13] Dia.)	0.08-0.09	Gold/Nickel Gold/Copper[1]	51563-3	51565-3	1-332057-0
		Gold/Nickel Gold/Copper[2]	51563-6	51565-6	1-332057-0
26 (Twisted Pair, Solid or Stranded; 7 Str., .0063 [0.16] Dia.)	0.12-0.15	Gold/Nickel Gold/Copper[1]	51563-3	51565-3	1-332057-0
		Gold/Nickel Gold/Copper[2]	51563-6	51565-6	1-332057-0
26 (Shielded, 0.75 [1.91] Max. O.D.)	0.12-0.15	Gold/Nickel Gold/Copper[1]	51563-1	51565-1	1-332057-0
		Gold/Nickel Gold/Copper[2]	51563-4	51565-4	1-332057-0

Extraction Tool **Part No. 305183.**
Note: A ferrule is required for each pin and socket.
[1] .000030 [0.00076] gold over .000050 [0.00127] nickel
[2] .000050 [0.00127] gold over .000050 [0.00127] nickel

Selection Chart for Coaxial Cable

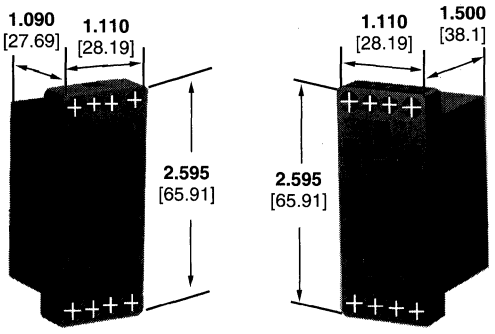
Cable Size (RG/U)	Contact Finish	Loose Piece Contact No. Pin	Loose Piece Contact No. Socket	Ferrule No.
178, 196	Gold/Nickel Gold/Copper[1]	51563-2	51565-2	1-332057-0
	Gold/Nickel Gold/Copper[2]	51563-5	51565-5	
196 (Double Braid)	Gold/Nickel Gold/Copper[1]	51563-2	51565-2	225088-1
	Gold/Nickel Gold/Copper[2]	51563-5	51565-5	
174, 188, 316	Gold/Nickel Gold/Copper[1]	51563-1	51565-1	1-332056-0
	Gold/Nickel Gold/Copper[2]	51563-4	51565-4	
174 (Double Braid)	Gold/Nickel Gold/Copper[1]	51563-1	51565-1	225088-3
	Gold/Nickel Gold/Copper[2]	51563-4	51565-4	
179, 187	Gold/Nickel Gold/Copper[1]	51563-1	51565-1	1-332056-0
	Gold/Nickel Gold/Copper[2]	51563-4	51565-4	
187 (Double Braid)	Gold/Nickel Gold/Copper[1]	51563-1	51565-1	225088-1
	Gold/Nickel Gold/Copper[2]	51563-4	51565-4	
161	Gold/Nickel Gold/Copper[1]	51563-1	51565-1	1-332056-0
	Gold/Nickel Gold/Copper[2]	51563-4	51565-4	

Special Application Connectors

High Current

12 Position

UL Voltage Rating: 1800 V



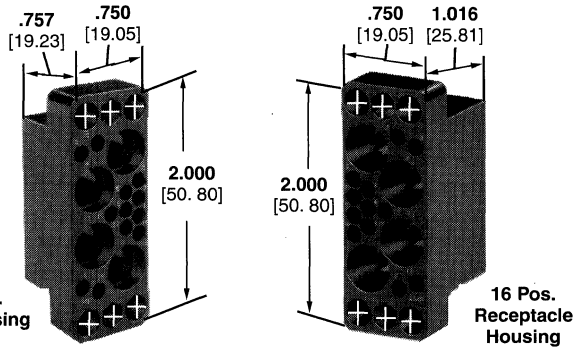
Plug Housing

Receptacle Housing

Phenolic Housing Part No.		Contacts Accepted		
Plug	Receptacle	Quantity	Contact Type	Page Ref.
205042-1	205043-1	12	Type XII	2015

Note: 12 position connector uses Standard 75 position Hardware. Refer to appropriate column of application charts for hardware selections, pages 2018-2033.

Mixed Connectors



16 Pos. Plug Housing

16 Pos. Receptacle Housing

15 Position

Phenolic Housing Part No.		Diallyl Phthalate Housing Part No.		Contacts Accepted		
Plug	Receptacle	Plug	Receptacle	Quantity	Contact Type	Page Ref.
201597-1	201598-1	201597-3	201598-3	12*	Type II	2012
					Type III+	2013-2014
					Subminiature COAXICON	2016
				3*	Type I	2015
					Miniature COAXICON	2016-2017

*Quantity may be all of the same type, or a combination of those types listed.
Note: 15 position connector uses Standard 26 position hardware. Refer to appropriate column of application charts for hardware selection, pages 2018-2033.

16 Position

Phenolic Housing Part No.		Contacts Accepted		
Plug	Receptacle	Quantity	Contact Type	Page Ref.
202268-2	202267-2	12*	Type II Size 20 Type II Size 16	2042
			Subminiature COAXICON Short Pins	2042
		4	Twin Standard COAXICON	2017

*Quantity may be all of the same type, or a combination of those types listed.
Note: 16 position connector uses Standard 34 position hardware. Refer to appropriate column of application charts for hardware selection, pages 2018-2033.

29 CF Position (with Center Fastener)

Phenolic Housing Part No.		Contacts Accepted		
Plug	Receptacle	Quantity	Contact Type	Page Ref.
202479-2	202478-2	14*	Type II	2012
			Type III+	2013-2014
			Subminiature COAXICON	2016
		12	Type XII	2015
		1	Type I	2015
			Miniature COAXICON	2016-2017

*Quantity may be all of the same type, or a combination of those types listed.
Note: Refer to appropriate column of application charts for hardware selection, pages 2018-2033.

42 Position

Phenolic Housing Part No.		Diallyl Phthalate Housing Part No.		Contacts Accepted		
Plug	Receptacle	Plug	Receptacle	Quantity	Contact Type	Page Ref.
202515-1	202516-1	202515-3	202516-3	36*	Type II	2012
					Type III+	2013-2014
					Subminiature COAXICON	2016
				6*	Type I	2015
					Miniature COAXICON	2016-2017

*Quantity may be all of the same type, or a combination of those types listed.
Note: 42 position connector uses Standard 50 position hardware. Refer to appropriate column of application charts for hardware selection, pages 2018-2033.

SOURCE: Catalog 82003

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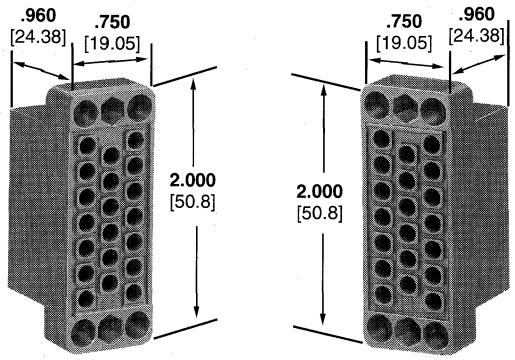
Special Application Connectors
(Continued)

High Voltage

20 Position
UL Voltage Rating: 1800 V

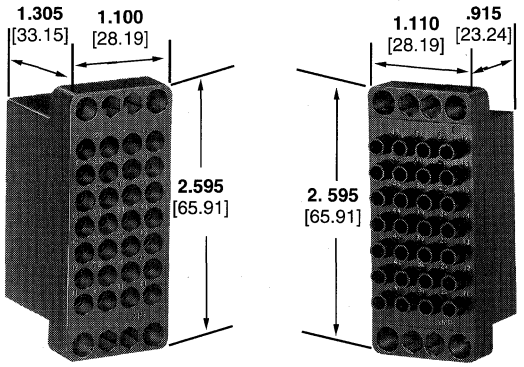


Plug Housing — Receptacle Housing

Diallyl Phthalate Housing Part No.		Contacts Accepted		
Plug	Receptacle	Quantity	Contact Type	Page Ref.
203908-2	203909-2	20*	Type II	2012
			Type III+	2013-2014
			Subminiature COAXICON	2016

*Quantity may be all of the same type, or a combination of those types listed.
Note: 20 position connector uses Standard 34 position hardware. Refer to appropriate column of application charts for hardware selection, page 2018-2033.

28 Position
UL Voltage Rating: 1800 V



Plug Housing — Receptacle Housing

Phenolic Housing Part No.		Contacts Accepted		
Plug	Receptacle	Quantity	Contact Type	Page Ref.
205689-2	205690-2	28*	Type II	2012
			Type III+	2013-2014
			Subminiature COAXICON	2016

*Quantity may be all of the same type, or a combination of those types listed.
Note: 28 position connector uses Standard 75 position hardware. Refer to appropriate column of application charts for hardware selection, pages 2018-2033.

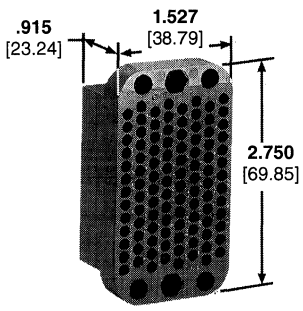
Special Application Connectors
(Continued)

104 Position

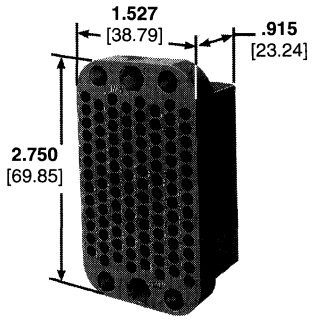
RFI/EMI Shielded

Diallyl Phthalate Housing Part No.		Contacts Accepted		
Plug	Receptacle	Quantity	Contact Type	Page Ref.
208323-3	202902-3	104*	Type II	2012
			Type III+	2013-2014
			Subminiature COAXICON	2016

*Quantity may be all of the same type, or a combination of those types listed.
Notes: 1. Pins and/or sockets may be used in any housing.
2. Shielding kits for these 104-position connector housings are shown below.



Plug Housing



Receptacle Housing

Shielding Kits

Part No. 208783-1
(with Internal Closed-End Pin Hood)

Part No. 208783-2 (with External Closed-End Pin Hood)

Part numbers of individual hardware components for mating connector half are:

Fixed Male Jackscrew—**Part No. 202875-2**

Fixed Female Jackscrew—**Part No. 202876-1**

Corner Guide Pins—**Part No. 201046-2**

Corner Guide Sockets—**Part No. 201047-2**

Internal Closed-End Pin Hood—**Part No. 212554-2**

External Closed-End Pin Hood—**Part No. 212555-2**

Order housings and ferrules separately.

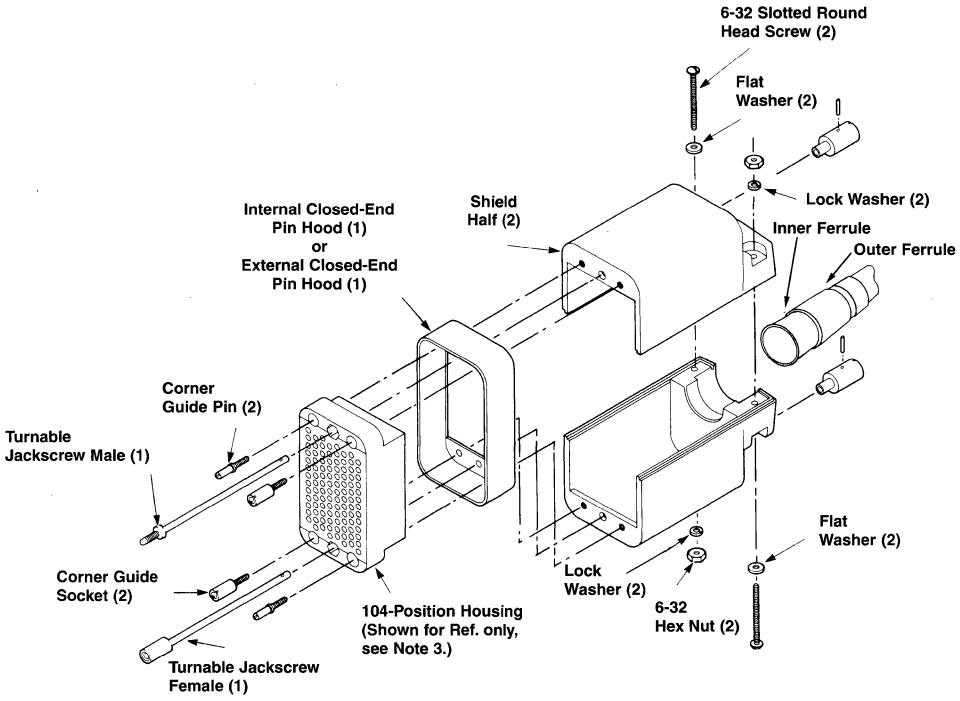
Ferrules:

Inner—**Part No. 211424-2**

Outer—**Part No. 1-211423-2**

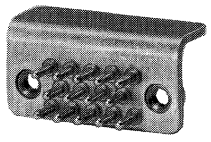
Crimping Tool—**Part No. 90410-1**

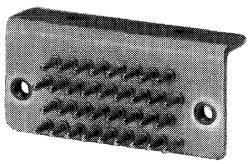
Die—**Part No. 90411-1**



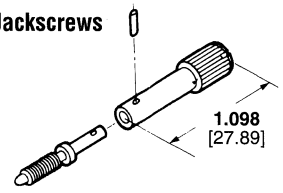
Notes: 1. All parts are packaged unassembled.
2. Each kit is comprised of the components illustrated above. Kit numbers and mating hardware component part numbers are listed at the left.
3. These shielding kits can be used with either pin or socket housing (shown above). **They cannot be adapted to 104-position standard connector housings.**

Grounding Blocks

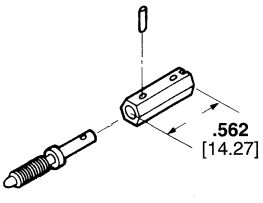

14 Position, Part No. 203540-1


34 Position, Part Number 204814-1

Jackscrews



Short Turnable Jackscrew, Male Part No. 203618-1 (2 Required)



Short-Short Turnable Jackscrew, Male Part No. 203535-2 (2 Required)

Notes: 1. Grounding blocks mate with Standard 14- and 34-position receptacle housings.
2. Use referenced turnable jackscrews on mating housings when mating to grounding blocks.

SOURCE: Catalog 82003

Specifications subject to change.
1-800-522-6752
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1-800-722-1111
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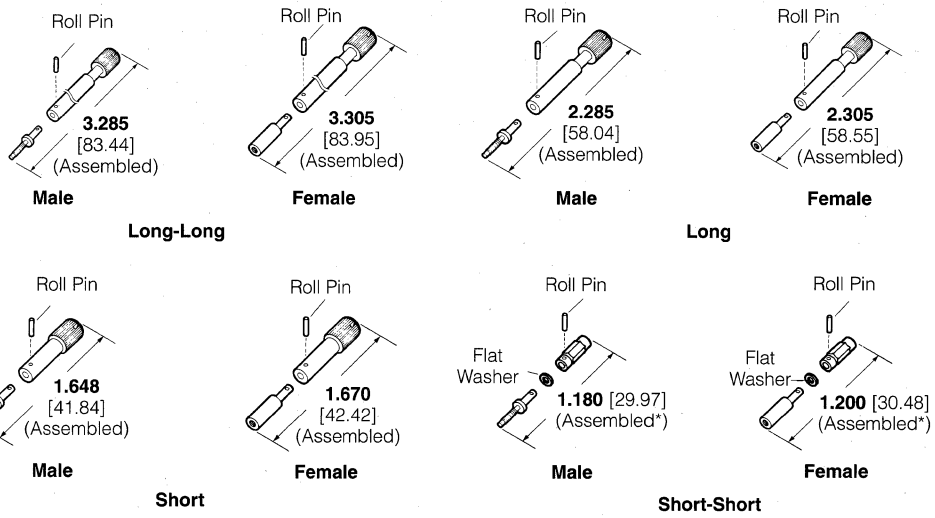
Fastening Hardware

Jackscrews

Jackscrews are used as an aid in mating and unmating connectors and for holding mated connectors together, mostly larger sizes (34-position and up). They can also be used for polarization.

Turnable Jackscrews



*Assembled dimension includes metal thickness of pin hood or strain relief clamp. Remove washer when both pin hood and strain relief clamp are used.

Style	Jackscrew Part No. 6-32 [M3.5 x 0.6] Double-Lead Thread	Jackscrew Part No. 6-32 [M3.5 x 0.6] Single-Lead Thread	Connectors Used on (No. of Positions) Standard	Posted	Special Application High Current	Mixed	High Voltage
Long-Long Male[1]	201911-1	207234-1	50 (90° shield only), 75 and 104	—	12	42	28
Long-Long Female[1]	201910-1	207235-1					
Long Male	200871-1	201413-1	20, 26, 34, 41 and 50	20, 26, 34, 41 and 50	12	15, 16 and 42	20 and 28
Long Female	200867-1	201414-1					
Short Male	200868-1	201087-1	6, 14, 20, 26, 34, 41, 50, 75 and 104	6, 14, 20, 26, 34, 41, 50, 75 and 104	12	15, 16 and 42	20 and 28
Short Female	200870-1	201088-1					
Short-Short Male	201388-1	201827-1	6, 14, 20, 26, 34, 41, 50, 75 and 104	6, 14, 20, 26, 34, 41, 50, 75 and 104	12	15, 16 and 42	20 and 28
Short-Short Female	201389-1	201828-1					

[1] Long-Long Turnable Jackscrews are used only with Two-Piece Shields on the connector sizes listed.

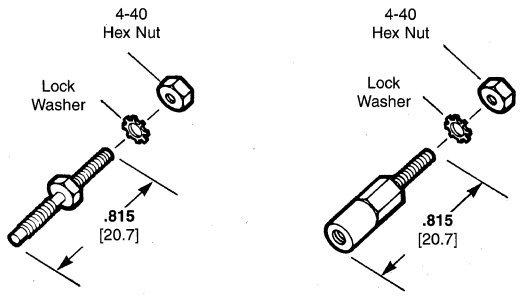
Notes: 1. Turnable Jackscrews mate with any Fixed Jackscrew listed below having the same thread size.
2. Special Turnable Jackscrews for use in connector housings to mate with Grounding Blocks are presented on page 2045.
3. Single-lead versions are designed to mate with competitive jackscrews.

Roll pins for turnable jackscrews, Long-Long, Long, Short **Part No. 201501-1**, Short-Short **Part No. 201501-2.**
Assembly Tool —**Part No. 91016-2** (for Roll Pins)

Fixed Jackscrews

Type	Jackscrew Part No. 6-32 [M3.5 x 0.6] Double-Lead Thread	Jackscrew Part No. 6-32 [M3.5 x 0.6] Single-Lead Thread
Male	200874-1	201092-1
Female	200875-1	201089-1

Notes: 1. Fixed Jackscrews mate with any Turnable Jackscrew listed above having the same thread size.
2. Single-lead versions are designed to mate with competitive jackscrews.
3. Can be readily assembled to a connector housing with Nut Driver Tool **Part No. 811262-1.**



SOURCE: Catalog 82003

Fastening Hardware

Locking Springs

Locking Springs are used to hold mated connectors together. Although Locking Springs can be used on connectors up to 50 positions, they are primarily used on smaller size connectors (less than 34 positions).

In all applications, a Male (Spring Member) is used opposite a Female (Latching Member). They can be secured to a connector housing using Guide Pins and Sockets or 4-40 x .250 [6.35] fillister head screws and nuts. Locking Springs can be used with all hardware, except Closed-End Pin Hoods.

Guiding Hardware

Guide Pins and Sockets

Guiding hardware is used to align connector halves during mating. This hardware can also be used for keying connectors to ensure proper mating. Guiding hardware can be readily secured to connector housings using the Nut Driver Tool.

Center Guide Pins and Sockets are used primarily in housings having a single mounting hole, but can also be used in the centermost hole of housings having 3 or 4 mounting holes.

Corner Guide Pins and Sockets are used in the corner holes of housings having 2, 3 or 4 mounting holes. They cannot be used in center mounting holes which are slightly deeper than corner mounting holes to accept Jackscrews.

Keying Hardware

Keying Plug (for Multimate Contact Cavities)

This cylindrical keying plug is used in Multimate contact cavities that accept Type II, Type III+ and Subminiature COAXICON socket contacts. The plug protrudes from the mating face of a connector and will prevent connector halves from being mated by butting against the pin contact. The mating pin contact must be removed to assure proper mating.

Keying Plugs (for Type XII Contact Cavities)

Two versions of rectangular keying plugs are available for Type XII contact cavities. A pin style is used in cavities that accept Type XII male contacts, and a plug style is used in cavities that accept Type XII female contacts. These keying plugs perform the same as the cylindrical keying plug described above. The mating contact must also be removed to assure proper connector mating.

Strain Relief Hardware

Strain Relief Clamps

Strain Relief Clamps are used to relieve the stress of the wires on the contacts and to group the wires where they enter a connector. Both long and short versions are available. The long versions are normally used for all applications and provide a greater distance between the wire bundle and the connector for operating Jackscrews without interference. The short versions are ideally suited for applications where space is limited.

AMP does not recommend the use of Strain Relief Clamps with posted connectors because of the danger of shorting.

Protective Hardware

Pin Hoods, Internal and External, Open-End and Closed-End

Pin Hoods are used to protect pin contacts that protrude from a connector housing.

When contacts are mixed (pins and sockets in both housings), an Internal Pin Hood is used on one housing and an External Pin Hood is used on the other housing. Or a Long Shield is used on one housing and an External Pin Hood must be used on the other housing. When a housing is loaded with all pin contacts, an Internal or External Pin Hood may be used—no Pin Hood is required on the mating half.

External Open-End Pin Hoods with flanges are used primarily for mounting a connector with pin contacts to a panel.

All Pin Hoods may be secured to connector housings using other appropriate hardware, such as Jackscrews and Guide Pins and Sockets.

Shields, Two-Piece, 180° and 90° Cable Exit

These Two-Piece Shields are used to protect connectors from dust, dirt and physical damage and to provide strain relief for the contacts. They feature integral cable clamps formed at 180° and 90° and are available in long and short versions. Long versions offer pin protection as well as connector protection and strain relief. Short versions may be used in combination with Pin Hoods to provide pin protection.

For shielding and fastening applications, Two-Piece Shields are used with Jackscrews. They may be secured to a connector housing using other appropriate hardware such as Guide Pins and Sockets.

Two-Piece Shields with cable clamps formed at 45° are available.

AMP does not recommend the use of shields with posted connectors because of the danger of shorting.

Shields, One-Piece, 180° and 90° Cable Exit

One-Piece Shields are used to protect connectors from dust, dirt and physical damage and to provide strain relief for the contacts. They feature integral cable clamps formed at 180° and 90° and are available in long and short versions. Long versions offer pin protection as well as connector protection and strain relief. Short versions may be used in combination with Pin Hoods to provide pin protection.

For shielding and fastening applications, One-Piece Shields are used with Locking Springs. They cannot be used with Jackscrews. One-Piece Shields may be secured to a connector housing using other appropriate hardware such as Guide Pins and Sockets.

AMP does not recommend the use of shields with posted connectors because of the danger of shorting.

Shields, Two-Piece, 45° and 30° Cable Exit

These Two-Piece Shields are used to protect connectors from dust, dirt and physical damage and to provide strain relief for the contacts. They feature integral cable clamps formed at 45° and are specifically designed for use with 104CF and 160CF position standard connectors.

These Shields may be used with Pin Hoods to provide pin protection.

These Two-Piece Shields may be secured to a connector housing using other appropriate hardware such as Guide Pins and Sockets.

AMP does not recommend the use of shields with posted connectors because of the danger of shorting.

SOURCE: Catalog 82003

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

CPC (Circular Plastic) and Metal-Shell CPC Connectors

Product Facts

- Lightweight, all-plastic connectors and metal-shell versions available
- CPC connectors are UL 94V-1 rated stabilized, heat resistant, self-extinguishing thermoplastic material
- Metal-Shell CPC connector housings made of UL 94V-0 rated thermoplastic
- Recognized under the Component Program of Underwriters Laboratories Inc. for 250 VAC, rms or 250 VDC, service*, File No. E28476
- Certified by Canadian Standards Association, File No. LR7189
- Operating Temperature Range: -55°C - 105°C
- Four connector series for different interconnection needs:
  - Series 1—Standard density applications with Multimate contacts
  - Series 2—High-density applications with Size 20 DM and 20 DF contacts (.040 [1.02] pin diameter)
  - Series 3—Power density applications with Type XII contacts capable of carrying up to 25 amperes of current
  - Series 4—Combination standard and power density applications with Series 1 and Series 3 contacts
- Available in panel or chassis mount versions and in free-hanging versions
- Quick connect/disconnect capability with thread assist, positive detent coupling
- Built-in pin and socket protection
- 5-key polarization for proper mating of connector halves
- Special connector configurations offer special solder and posted contacts, special receptacles with threaded inserts
- Full complement of optional accessories

* Some connectors are recognized for 600-volt service. Consult AMP for more information

CPC Connectors

These molded plugs and receptacles provide substantial savings in both weight and cost through the use of plastic shells and a wide variety of hand and machine terminated pin and socket contacts. CPC connectors are available in various shell sizes, densities and configurations and are supplied unloaded. Several Series 1 and 2 arrangements are available preloaded with posted contacts. Many connectors can be furnished in either standard sex (receptacles that accept pins, plugs that accept sockets) or reverse sex (receptacles that accept sockets, plugs that accept pins). Also a full complement of optional accessories is available to extend the usefulness of the CPC connectors.

Metal-Shell CPC Connectors

Metal-shell CPC connectors consist of a black thermoplastic insert in a nickel-plated, zinc alloy shell. These connectors are currently available in shell sizes 14, 22 and 28 and in two basic configurations: plugs and square flange receptacles.

SOURCE: Catalog 82021

CPC Connectors Series 1

Part numbers listed are for connectors only; order contacts separately.

Note: Size 11 Housing O.D. Dim. (Typ.) – .687 [17.45]

Standard Sex Connectors

Square Flange Receptacle (Accepts Multimate Pins)

Free-Hanging Receptacle (Accepts Multimate Pins)

Plug (Accepts Multimate Sockets)

Arrangement	Part Numbers		
	Square Flange Receptacle	Free-Hanging Receptacle	Plug
11-4	206061-1	206153-1	206060-1
13-9	206705-1	206705-2	206708-1
17-16	206036-1	206036-3	206037-1
23-24	206838-1	206838-2	206837-1
23-37	206151-1	206151-2	206150-1

Reverse Sex Connectors

Square Flange Receptacle (Accepts Multimate Sockets)

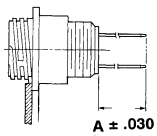
Free-Hanging Receptacle (Accepts Multimate Sockets)

Plug (Accepts Multimate Pins)

Arrangement	Part Numbers		
	Square Flange Receptacle	Free-Hanging Receptacle	Plug
11-4	206430-1	206430-2	206429-1
17-14	206043-1	206043-3	206044-1
23-37	206306-1	206306-2	206305-1

Square Flange Receptacles Preloaded with Posted Contacts, Series 1

These square flange receptacles are preloaded with .025 [0.64] sq. posted contacts.



A ± .030 [±0.76]

Contact Finish:

A—Select—Gold flash over nickel on entire contact, with .000030 [0.00076] gold on electrical engagement area

B—Gold flash over nickel on entire contact

C—Tin

Standard Sex (Posted Pin Contacts)

Arrangement No.	Receptacle Assemblies Part Numbers		Dimension A	Contact Finish Code
	Mounting Holes	Threaded Inserts		
11-4	—	207825-1	**.119** 3.02	A
11-4	—	207825-2	**.220** 5.59	A
13-9	208223-1	208223-3	**.220** 5.59	A
17-16	207303-1	—	**.220** 5.59	C
17-16	207303-3	—	**.220** 5.59	A
23-24	—	213588-1	**.220** 5.59	C
23-37	206934-1	206934-4	**.220** 5.59	A
23-37	208132-1	—	**.429** 10.9	C

Reverse Sex (Posted Socket Contacts)

Arrangement No.	Receptacle Assembly Part No.	Dimension A	Contact Finish Code
11-4	208283-1	**.159** 4.04	A
17-14	213729-1	**.368** 9.53	A
23-37	208224-1	**.557** 14.15	A
23-37	207890-1	**.159** 4.04	A

Note: Posts are .017 [0.43] offset from centerline of contacts. All posts must be oriented in the same plane for proper contact/post location.

Other Available Posted Contacts

Posted contacts are available for loading into the standard or reverse sex square flange receptacles shown above. The chart at the right provides the contact part numbers for ordering Size 16, Type III+ posted contacts. These contacts are .025 [0.64] sq. and accept 32 AWG [0.03 mm²] wire.

Posted Pin Contacts for Standard Sex Square Flange Connectors

3 Term. High Post			2 Term. High Post			1 Term. High Post		
Dimension A	Part No.	Contact Finish Code	Dimension A	Part No.	Contact Finish Code	Dimension A	Part No.	Contact Finish Code
.618 15.7	66460-9	A	**.429** 10.9	66460-8	A	**.220** 5.59	66460-7	A
	66460-6	B		66460-5	B		66460-4	B
	66460-3	C		66460-2	C		66460-1	C

Posted Socket Contacts for Reverse Sex Square Flange Connectors

3 Term. High Post			2 Term. High Post			1 Term. High Post		
Dimension A	Part No.	Contact Finish Code	Dimension A	Part No.	Contact Finish Code	Dimension A	Part No.	Contact Finish Code
.557 14.15	66461-9	A	**.368** 9.35	66461-8	A	**.159** 4.04	66461-7	A
	66461-6	B		66461-5	B		66461-4	B
	66461-3	C		66461-2	C		66461-1	C

SOURCE: Catalog 82021

Specifications subject to change.

1-800-522-6752
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1-800-722-1111
Tooling/Technical Assistance Center

CPC Connectors Series 1, VDE Tested

Part numbers listed are for connectors only; order contacts separately.

Product Facts

- **Meets test requirements of VDE as shown in VDE Test Report File No. 4751-1431-4028/A2J**
- **Recognized under the Component Program of Underwriters Laboratories Inc. for 600 volts AC and DC service, File No. E28476**
- **Certified by Canadian Standards Association, File No. LR 7189**

Note: Size 11 Housing O.D. Dim (Typ.) – .687 [17.45]

Standard Sex Connectors

Square Flange Receptacle
(Accepts Multimate Pins)

Plug
(Accepts Multimate Sockets)

Arrangement	Part Numbers	
	Square Flange Receptacle	Plug
13-7	211401-1	211399-1
17-9	211767-1	211766-1
23-19	211771-1	211770-2

Note: Maximum wire insulation dia. is .150 [3.81].

Reverse Sex Connectors

Square Flange Receptacle
(Accepts Multimate Sockets)

Plug
(Accepts Multimate Pins)

Arrangement	Part Numbers	
	Square Flange Receptacle	Plug
13-7	211398-1	211400-1
17-9	211769-1	211768-1
23-19	211773-1	211772-1

Note: Maximum wire insulation dia. is .150 [3.81].

Multimate Contacts Series 1

Type III+ (Crimp)

Contact Size—16
Pin Diameter—.062 [1.57]
***Test Current**—13 amperes
(Single contact, free-air test current; not to be construed as contact rating current. Use only for testing.)

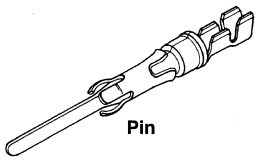
Contact Finish:

A—.000015 [0.00038] gold on the electrical engagement area over .000050 [0.00127] nickel.

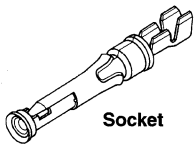
B—.000030 [0.00076] gold on the electrical engagement area over .000050 [0.00127] nickel.

C—Tin

***Note:** Total current capacity of each contact in any given connector is dependent on the heat rise resulting from the combination of electrical loads of all contacts in the connector arrangement and the maximum ambient temperature in which the connector will be operating.



Pin



Socket

Wire Size Range AWG	Wire Size Range [mm²]	Ins. Dia. Range	Contact Finish Code	Strip Form Contact No. Pin	Strip Form Contact No. Socket	Loose Piece Contact No. Pin	Loose Piece Contact No. Socket
30-26	0.05-0.15	.040-.060 1.02-1.52	C	66425-6	66424-6	—	—
			A	66425-7	66424-7	66429-3	66428-3
			B	66425-8	66424-8	66429-4	66428-4
		.014-.030 0.36-0.76	A	66393-7	66394-7	—	—
			B	66393-8	66394-8	66406-4	66405-4
26-24	0.12-0.2	.035-.055 0.89-1.4	C	66106-6	66108-6	66107-2	66109-2
			A	66106-7	66108-7	66107-3	66109-3
			B	66106-8	66108-8	66107-4	66109-4
24-20	0.2-0.6	.040-.080 1.02-2.03	C	66102-7	66104-7	66103-2	66105-2
			A	66102-8	66104-8	66103-3	66105-3
			B	66102-9	66104-9	66103-4	66105-4
		.080-.100 2.03-2.54	C	66332-5	66331-5	66400-1	66399-1
			A	66332-7	66331-7	66400-3	66399-3
			B	66332-8	66331-8	66400-4	66399-4
		.060-.135[1] 1.52-3.43	C	66564-6	66563-6	66566-2	66565-2
			A	—	66563-7	66566-3	66565-3
			B	66564-8	66563-8	66566-4	66565-4
18-16	0.8-1.4	.080-.100 2.03-2.54	C	66098-7	66100-7	66099-2	66101-2
			A	66098-8	66100-8	66099-3	66101-3
			B	66098-9	66100-9	66099-4	66101-4
18-14[2]	0.8-2	.110-.150[2] 2.79-3.81	C	66597-1	66598-1	66602-1	66601-1
			B	66597-2	66598-2	66602-2	66601-2
18-14	0.8-2	.080-.100 2.03-2.54	C	66359-6	66358-6	66361-2	66360-2
			A	66359-9	66358-9	66361-3	66360-3
			B	1-66359-0	1-66358-0	66361-4	66360-4

[1] When crimping insulation with diameters greater than .100 [2.54], contacts can only be used for Series 1 connectors (Arrangement No. 23-24), Series 4 connectors (Arrangement Nos. 23-13M, 23-16M and 23-22M) and VDE connectors.
[2] Contacts can only be used for Series 1 connectors (Arrangement No. 23-24), Series 4 connectors (Arrangement Nos. 23-13M, 23-16M and 23-22M) and VDE connectors.
Insertion Tool-Tweezer Style—**Part No. 91002-1**
Insertion Tool for High Density Application—**Part No. 200893-2.**
Extraction Tool **Part No. 305183**

SOURCE: Catalog 82021

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

Multimate Contacts Series 1
(Continued)

Type III+ (Solder Version)

Contact Size—16
Pin Diameter—.062 [1.57]
***Test Current**—13 amperes (Single contact, free-air test current; not to be construed as contact rating current. Use only for testing.)

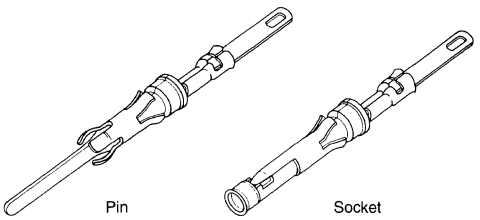
Contact Finish:

A—.000030 [0.00076] gold over .000050 [0.00127] nickel

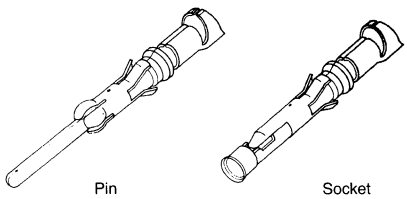
B—Tin

***Note:** Total current capacity of each contact in any given connector is dependent on the heat rise resulting from the combination of electrical loads of all contacts in the connector arrangement and the maximum ambient temperature in which the connector will be operating.

Solder Tab



Solder Type (with preformed wire barrel/insulation support)



Wire Size Range[1]		Contact Finish Code	Loose Piece Contact No.	
AWG	[mm²]		Pin	Socket
26-20	0.12-0.6	A	66182-1	66183-1
18-16	0.8-1.4		66180-1	66181-1
Solder Tab	—	A	202236-1[2]	202237-1[2]
		B	202236-2	202237-2

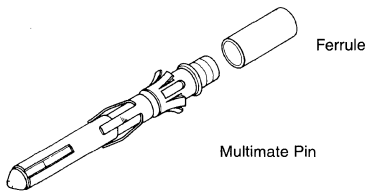
[1] Wire strip length—.156 [3.96] (all wire sizes).
[2] Tin-lead on solder tail.
Note: These contacts can also be used in Series 4 connectors with Multimate contact cavities.

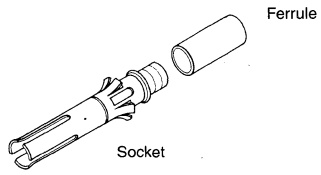
Subminiature COAXICON Contacts

Contact Finish:

Center Contacts, Outer Shells—.000030 [0.00076] gold over .000050 [0.00127] nickel

Ferrules—Tin plated





Cable Size		Loose Piece Contact No.		Ferrule No.
RG/U or AWG	[mm²]	Pin	Socket	
RG/U-178, 196	—	226537-2	51565-2[1]	1-332057-0
RG/U-196 Double Braid	—	226537-2	51565-2[1]	225088-1
RG/U-174, 188, 316	—	226537-1	51565-1	1-332056-0
RG/U-174 Double Braid	—	226537-1	51565-1	225088-3
RG/U-179, 187	—	226537-1	51565-1	1-332056-0
RG/U-187 Double Braid	—	226537-1	51565-1	225088-1
RG/U-161	—	226537-1	51565-1	1-332056-0
26 AWG Shielded, .075 [1.91] Max. O.D.	0.12-0.15	226537-1	51565-1	1-332057-0
26 AWG Twisted Pair, Solid or Stranded (7 str.), .0063 [0.16] Dia.	0.12-0.15	226537-3	51565-3	1-332057-0
28 AWG Twisted Pair, Solid	0.08-0.09	226537-3	51565-3	1-332057-0
28 AWG Twisted Pair, Stranded (7 Str.), .005 [0.13] Dia.	0.08-0.09	226537-7	51565-3	1-332057-0
30 AWG Twisted Pair, Solid	0.05	226537-3	51565-3	1-332057-0

[1]These contacts have insulating liner inside support sleeve.
Note: These contacts can also be used in Series 4 connectors with Multimate contact cavities.
Extraction Tool **Part No. 305183.**

SOURCE: Catalog 82021

Specifications subject to change.

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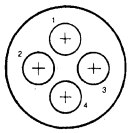
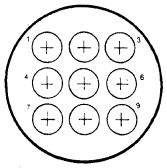
Contact Arrangements Series 1

Shell Sizes 11 and 13

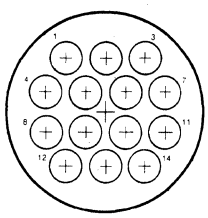


Arrangement 11-4
Max. Wire Ins. Dia. = .100 [2.54]

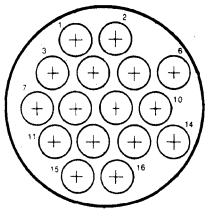


Arrangement 13-9
Max. Wire Ins. Dia. = .100 [2.54]

Shell Size 17

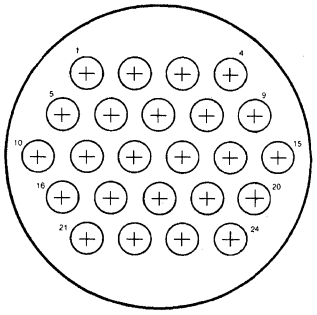


Arrangement 17-14
Max. Wire Ins. Dia. = .100 [2.54]

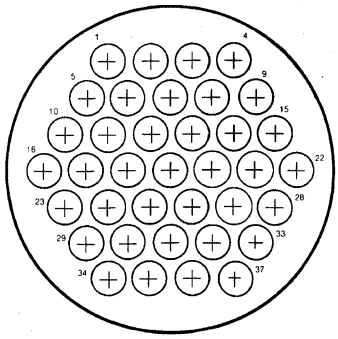


Arrangement 17-16
Max. Wire Ins. Dia. = .100 [2.54]

Shell Size 23



Arrangement 23-24
Max. Wire Ins. Dia. = .150 [3.81]

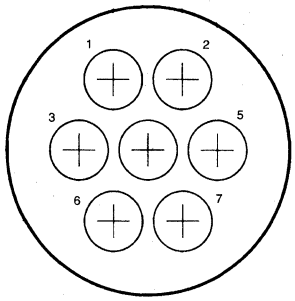


Arrangement 23-37
Max. Wire Ins. Dia. = .100 [2.54]

Contact Arrangements Series 1, VDE Tested

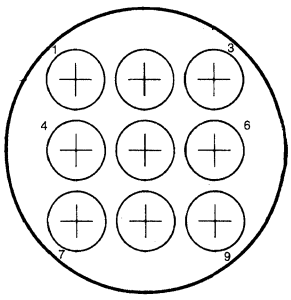
Note: Contact arrangements shown are of pin mating face (plug or receptacle). Socket mating face is mirror image.

Shell Size 13



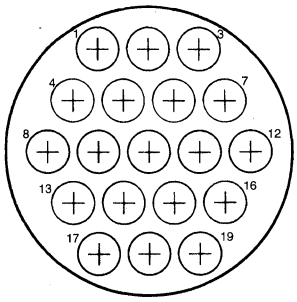
Arrangement 13-7
Max. Wire Ins. Dia. = .150 [3.81]

Shell Size 17



Arrangement 17-9
Max. Wire Ins. Dia. = .150 [3.81]

Shell Size 23



Arrangement 23-19
Max. Wire Ins. Dia. = .150 [3.81]

SOURCE: Catalog 82021

CPC Connectors Series 2

Part numbers listed are for connectors only; order contacts separately.

Note: Size 11 Housing O.D. Dim (Typ.) – .688 [17.48]

Standard Sex Connectors

Square Flange Receptacle (Accepts Size 20 DM or DF Pins)

Free-Hanging Receptacle (Accepts Size 20 DM or DF Pins)

Plug (Accepts Size 20 DM or DF Sockets)

Arrangement	Part Numbers		
	Square Flange Receptacle	Free-Hanging Receptacle	Plug
11-8	205841-1	205841-2	205838-1
11-9	206486-1	206486-2	206485-1
17-28	205840-3	206152-1	205839-3
23-63	205843-1	205843-2	205842-1

Note: Maximum wire insulation dia. is .068 [1.73]

Reverse Sex Connectors

Square Flange Receptacle (Accepts Size 20 DM or DF Sockets)

Free-Hanging Receptacle (Accepts Size 20 DM or DF Sockets)

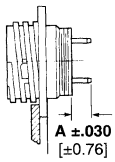
Plug (Accepts Size 20 DM or DF Pins)

Arrangement	Part Numbers		
	Square Flange Receptacle	Free-Hanging Receptacle	Plug
11-8	206433-1	206433-2	206434-1
17-28	206038-1	206038-2	206039-1
23-57	206438-1	206438-2	206437-1

Note: Maximum wire insulation dia. is .068 [1.73]

Square Flange Receptacles Preloaded with Posted Contacts Series 2

These square flange receptacles are preloaded with .025 [0.64] sq. posted contacts.



Contact Finish:

A—Select—Gold flash over nickel on entire contact, with .000030 [0.00076] gold on electrical engagement area

B—Gold flash over nickel on entire contact

Standard Sex (Posted Pin Contacts)

Arrangement No.	Receptacle Assemblies Part No.	Dimension A	Contact Finish Code
11-9	206852-2	**.125** 3.18	A
11-9	206582-1	**.352** 8.94	A
17-28	207369-1	**.125** 3.18	A
23-63	206455-2	**.227** 5.77	A
23-63	206455-1	**.449** 11.4	A

Reverse Sex (Posted Socket Contacts)

Arrangement No.	Receptacle Assemblies Part Number		Dimension A	Contact Finish Code
	Mounting Holes	Threaded Inserts		
11-8	208657-1	208657-2	**.352** 8.94	A
11-8	—	208657-5	**.574** 14.58	A
17-28	207216-2	211886-1	**.125** 3.18	B
17-28	—	207216-6	**.352** 8.94	A

Note: Posts are .017 [0.43] offset from centerline of contacts. All posts must be oriented in the same plane for proper contact/post location.

Other Available Posted Contacts

Posted contacts are available for loading into the standard or reverse sex square flange receptacles shown above. The charts at the right provide the contact part numbers for ordering Size 20 DF posted contacts. These contacts are .025 [0.64] sq. and accept 32 AWG [0.03 mm²] wire.

Posted Pin Contacts for Standard Sex Square Flange Connectors

Shell Size	.215 [5.46] Post Length			.288 [7.32] Post Length			.515 [13.08] Post Length			.737 [18.72] Post Length		
	Dim. A	Part No.	Contact Finish Code	Dim. A	Part No.	Contact Finish Code	Dim. A	Part No.	Contact Finish Code	Dim. A	Part No.	Contact Finish Code
11 and 17	**.052** 1.32	745287-4 745287-2	A B	**.125** 3.18	2-745287-0 1-745287-8	A B	**.352** 8.94	745287-8 745287-6	A B	**.574** 14.58	1-745287-2 1-745287-0	A B
23	—	—	—	—	—	—	**.227** 5.77	745287-8 745287-6	A B	**.449** 11.4	1-745287-2 1-745287-0	A B

Posted Socket Contacts for Reverse Sex Square Flange Connectors

Size	.215 [5.46] Post Length			.288 [7.32] Post Length			.515 [13.08] Post Length			.737 [18.72] Post Length		
	Dim. A	Part No.	Contact Finish Code	Dim. A	Part No.	Contact Finish Code	Dim. A	Part No.	Contact Finish Code	Dim. A	Part No.	Contact Finish Code
11 and 17	**.052** 1.32	745288-4 745288-2	A B	**.125** 3.18	2-754288-0 1-745288-8	A B	**.352** 8.94	745288-8 745288-6	A B	**5.74** 14.58	1-745288-2 1-745288-0	A B
23	—	—	—	—	—	—	**.227** 5.77	745288-8 745288-6	A B	**.449** 11.4	1-745288-2 1-745288-0	A B

SOURCE: Catalog 82021

Specifications subject to change.

1-800-522-6752
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Tooling/Technical Assistance Center

Contacts
Series 2

Crimp Snap-In Contacts

Contact Size—20 DF
Pin Diameter—.040 [1.02]
***Test Current**—7.5 amperes
(Single contact, free-air test current; not to be construed as contact rating current. Use only for testing.)

Contact Finish:

A—Select—Gold flash over nickel on entire contact, with additional .000030 [0.00076] gold on mating end

B—Duplex—.000030 [0.00076] gold on mating end, tin-lead on termination end, with entire contact nickel underplated

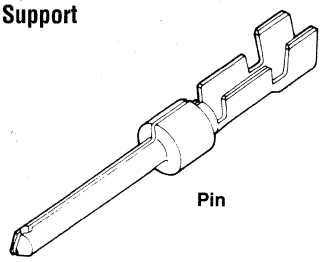
C—Gold flash over nickel on entire contact

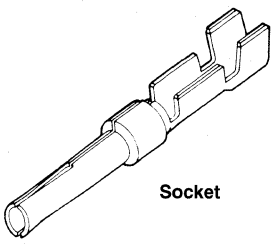
D—Duplex—Gold flash on mating end, tin-lead on termination end, with entire contact nickel underplated

E—Duplex—Gold flash on mating end, tin-lead on termination end, with entire contact nickel underplated (Short Point of Contact [S.P.O.C.])

***Note:** Total current capacity of each contact in any given connector is dependent of the heat rise resulting from the combination of electrical loads of all contacts in the connector arrangement and the maximum ambient temperature in which the connector will be operating.

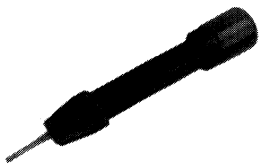
With Insulation Support


Pin


Socket

Wire Size Range AWG	Wire Size Range mm²	Ins. Dia. (Max.)	Contact Finish Code	Contact Part Nos. Pin Strip Form	Pin Loose Piece	Socket Strip Form	Socket Loose Piece
28-24	0.08-0.2	.040 1.02	A	66507-3	66507-9	66505-3	66505-9
			B	3-66507-0	5-66507-7	6-66505-0	6-66505-2
			C	66507-4	1-66507-0	66505-4	1-66505-0
			D	3-66507-1	5-66507-9	5-66505-7	5-66505-9
		.060 1.52	A	66682-2	66682-4	66683-2	66683-4
			B	66682-9	1-66682-1	1-66683-0	1-66683-2
			D	66682-6	66682-8	66683-7	66683-9
26-22	0.12-0.4	.050 1.27	A	745254-2	745254-6	745253-2	745253-6
			B	1-745254-4	1-745254-6	1-745253-4	1-745253-6
			C	745254-3	745254-7	745253-3	745253-7
			D	1-745254-1	1-745254-3	1-745253-1	1-745253-3
24-20	0.2-0.6	.060 1.52	A	66506-3	66506-9	66504-3	66504-9
			B	2-66506-4	5-66506-7	5-66504-9	6-66504-0
			C	66506-4	1-66506-0	66504-4	1-66504-0
			D	2-66506-5	5-66506-9	5-66504-6	5-66504-7
			E	—	—	748321-2	748321-6

PRO-CRIMPER II Hand Tool Part No. 58448-2.


Insertion/Extraction Tool Part No. 91285-1

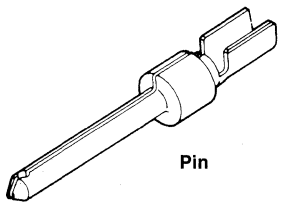
This tool includes interchangeable tips to insert/extract:

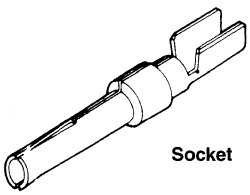
Size 22, 28-22 AWG [0.08-0.03 mm²] Crimp Contacts

Size 20, 28-20 AWG [0.08-0.6 mm²] Crimp and Solder Cup Contacts

Size 20, Posted Contacts

Without Insulation Support


Pin


Socket

Wire Size Range AWG	Wire Size Range mm²	Ins. Dia. (Max.)	Contact Finish Code	Contact Part Nos. Pin Strip Form	Pin Loose Piece	Socket Strip Form	Socket Loose Piece
28-24	0.08-0.2	.068 1.73	A	205310-2	205310-8	205311-3	205311-9
			B	2-205310-5	2-205310-7	2-205311-1	2-205311-3
			C	205310-4	1-205310-0	205311-4	1-205311-0
			D	2-205310-2	2-205310-4	1-205311-8	2-205311-0
24-20	0.2-0.6	.068 1.73	A	205202-2	205202-4	205201-3	205201-5
			B	2-205202-5	2-205202-7	2-205201-5	2-205201-7
			C	205202-6	205202-7	205201-6	205201-7
			D	2-205202-2	2-205202-4	2-205201-2	2-205201-4
22-18	0.3-0.9	.068 1.73	A	745229-2	745229-4	745230-2	745230-4
			B	1-745229-1	1-745229-3	1-745230-1	1-745230-3
			C	745229-5	745229-7	745230-5	745230-7
			D	745229-8	1-745229-0	745230-8	1-745230-0

Note: Wire insulation diameter is limited by the connector housing cavity and clearance for the insertion/extraction tool.

SOURCE: Catalog 82021

Contacts
Series 2
(Continued)

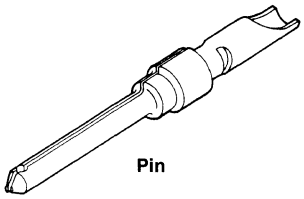
Solder Cup Contacts, Snap-In

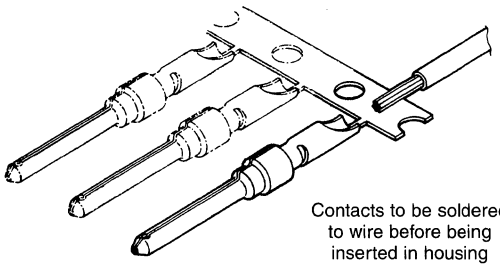
Contact Size—20 DF
Pin Diameter—.040 [1.02]
***Test Current**—7.5 amperes
(Single contact, free-air test current; not to be construed as contact rating current. Use only for testing.)

Finish:

Gold flash over nickel on entire contact, with additional .000030 [0.00076] gold on mating end

***Note:** Total current capacity of each contact in any given connector is dependent on the heat rise resulting from the combination of electrical loads of all contacts in the connector arrangement and the maximum ambient temperature in which the connector will be operating.





Contacts to be soldered to wire before being inserted in housing

18 AWG [0.08-0.09 mm²] Max. Wire

Strip Form Contact No.		Loose Piece Contact No.	
Pin	Socket	Pin	Socket
66570-2	66569-2	66570-3	66569-3

Insertion/Extraction Tool
Part No. 91285-1

This tool includes interchangeable tips to insert/extract:

Size 22, 28-22 AWG [0.08-0.3 mm²] Crimp Contacts

Size 20, 28-20 AWG [0.08-0.6 mm²] Crimp and Solder Cup Contacts

Size 20, Posted Contacts

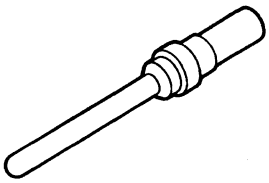
Size 20 DM Contacts (Screw-Machined)

Contact Size—20 DM
Pin Diameter—.040 [1.02]
***Test Current**—7.5 amperes
(Single contact, free-air test current; not to be construed as contact rating current. Use only for testing.)

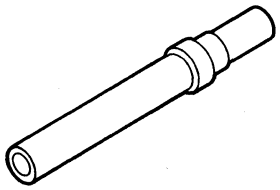
Finish:

Pin and Socket Body—
.000050-.000100 [0.00127-0.00254] gold over .000100-.000150 [0.00254-0.00381] copper
Gold plating per MIL-G-45204; copper plating per MIL-C-14550

***Note:** Total current capacity of each contact in any given connector is dependent on the heat rise resulting from the combination of electrical loads of all contacts in the connector arrangement and the maximum ambient temperature in which the connector will be operating.



Pin
M39029/64-369
(Supersedes M24308/11-1)



Socket
M39029/63-368
(Supersedes M24308/10-1)

Wire Size Range[1]		Ins. Dia. (Max.)	Contact Configuration	Tape Mounted Contacts[2]	Loose Piece Contacts		Hand Tool Nos.		Positioner Nos.	
AWG	mm²			AMP Part No.	Military Part No. (M39029/)	AMP Part No.	Military (M22520/)	AMP	Military M22520/)	AMP
24-20	0.2-0.6	.068 1.73	Pin	205089-2	64-369	205089-1	02-01	601966-1	2-08	601966-5
			Socket	205090-2	63-368	205090-1				

[1] Wire strip length—.140 [3.56] (all wire sizes).
[2] Tape mounted contacts are reeled for the AMP-TAPEMATIC Stripper/Crimper Machine **Part No. 599406-7,** requires Funnel **Part No. 125905-1.**
Note: These contacts are used in Series 2 connectors only.
Insertion/Extraction Tool, Military **Part No. M81969/1-02**, AMP **Part No. 91067-2.**
Insertion Replacement Tip **Part No. 126195-3.**
Extraction Replacement Tip **Part No. 126195-4.**

SOURCE: Catalog 82021

Specifications subject to change.
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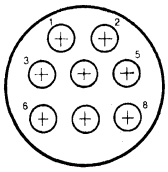
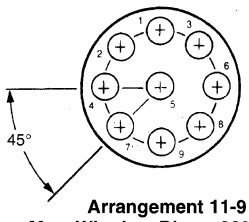
1-800-722-1111
Tooling/Technical Assistance Center

Contact Arrangements
Series 2

Shell Size 11

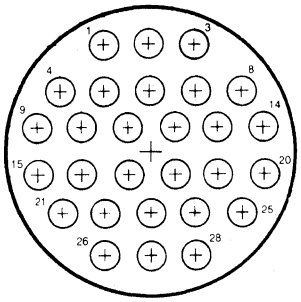


Arrangement 11-8
Max. Wire Ins. Dia. = .068 [1.73]



Arrangement 11-9
Max. Wire Ins. Dia. = .068 [1.73]

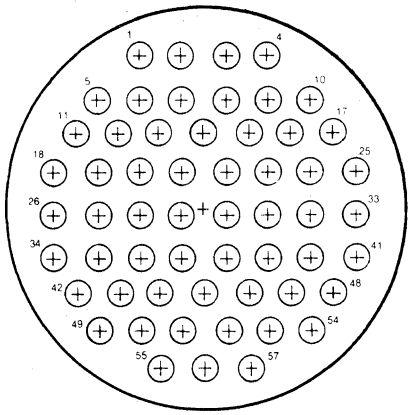
Shell Size 17



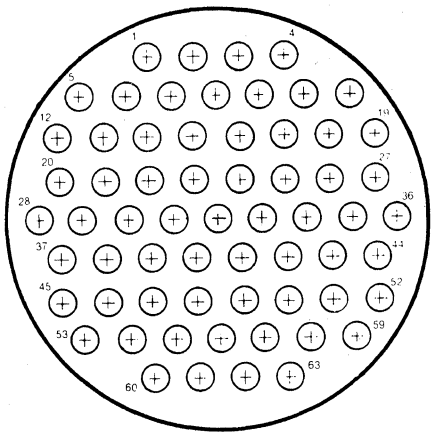
Arrangement 17-28
Max. Wire Ins. Dia. = .068 [1.73]

Shell Size 23

Note: Contact arrangements shown are of pin mating face (plug or receptacle). Socket mating face is mirror image.



Arrangement 23-57
Max. Wire Ins. Dia. = .068 [1.73]



Arrangement 23-63
Max. Wire Ins. Dia. = .068 [1.73]

SOURCE: Catalog 82021

CPC Connectors Series 3

Part numbers listed are for connectors only; order contacts separately.

Note: Size 17 Housing O.D. Dim (Typ.) – 1.050 [26.67]

Standard Sex Connectors

Square Flange Receptacle (Accepts Type XII Male Pins)

Free-Hanging Receptacle (Accepts Type XII Male Pins)

Plug (Accepts Type XII Female Sockets)

Arrangement	Part Numbers		
	Square Flange Receptacle	Free-Hanging Receptacle	Plug
17-3	206036-2	206207-1	206037-2
23-7	206137-1	206137-2	206136-1

Note: Maximum wire insulation dia. is .220 [5.59].

Reverse Sex Connectors

Square Flange Receptacle (Accepts Type XII Female Sockets)

Free-Hanging Receptacle (Accepts Type XII Female Sockets)

Plug (Accepts Type XII Male Pins)

Arrangement	Part Numbers		
	Square Flange Receptacle	Free-Hanging Receptacle	Plug
17-3	206425-1	206425-2	206426-1
23-7	206227-1	206227-2	206226-1

Note: Maximum wire insulation dia. is .220 [5.59].

Contacts Series 3

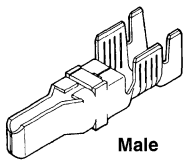
Type XII Contacts

Operating Current—25 amperes, max. - gold and silver.

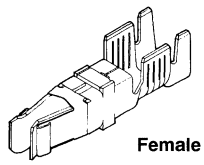
Finish:

A—Select—Gold flash over .000030 [0.00076] nickel on entire contact, with additional .000030 [0.00076] gold on electrical engagement area.

B—Silver—.000200 [0.00508] silver, with lubricant added—recommended for high current/vibration applications where fretting corrosion is a problem.



Male



Female

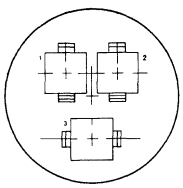
Wire Size Range		Ins. Dia. Range	Contact Finish Code	Strip Form Contact No.		Loose Piece Contact No.	
AWG	[mm²]			Male	Female	Male	Female
16 and 14-12	1.25-1.4 and 2-3	**.135-.160** 3.43-4.06	A	66255-6	1-66740-1	66261-2	66740-6
				66256-4[1]		66262-2[1]	
			B	66255-8	66740-9	66261-4	66740-2
				—		66262-4[1]	
10-8	5-8	**.190-.220** 4.83-5.59	A	66253-6	1-66741-1	66259-2	66741-6
				—		66260-2[1]	
			B	66253-8	66741-9	66259-4	66741-2
				—		66260-4[1]	

[1] Grounding contact.
Extraction Tool **Part No. 91019-3**

Contact Arrangements Series 3

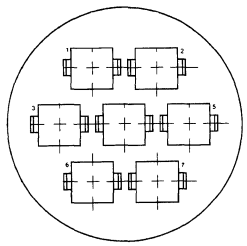
Note: Contact arrangements shown are of pin mating face (plug or receptacle). Socket mating face is mirror image.

Shell Size 17



Arrangement 17-3
Max. Wire Ins. Dia. = .220 [5.59]

Shell Size 23



Arrangement 23-7
Max. Wire Ins. Dia. = .220 [5.59]

SOURCE: Catalog 82021

Specifications subject to change.

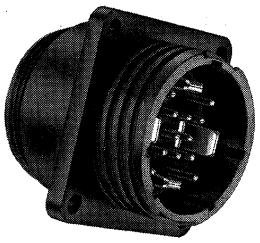
1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

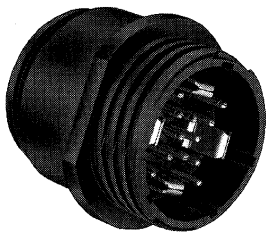
CPC Connectors
Series 4

Part numbers listed are for connectors only; order contacts separately.

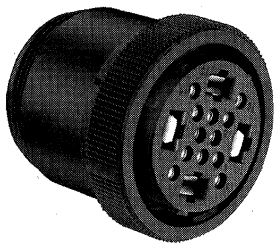
Standard Sex Connectors



Square Flange Receptacle
(Accepts Type XII Male and Multimate Pins)



Free-Hanging Receptacle
(Accepts Type XII Male and Multimate Pins)



Plug
(Accepts Type XII Female and Multimate Sockets)

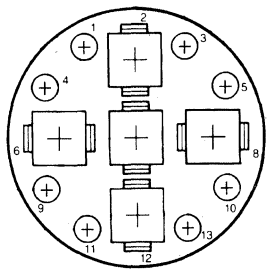
Note: Size 23 Housing O.D. Dim. (Typ.) – 1.438 [36.53]

Arrangement	No. of Cavities		Part Numbers		
	Power	Multimate	Square Flange Receptacle	Free-Hanging Receptacle	Plug
23-13M	5	8	211825-1	211825-2	211824-1
23-16M	4	12	207486-1	207486-2	207485-1
23-22M	2	20	206613-1	206613-3	206612-1

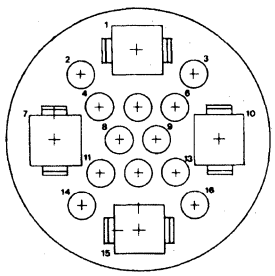
Note: Maximum wire insulation dia. is .150 [3.81] for Multimate contacts; .220 [5.59] for Power contacts.

Contact Arrangements
Series 4

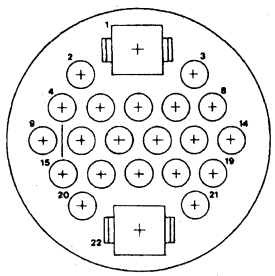
Shell Size 23



Arrangement 23-13M
Max. Wire Ins. Dia. =
.150 [3.81] for Multimate Contacts,
.220 [5.59] for Power Contacts



Arrangement 23-16M
Max. Wire Ins. Dia. =
.150 [3.81] for Multimate Contacts,
.220 [5.59] for Power Contacts



Arrangement 23-22M
Max. Wire Ins. Dia. =
.150 [3.81] for Multimate Contacts,
.220 [5.59] for Power Contacts

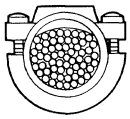
Note: Contact arrangements shown are of pin mating face (plug or receptacle). Socket mating face is mirror image.

SOURCE: Catalog 82021

CPC Connector Accessories

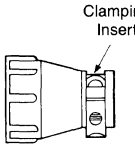
Cable Clamps

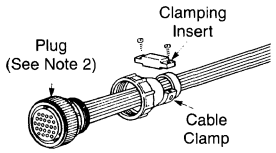
Cable clamps provide strain relief and can be used on all series receptacles and plugs.



The clamping area can be adjusted by reversing the clamping insert as shown below.

Standard Size

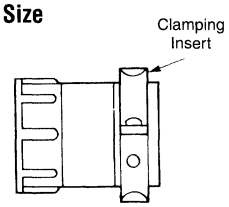


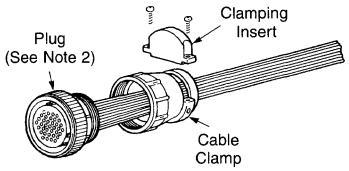


Shell Size	Cable O.D. (Max.)	Thread Size	Part No.	
			Individually Packaged	Bulk Packaged*
11	.329 8.36	5/8-24 UNEF-2B	206062-3	206062-4** (400)
13	.453 11.51	3/4-20 UNEF-2B	206966-1	206966-2** (200)
17	.453 11.51	15/16-20 UNEF-2B	206070-1	206070-3** (200)
23	.703 17.86	1-3/8-18 UNEF-2B	206138-1	206138-2** (100)

*Numbers in parentheses specify, in multiples, the minimum quantity of parts that can be ordered.
**Packaging includes two screws: shell sizes 11-17; screw length .500 [12.7]; shell size 23; screw length .625 [15.88]
Note: Clamping areas adjustable by inverting or changing clamping inserts. The quantity of inserts supplied with each assembly is as follows: for size 11 cable clamps, one insert; for all other cable clamps, two inserts.

Large Size





Shell Size	Cable O.D. (Max.)	Thread Size	Part No.	
			Individually Packaged	Bulk Packaged*
11	.453 11.51	5/8-24 UNEF-2B	206358-1	206358-2** (200)
13	.703 17.86	3/4-20 UNEF-2B	207008-1	207008-2** (100)
17	.703 17.86	15/16-20 UNEF-2B	206322-1	206322-2** (100)
23	1.125 28.58	1-3/8-18 UNEF-2B	206512-1	206512-2** (75)

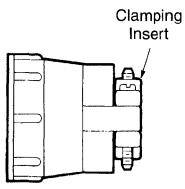
* Numbers in parentheses specify, in multiples, the minimum quantity of parts that can be ordered.
**Packaging includes two screws: shell sizes 11; screw length .500 [12.7]; shell size 13-23, screw length .625 [15.88].
Note: Clamping areas adjusted by inverting or changing clamping inserts. The quantity of inserts supplied with each assembly is as follows: for size 23 cable clamps, four inserts: for all other cable clamps, two inserts.

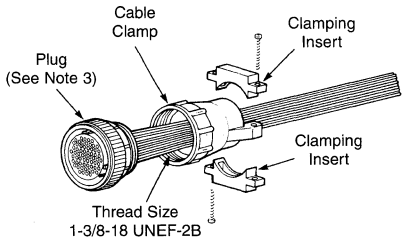
Notes: 1. Components for all cable clamps are packaged unassembled. This includes the cable clamp, two screws and the clamping inserts.
2. Cable clamps can be threaded directly onto plugs or receptacles, or onto back-shell extenders (below).
3. Replacement screws are available in the following sizes: 3/8 in. [9.52]—**Part No. 19024-1**, 1/2 in. [12.7]—**Part No. 19024-2**, 5/8 in. [15.88]—**Part No. 19024-3**, 1 in. [25.4]—**Part No. 19024-4.**
4. Cable clamp inserts not sold separately.

Self-Centering (for Shell Size 23)

The self-centering cable clamp is used in applications where strain relief protection is required and the cable or wire bundle is large and/or stiff.

Part Nos.
207774-1 (individually packaged)
207774-2 (bulk packaged)



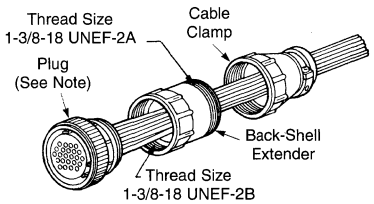


Notes: 1. Clamping area is adjustable by inverting clamping inserts; maximum cable diameter is 1.125 [28.58].
2. Components for cable clamp are packaged unassembled. This includes the cable clamp, two screws (1.00 [25.4]) and the clamping inserts.
3. Cable clamp can be threaded directly onto plugs or receptacles, or onto back-shell extenders.

Back-Shell Extender (for Shell Size 23)

A back-shell extender is used with a cable clamp in applications where added length and/or additional wire breakout are required.

Part No. 207055-1



Note: Back-shell extenders can be threaded directly onto plugs or receptacles and will accept cable clamps of the appropriate size.

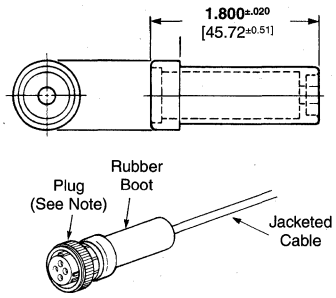
SOURCE: Catalog 82021

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

CPC Connector Accessories
(Continued)

Rubber Boots

Rubber boots are used with jacketed cable to provide splash-proof connections for Series 1 and Series 3 connectors.

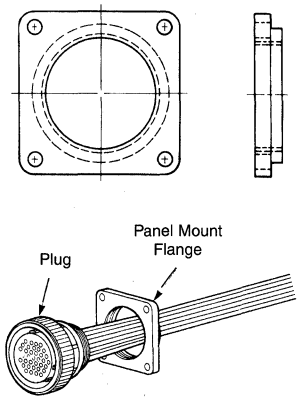


Shell Size	Cable Dia. Sealing Range	Part No.
11	.219-.438 5.56-11.13	206304-1
17	.297-.516 7.54-13.11	206398-1

Note: Rubber boots are recommended for use with jacketed cable and can be used on plugs or receptacles, except Series 2 connectors.

Panel Mount Flanges (for Plugs only)

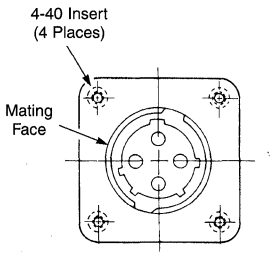
A panel mount flange is used in applications that require the plug half of a connector to be panel mounted.



Shell Size	Part No.
11	207299-1
13	207299-2
17	207299-3
23	207299-4

Square Flange Receptacles with Threaded Inserts

Square flange receptacles with threaded inserts are available in certain sizes. Consult AMP for specific requirements.

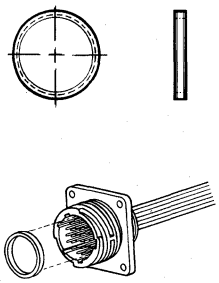


Series	Shell Size	Sex	Threaded Insert Receptacle Part No.
1	11-4	Std.	208130-1
	11-4	Rev.	211102-1
	13-9	Std.	208131-1
	17-14	Rev.	211103-1
	17-16	Std.	208129-1
	23-37	Rev.	206306-5*
2	11-8	Std.	205841-3
	11-8	Rev.	206433-3
	11-9	Std.	206852-8
	17-28	Rev.	206038-4
3	17-3	Std.	213581-1

*Minimum order required—600 pieces.

Peripheral Seals (for Receptacles only)

Peripheral seals are recommended for use in sealing/splash-proof applicators, or where connectors will be subjected to vibration.



Shell Size	Peripheral Seal Part No.	Standard Sex Receptacle with Peripheral Seal Bonded In			
		Contact Arrangement	Sex	Square Flange Part No.	Free-Hanging Part No.
11	206403-1	—	—	—	—
13	206403-4	13-9	Std.	—	206705-4
17	206403-2	17-14	Rev.	—	206043-5
		17-16	Std.	206036-4	206036-5
23	206403-3	23-24	Std.	206838-3	—
		23-37	Std.	—	206151-4

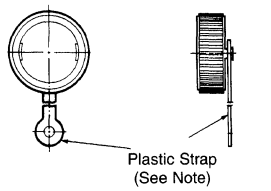
Note: Peripheral seals must be bonded into receptacles of other sizes; use Loctite Super bonder 416. Consult AMP for details.

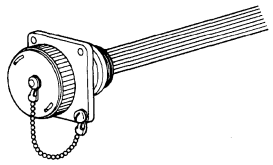
SOURCE: Catalog 82021

CPC Connector Accessories
(Continued)

Sealing Caps (for Receptacles only)

Sealing caps are used to protect exposed contacts of unmated receptacles.



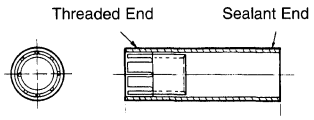


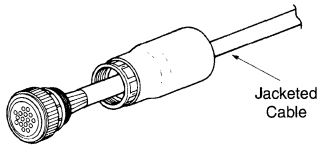
Shell Size	Series	Part Numbers	
		Plastic Strap	Metal Bead Chain
11	1 & 2	206903-1	208800-1
13	1	211870-1	213485-1
17	1, 2 & 3	207445-1	208652-1
23	1, 3 & 4	207446-1[1]	208680-1[1]
	2	207446-2[2]	208680-2[2]

[1] These sealing caps are used with Series 1 and Series 3 receptacles.
[2] These sealing caps are used with Series 2 receptacles.
Note: Sealing caps are supplied with either a plastic strap or metal bead chain. See chart above.

Cable Entry Seals (Heat Shrinkable Sealing Boots)

Cable entry seals are used with jacketed cable to provide an environmentally sealed wire-to-connector system. They can be used with plugs or receptacles.



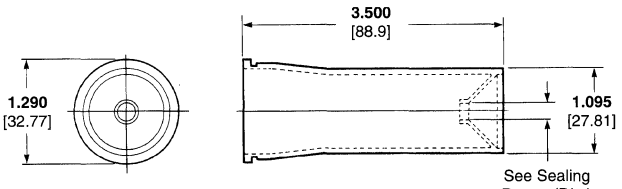


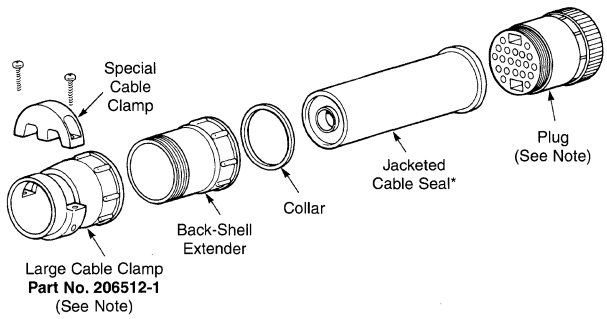
Shell Size	Sealing Range (Dia.)	Part No.
11	**.260-.600** 6.6-15.24	54010-1
13	**.300-.725** 7.62-18.42	54123-1
17	**.400-.875** 10.16-22.22	54011-1
23	**.550-1.100** 13.97-27.94	54012-1

Jacketed Cable Seals (for Shell Size 23)

A jacketed cable seal kit provides an environmentally sealed connection for jacketed cable.

Note: Jacketed cable seals must be used with large cable clamps and can be used on plugs or receptacles. Large cable clamps are to be ordered separately (see page 2059).
Each jacketed cable seal kit includes:
- Peripheral Seal—to be discarded if kit is used on plug. Additional seals may be purchased.
- Collar—provides bearing surface for back-shell extender
- Jacketed Cable Seal
- Back-Shell Extender
- Special Clamp Saddle—to be used in lieu of clamping insert supplied with large cable clamp





Sealing Range (Dia.)	Kit Number
.300-.450 7.62-11.43	207052-1
.450-.600 11.43-15.24	207052-2
.600-.875 15.24-22.22	207052-3

*Jacketed cable seal is pressed flush against rear connector face when back-shell extender is threaded onto rear of connector.

SOURCE: Catalog 82021

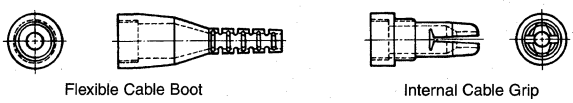
Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

CPC Connector Accessories
(Continued)

Flexible Cable Boot and Internal Cable Grip

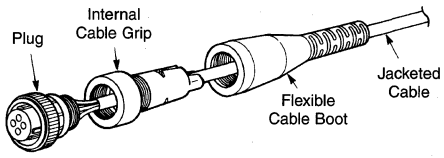
Flexible cable boots, with internal cable grip installed, provide strain relief capabilities for jacketed cable in applications where aesthetic appearance is essential. They can be threaded onto plugs or receptacles.

(for Shell Size 11)



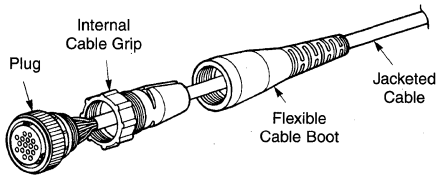
Part Nos.
207489-1 (Cable Boot)
207490-1 (Cable Grip)

Cable Range:
.150 - .250 [3.81-6.35]



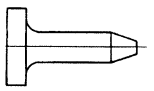
(for Shell Size 17)

Part Nos.
207241-1 (Cable Boot)
207387-1 (Cable Grip)
A Dia. = .325 [8.26] for cable range of .200-.250 [5.08-6.35]
207387-2 (Cable Grip)
A Dia. = .385 [9.78] for cable range of .250-.350 [6.35-8.89]
207387-4* (Cable Grip)
A Dia. = .385 [9.78] for cable range of .250-.350 [6.35-8.89]
*For use with soft jacket cable

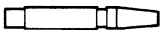


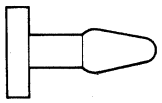
Keying Plugs

Keying plugs are used to provide keying capabilities for all connector series. Keying plugs are used in socket cavities of standard sex plugs and reverse sex receptacles, except when used with sealing caps.

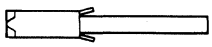


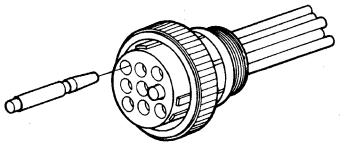
Part No. 206509-1





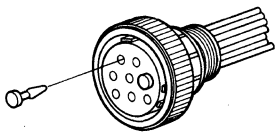
Part No. 213586-1



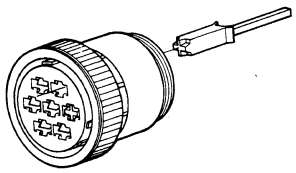


Series 1 and Series 4 Keying Plug
(for Types III+ and Subminiature COAXICON Contacts)

Part No. 200821-1



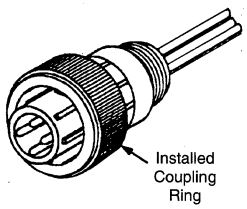
Series 2 Keying Plug
(for Size 20 DM and 20 DF Contacts)



Series 3 and Series 4 Keying Plugs
(for Type XII Contacts)

Part No. 206508-1 (Socket Cavities)
Part No. 207597-1 (Pin Cavities)

Replacement Coupling Rings



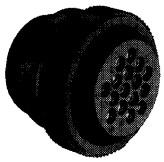
Shell Size	Part Number
11	206089-1
13	206707-1
17	205958-1
17	213582-1*
23	206251-1

*Impact modified plastic

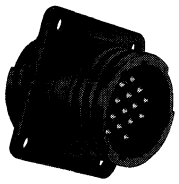
SOURCE: Catalog 82021

Special CPC Connectors

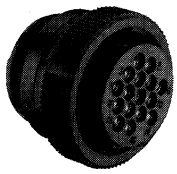
Feed-Thru Series 1 (Pressure Rating—up to 30 psi)



Plug
(Accepts Sockets)



Receptacle
(with Permanently Sealed .062 [1.57] Dia. Solid Pins)

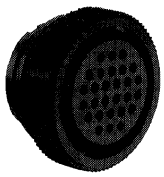


Plug
(Accepts Sockets)

Note: Size 11 Housing O.D. Dim. (Typ.)—.687 [17.45]

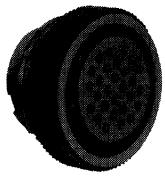
Arrangement	Part Numbers		
	Standard Numbering Plug	Reverse Numbering Plug	Feed-Thru Receptacle
11-4	206060-1	206516-1	206518-2
17-16	206037-1	206554-1	206552-1

Series 2 (Pressure Rating—up to 30 psi)



Plug
(Accepts Sockets)

Receptacle
(with Permanently Sealed .040 [1.02] Dia. Solid Pins)



Plug
(Accepts Sockets)

Note: One plug must have standard numbering of cavities. The other plug must have reverse numbering.

Note: Size 17 Housing O.D. Dim. (Typ.)—1.050 [26.67]

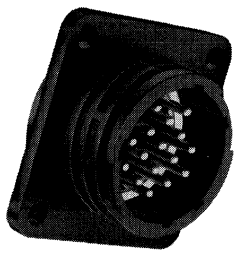
Arrangement	Part Numbers		
	Standard Numbering Plug	Reverse Numbering Plug	Feed-Thru Receptacle
11-8	205838-1	206460-1	206458-1
17-28	206125-1	206126-1	206127-1

Square Flange Receptacle

Note: Size 17 Housing O.D. Dim. (Typ.)—1.050 [26.67]

With Round Posted Contacts (Size 16), Contact Arrangement 17-16

Receptacle is standard sex; supplied preloaded with 16 special round posted pin contacts, .030 [0.76] diameter posts.

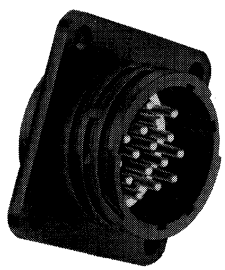


Part Number 207292-1

With Solder Type Contacts (Size 16), Contact Arrangement 17-16

Receptacle is standard sex; supplied preloaded with 16 special solder cup pin contacts.

Note: This connector can be used for pressure bulkhead feed-thru (sealed) applications.



Part Numbers:
206404-1 (Gold-Plated Contacts)
206404-2 (Tin-Plated Contacts)

SOURCE: Catalog 82021

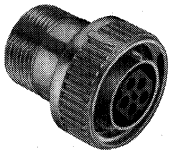
Specifications subject to change.
1-800-522-6752 Product Information Center/ AMP FAX Service
1-800-722-1111 Tooling/Technical Assistance Center

Metal-Shell CPC Connectors Series 1

Part numbers are for connectors only; order contacts separately (see pages 2050, 2051).

Standard Sex Connectors

Square Flange Receptacle
(Accepts Multimate Pins)



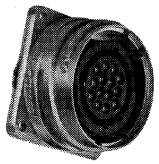
Plug
(Accepts Multimate Sockets)

Note: Size 14 Housing O.D. Dim. (Typ.)—1.031 [26.19]

Arrangement	Part Numbers		
	Square Flange Receptacle	Plug	
		w/o TETRASEAL	with TETRASEAL
14-5	208719-1	208718-1	208718-2
14-7	208715-1	208714-1	208714-2
22-16	208489-1	208488-1	208488-3
28-24	208459-1	208457-1	208457-3
28-37	208471-1	208470-1	208470-3

Note: Maximum wire insulation diameter is .100 [2.54] max., except arrangements 14-5 and 28-24 which are .150 [3.81] max.

Reverse Sex Connectors



Square Flange Receptacle
(Accepts Multimate Sockets)

Plug
(Accepts Multimate Pins)

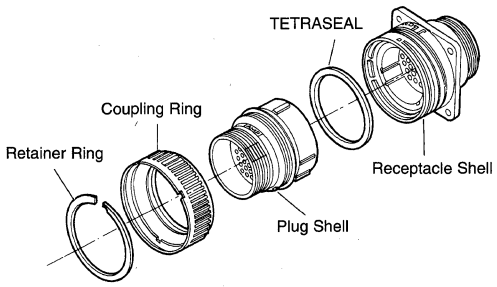
Note: Size 14 Housing O.D. Dim. (Typ.)—1.031 [26.19]

Arrangement	Part Numbers		
	Square Flange Receptacle	Plug	
		w/o TETRASEAL	with TETRASEAL
14-5	208721-1	208720-1	208720-2
14-7	208717-1	208716-1	208716-2
22-14	208487-1	208486-1	208486-3
28-37	208473-1	208472-1	208472-3

Note: Maximum wire insulation diameter is .100 [2.54] max., except arrangement 14-5 which is .150 [3.81] max.

TETRASEAL (Installed in plugs only)

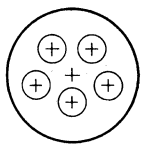
The TETRASEAL rubber seal provides splash-proof sealing between mating metal shells. It is located behind the plug shell external keys (under the coupling ring). When mated with a receptacle, the seal is compressed against the inside diameter of the mating end edge of the receptacle shell.



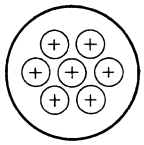
Contact Arrangements Series 1

Note: Contact arrangements shown are of pin mating face (plug or receptacle). Socket mating face is mirror image.

Shell Size 14

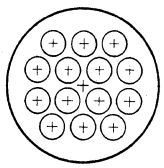


Arrangement 14-5
Max. Wire Ins. Dia. = .150 [3.81]

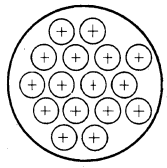


Arrangement 14-7
Max. Wire Ins. Dia = .100 [2.54]

Shell Size 22

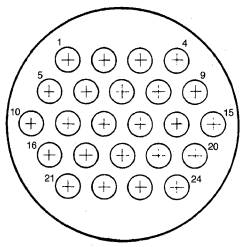


Arrangement 22-14
Max. Wire Ins. Dia. = .100 [2.54]

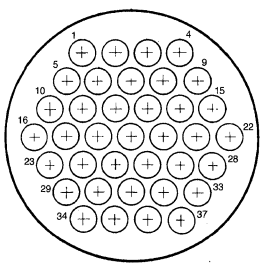


Arrangement 22-16
Max. Wire Ins. Dia. = .100 [2.54]

Shell Size 28



Arrangement 28-24
Max. Wire Ins. Dia. = .150 [3.81]



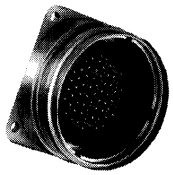
Arrangement 28-37
Max. Wire Ins. Dia. = .100 [2.54]

SOURCE: Catalog 82021

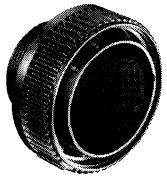
Metal-Shell CPC Connectors Series 2

Part numbers are for connectors only; order contacts separately (see pages 2054, 2055).

Standard Sex Connectors



Square Flange Receptacle
(Accepts 20 DF and 20 DM Pins)

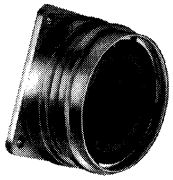


Plug
(Accepts 20 DF and 20 DM Sockets)

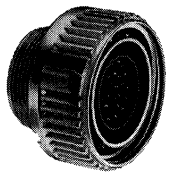
Note: Size 22 Housing O.D. Dim. (Typ.)—1.503 [38.18]

Arrangement	Part Numbers		
	Square Flange Receptacle	Receptacle (w/Peripheral Seal)	Plug (w/o TETRASEAL)
22-28	208491-1	208491-2	208490-1
28-63	208477-1	208477-2	208476-1

Reverse Sex Connectors



Square Flange Receptacle
(Accepts 20 DF and 20 DM Sockets)



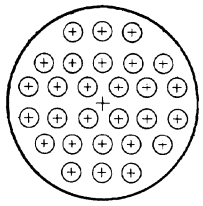
Plug
(Accepts 20 DF and 20 DM Pins)

Note: Size 22 Housing O.D. Dim. (Typ.)—1.503 [38.18]

Arrangement	Part Numbers		
	Square Flange Receptacle	Receptacle (w/Peripheral Seal)	Plug (w/o TETRASEAL)
22-28	208493-1	208493-2	208492-1
28-57	208475-1	208475-2	208474-1

Contact Arrangements Series 2

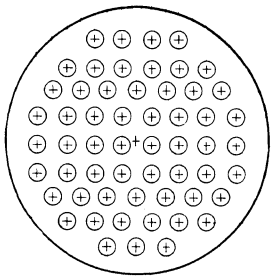
Shell Size 22



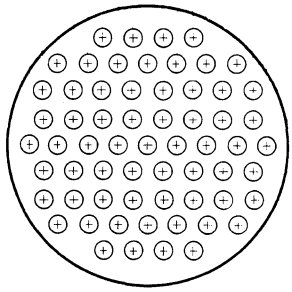
Arrangement 22-28
Max. Wire Ins. Dia. = .068 [1.73]

Shell Size 28

Note: Contact arrangements shown are of pin mating face (plug or receptacle). Socket mating face is mirror image.



Arrangement 28-57
Max. Wire Ins. Dia. = .068 [1.73]



Arrangement 28-63
Max. Wire Ins. Dia. = .068 [1.73]

SOURCE: Catalog 82021

Specifications subject to change.

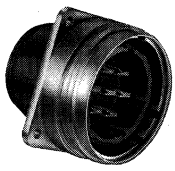
1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

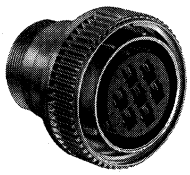
Metal-Shell CPC Connectors Series 3

Part numbers are for connectors only; order contacts separately (see page 2057).

Standard Sex Connectors



Square Flange Receptacle
(Accepts Type XII Male Pins)

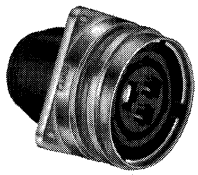


Plug
(Accepts Type XII Female Sockets)

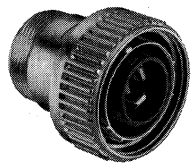
Note: Size 22 Housing O.D. Dim. (Typ.)—1.503 [38.18]

Arrangement	Part Numbers		
	Square Flange Receptacle	Plug	
		w/o TETRASEAL	with TETRASEAL
22-3	208495-1	208494-1	208494-3
28-7	208483-1	208482-1	208482-3

Reverse Sex Connectors



Square Flange Receptacle
(Accepts Type XII Female Sockets)



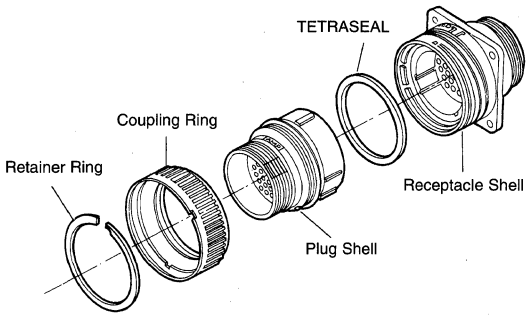
Plug
(Accepts Type XII Male Pins)

Note: Size 22 Housing O.D. Dim. (Typ.)—1.503 [38.18]

Arrangement	Part Numbers		
	Square Flange Receptacle	Plug	
		w/o TETRASEAL	with TETRASEAL
22-3	208497-1	208496-1	208496-3
28-7	208485-1	208484-1	208484-3

TETRASEAL (Installed in Plugs Only)

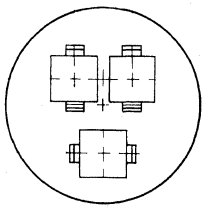
The TETRASEAL rubber seal provides splash-proof sealing between connector metal shells. It is located behind the plug shell external keys (under the coupling ring). When mated with a receptacle, the seal is compressed against the inside diameter of the mating end edge of the receptacle shell.



Contact Arrangements Series 3

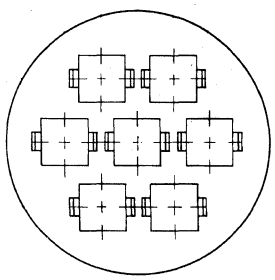
Note: Contact arrangements shown are of pin mating face (plug or receptacle). Socket mating face is mirror image.

Shell Size 22



Arrangement 22-3
Max. Wire Ins. Dia. = .220 [5.59]

Shell Size 28



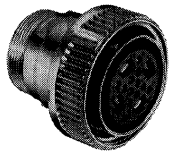
Arrangement 28-7
Max. Wire Ins. Dia. = .220 [5.59]

Metal-Shell CPC Connectors Series 4

Part numbers are for connectors only; order contacts separately (see pages 2050, 2051, 2057).

Standard Sex Connectors

Square Flange Receptacle
(Accepts Type XII Male and Multimate Pins)



Plug
(Accepts Type XII Female and Multimate Sockets)

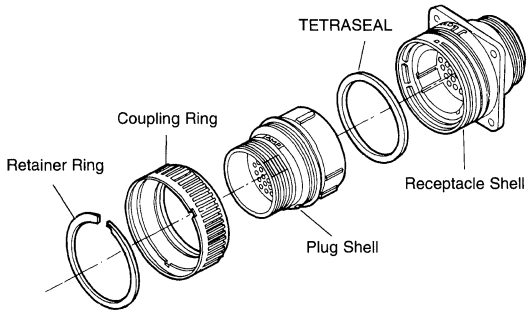
Note: Size 28 Housing O.D. Dim. (Typ.)—1.900 [48.26]

Arrangement	Part Numbers		
	Square Flange Receptacle	Plug	
		w/o TETRASEAL	with TETRASEAL
28-13M	211823-1	211822-1	211822-3
28-16M	208479-1	208478-1	208478-3
28-22M	208481-1	208480-1	208480-3

TETRASEAL (Installed in Plugs Only)

The TETRASEAL rubber seal provides splash-proof sealing between connector metal shells. It is located behind the plug shell external keys (under the coupling ring).

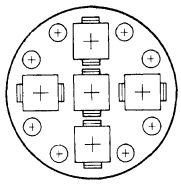
When mated with a receptacle, the seal is compressed against the inside diameter of the mating end edge of the receptacle shell.



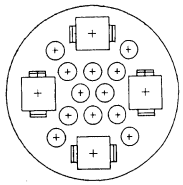
Contact Arrangements Series 4

Shell Size 28

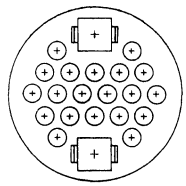
Note: Contact arrangements shown are of pin mating face (plug or receptacle). Socket mating face is mirror image.



Arrangement 28-13M
Max. Wire Ins. Dia. =
.150 [3.81] for Multimate Contacts,
.220 [5.59] for Power Contacts



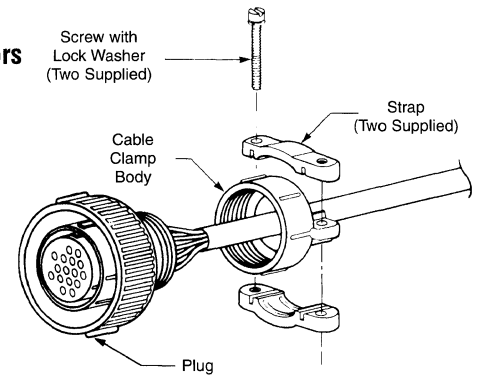
Arrangement 28-16M
Max. Wire Ins. Dia. =
.150 [3.81] for Multimate Contacts,
.220 [5.59] for Power Contacts



Arrangement 28-22M
Max. Wire Ins. Dia. =
.150 [3.81] for Multimate Contacts,
.220 [5.59] for Power Contacts

Metal-Shell CPC Connectors Accessories

Cable Clamps



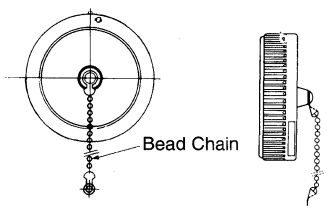
Shell Size	Cable O.D. Range	Thread Size	Part No.
14	**.312-.562** 7.92-14.27	7/8-20 UNEF-3B	208945-5
22	**.500-.750** 12.7-19.05	1-3/16-18 UNEF-3B	208945-7
28	**.625-.938** 15.88-23.83	1-7/16-18 UNEF-3B	208945-8

Note: For Shell Size 22 Receptacle use plastic cable clamp size 17, for Shell Size 28 Receptacle use plastic cable clamp size 23. Use size 14 metal cable clamp for both plug and receptacle size 14 connectors.

Protective Cap Assemblies (for Metal-Shell CPC Receptacles Only)

Part No. 211903-1
(Shell Size 22)

Part No. 211904-1
(Shell Size 28)



SOURCE: Catalog 82021

Specifications subject to change.

1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

Military Specified Circular Connectors

Introduction

Circular metal-shell connectors are now available from AMP or MATRIX. Since Matrix Science has joined the AMP family, we can now offer you a full line of Mil-spec connectors.

This union of combined strengths in technical innovation, low-cost manufacturing, research and development in materials and processes brings you the best in military qualified circular connectors. MATRIX, for example, was the first manufacturer qualified to all series of MIL-C-38999.

MIL-C-26482, -83723 and -5015 connectors are also available with the full range of insert configurations, options and accessories. Specials such as glass-sealed hermetic, high-temperature firewall, filtered and EMP-protected connectors are available.

This catalog is arranged by military specification number. A general table of contents is presented below. Intermateable connectors are noted in the Product Guide and Cross Reference table below.

Product Guide and Cross Reference

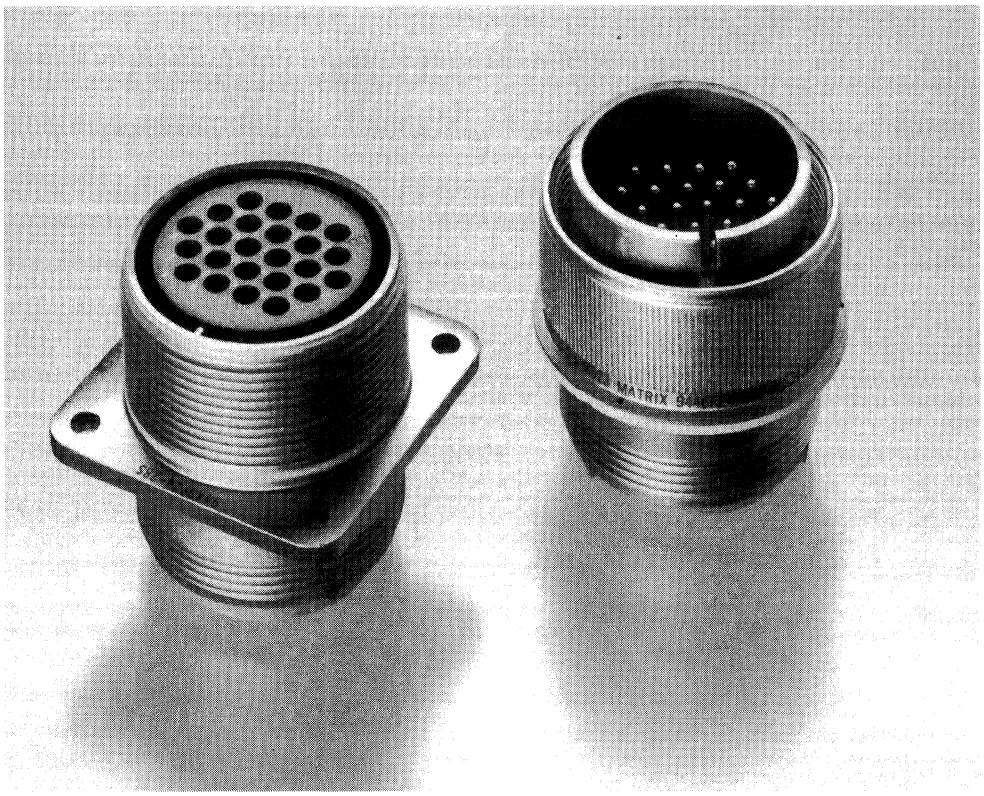
Connectors

MIL-C-	Military Part Number	Intermates with MIL-Spec. Number	MATRIX Basic Part Number	Description/Remarks
5015 3450 Series only	MS 3450 thru MS 3459	5015 (solder contacts) 5015 (crimp—front release contacts) 83723 II	944 Series	Circular, threaded coupling, AN type, environmental, w/ crimped rear release contacts, qualified for firewall applications, active for new designs.
			981 Series	Circular, self-locking threaded coupling, environmental, w/ crimped rear release contacts, qualified for firewall applications, active for new designs.
26482 Series I	MS 3120 thru MS 3126	26482 I (solder contacts) 26482 II 83723 I	MBF 2 Series	Circular, miniature, bayonet coupling, environmental, w/ crimped front release contacts, inactive for new designs.
26482 Series II	MS 3470 thru MS 3476	26482 I (solder contacts) 26482 I (crimp contacts) 83723 I	MB 1 Series	Circular, miniature, bayonet coupling, environmental, w/ crimped rear release contacts, active for new designs.
83723 Series I	83723 /01 thru /14 /42 & /43	26482 I (solder contacts) 26482 I (crimp contacts) 26482 II	MB 1 Series	Circular, miniature, bayonet coupling, environmental, w/ crimped rear release contacts, inactive for new designs.
83723 Series II	83723 /17 thru /24	5015 (solder contacts) 5015 (crimp–front release contacts) 5015 (crimp–rear release contacts)	M 723 Series	Circular, threaded coupling, environmental, w/ crimped rear release contacts, qualified for firewall applications, inactive for new designs.
83723 Series III	83723 /65 thru /98	26500	MB 3 Series	Circular, miniature, bayonet coupling, environmental, w/ crimped rear release contacts, active for new designs.
			MT 3 Series	Circular, miniature, threaded coupling, environmental, w/ crimped rear release contacts, qualified for firewall applications, active for new designs.
			MQ 3 Series	Circular, miniature, quick disconnect coupling (w/ or without lanyard) environmental, w/ crimped rear release contacts, active for new designs.
38999 Series I	MS 27***	—	MB 91 Series	Circular, subminiature, bayonet coupling, environmental, w/ crimped rear release contacts, scoop proof, active for new designs.
38999 Series II	MS 27***	—	MB 92 Series	Circular, subminiature, low profile, bayonet coupling, environmental, w/ crimped rear released contacts, NONscoop proof, active for new designs.
38999 Series III	D 38999 /20 thru /39	—	MT 93 Series	Circular, subminiature, triple start threaded coupling, environmental, w/ crimped rear released contacts, scoop proof, qualified for firewall applications, available for composite application, active for new designs.

Contacts, Sealing Plugs, Tools and Accessories are cataloged within each military specification group.

SOURCE: Catalog 82647

MIL-C-5015



During the late 1960's, problems were experienced with solder type circular connectors on high performance aircraft.

These problems initiated the development of a high reliability connector to replace the existing MIL-C-5015 solder type connector.

Since many of the problems revolved around the potting compound, it was advantageous to develop an environmentally sealed connector with crimp contacts.

The first evolution took the form of MIL-C-83723 Series II, which was the specification developed for AN type circular connectors that met these goals. These connectors are intermatable and interchangeable with, and use the same backshell hardware as the previous MIL-C-5015 type connectors.

Subsequently, it became desirable to develop a superseding and improved connector that would provide a captive coupling nut and more importantly, would utilize backshell hardware common to MIL-C-26482 Series II and MIL-C-83723 Series I and III Connectors. MIL-C-5015 Rev. G was developed and approved by all services.

These connectors accommodate contact sizes 0 to 16 and shell sizes 8 to 40. Multiple interlock systems provide for permanent insert retention. Plugs with an internal ratcheting mechanism, which prevents unmating due to vibration or shock, are available as well as the standard plug with the captive coupling nut.

Complete environmental sealing includes individual contact seals, interfacial seals between contacts, a peripheral gasket shell-to-shell seal, redundant rear-wire seals, and insert-to-shell seals.

Other design features show how Matrix Science keeps an old connector standard abreast of current technology. The captive coupling nut, for example, uses retaining rings in combination with "L" washers to prevent inadvertent disassembly. Superior tolerancing of the damage-proof retention clip provides positive retention of contacts, while positive control of the dielectric guarantees easy contact insertion.

This circular connector series includes not only threaded aluminum plugs and receptacles in all standard versions but also includes the following:

1. A self-locking plug version where it is desirable to eliminate the need for safety wiring.
2. Firewall connectors available in both a standard threaded plug configuration and a self-locking plug version.
3. A push on/pull off quick-disconnect plug that is available with or without lanyard.

SOURCE: Catalog 82647

Specifications subject to change.
1-800-522-6752 Product Information Center/ AMP FAX Service
1-800-722-1111 Tooling/Technical Assistance Center

MIL-C-5015 (Continued)

Performance Specifications

Voltage Rating

Altitude		Service Rating					
ft	m	Inst.	A	D	E	B	C
Sea Level	—	1000	2000	2800	3500	4500	7000
50,000	15 240	400	600	675	750	825	975
70,000	21 326	260	360	400	440	480	560
110,000	33 528	200	200	200	200	200	200

Contact Current Rating and Retention

Contact Size*	Current Rating		Contact Retention	
	Amperes Max.	Voltage Drop Millivolts	Axial Load lb	Axial Load N
16	13	50	25	111.2
12	23	50	30	133.4
8	46	25	50	222.4
4	80	14	60	266.9
0	150	12	75	333.6

* Organize individual circuits to maintain heat rise within operating temperature requirements.

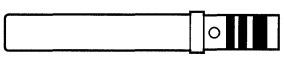
Operating Temperature Range
-55°C to +200°C [-75°F to +392°F]

Environmental Seal
Wired, mated connectors with the specified accessory attached will meet the altitude immersion test specified in MIL-C-5015.

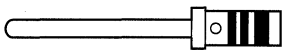
Durability
Minimum of 100 mating cycles

Shock
Wired, mated connectors are subjected to one shock in each of three mutually perpendicular axes with pulse of an approximate half sine wave of 50 g magnitude for a duration of 11 milliseconds. All contacts wired in series circuit with 100±10 milliamperes of current flow.

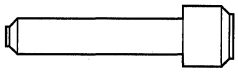
Contacts, Sealing Plugs and Assembly Tools



Socket Contact



Pin Contact



Sealing Plug

Contact Size	Wire Range		Socket Contacts		Pin Contacts		Sealing Plugs	
	AWG	mm²	Military Part No.	MATRIX Part No.	Military Part No.	MATRIX Part No.	Military Part No.	MATRIX Part No.
16S**	20-16	0.5-1.4	M39029/30-217	5100-033-1601	M39029/29-212	5000-029-0016	MS27488-16	3400-043-0016
16	20-16	0.5-1.4	M39029/30-218	5100-033-1602	M39029/29-212	5000-029-0016	MS27488-16	3400-043-0016
12	14-12	2-3	M39029/30-219	5100-033-0012	M39029/29-213	5000-029-0012	MS27488-12	3400-043-0012
8	10-8†	5-8.5	M39029/30-220	5100-033-0008	M39029/29-214	5000-029-0008	MS27488-8	3400-043-0008
4	6-4†	13-21	M39029/30-221	5100-033-0004	M39029/29-215	5000-029-0004	MS27488-4	3400-043-0004
0	2-0†	34-60	M39029/30-222	5100-033-0000	M39029/29-216	5000-029-0000	MS27488-0	3400-043-0000

** Shorter wire barrel
† Use MS3348 bushing to accommodate smaller wire.

Crimping Tools

Contact Size	Wire Range		Finished Wire Dia. Range		Color Code	Military Part No.	
	AWG	mm²	inch	mm		Crimping Tool	Turret or Positioner
16S	20-16	0.5-1.4	.053-.103	1.34-2.62	Rd./Wh.	M22520/1-01	M22520/1-02
16	20-16	0.5-1.4	.053-.103	1.34-2.62	Bl./Wh.	M22520/1-01	M22520/1-02
12	14-12	2-3	.085-.158	2.15-4.01	Yel./Wh.	M22520/1-01	M22520/1-02
8	10-8	5-8.5	.132-.255	3.35-6.48	Wh./Red.	M22520/23-01	M22520/23-02
4	6-4	13-21	.237-.370	6.01-9.40	Wh./Bl.	M22520/23-01	M22520/23-04
0	2-0	34-60	.360-.550	9.14-13.97	Wh./Yel.	M22520/23-01	M22520/23-05

Insertion/Extraction Tools

Contact Size	Color Code	Military Part No.	MATRIX Part No.
16	Bl./Wh.	M81969/14-03	6500-001-0016
12	Yel./Wh.	M81969/14-04	6500-001-0012
8	Wh./Red.	M81969/14-06	6500-018-0008
4	Wh./Bl.	M81969/14-07	6500-018-0004
0	Wh./Yel.	M81969/14-08	6500-018-0000

SOURCE: Catalog 82647

Specifications subject to change.
1-800-522-6752
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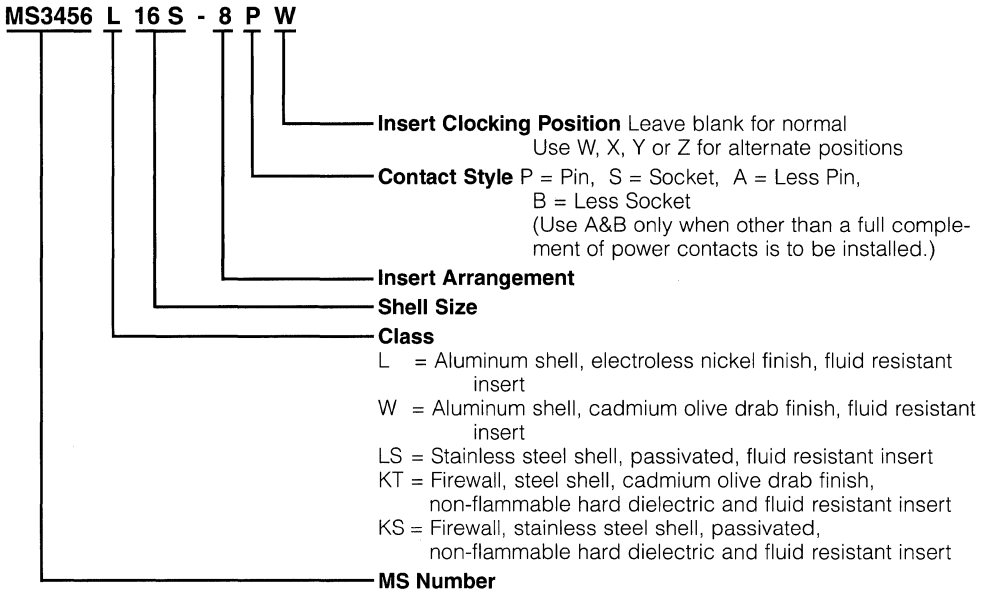
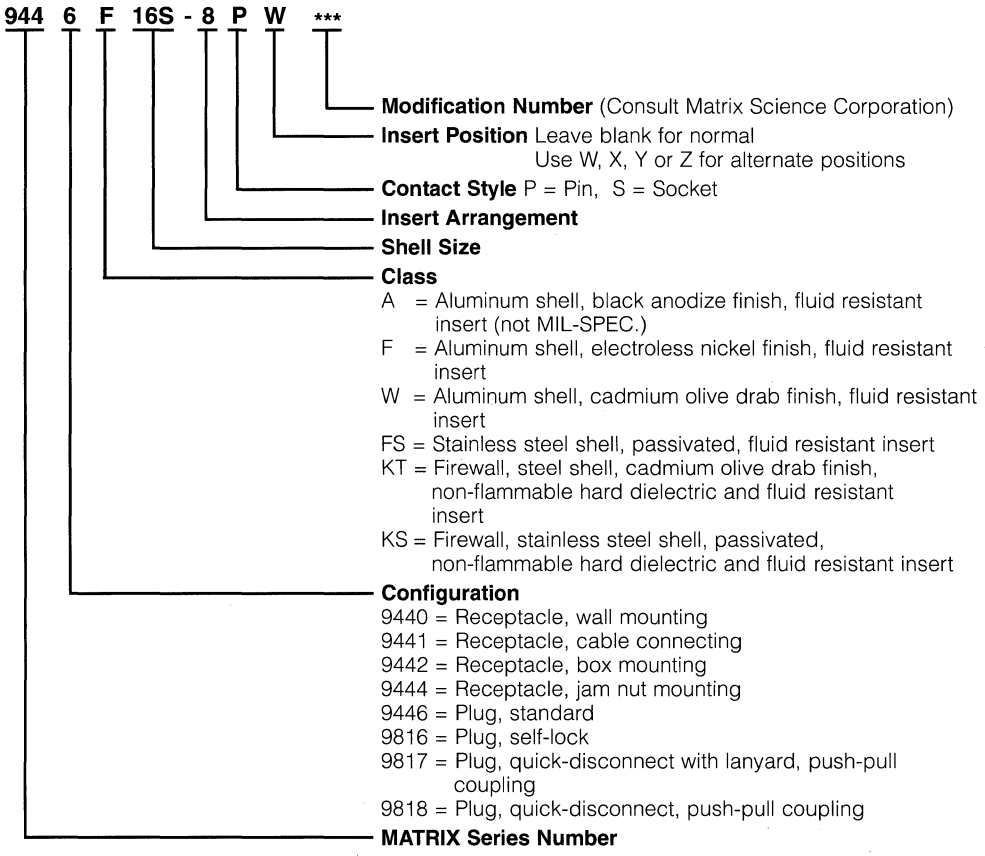
MIL-C-5015 (Continued)

Military Part Number System



Note: Class K is inactive and has been replaced by Class KT for all applications.

MATRIX Part Number System



SOURCE: Catalog 82647

Specifications subject to change.
1-800-522-6752 Product Information Center/ AMP FAX Service
1-800-722-1111 Tooling/Technical Assistance Center

MIL-C-5015 (Continued)

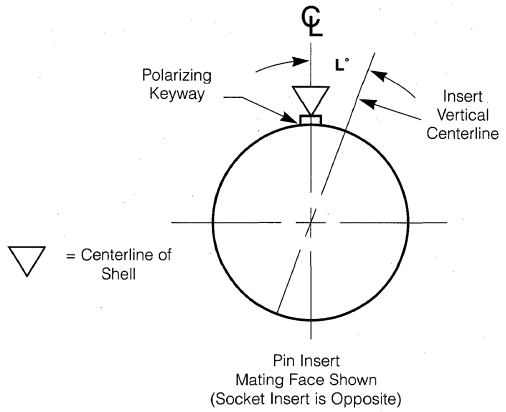
Polarization

Clocking Positions (Per MIL-STD-1651)

1. In the Normal position, the insert vertical centerline and key/keyway centerlines coincide: L=0°
2. In the "Alternate" insert position (positions W, X, Y & Z), the insert is rotated relative to the centerline of the master key or keyway of the shell.

   a. In alternate positions the pin insert is rotated clockwise within the shell so that the angle "L" between the indexing radius and the centerline of the master key or keyway of the shell is as required.

   b. In alternate positions the socket insert is rotated counterclockwise within the shell so that the angle "A" between the indexing radius and the centerline of the master key or keyway of the shell is as required



Insert Arrangement and Clocking Chart (Per MIL-STD-1651)

Shell Size & Insert Arrangement	Contacts Quantity	Contacts Size	Service Rating	Alternate Insert Positions L Degrees W	X	Y	Z	Remarks
8S-1	1	16	A	–	–	–	–	
10S-2	1	16	A	–	–	–	–	
10SL-3	3	16	A	–	–	–	–	Service Rating Inst. Class K
10SL-4	2	16	A	–	–	–	–	
12S-1	2	16	A	Insert rotated 100° in shell				Made from 12S-3
12S-2	2	16	A	Insert rotated 250° in shell				Made from 12S-3
12S-3	2	16	A	70	145	215	290	
12S-4	1	16	D	–	–	–	–	
12-5	1	12	D	–	–	–	–	
14S-1**	3	16	A	–	–	–	–	
14S-2	4	16	Inst.	–	120	240	–	
14-3	1	8	A	–	–	–	–	
14S-5	5	16	Inst.	–	110	–	–	
14S-6	6	16	Inst.	–	–	–	–	
14S-7	3	16	A	90	180	270	–	
14S-9**	2	16	A	70	145	215	290	
14S-10	4	16	Inst.	Insert rotated 100° in shell				Made from 14S-2
14S-11	4	16	Inst.	Insert rotated 250° in shell				Made from 14S-2
14S-12	3	16	A	Insert rotated 100° in shell				Made from 14S-1
14S-13	3	16	A	Insert rotated 260° in shell				Made from 14S-1
16S-1	7	16	A	80	–	–	280	
16-2*	1	12	E	–	–	–	–	
16S-3*	1	16	B	–	–	–	–	
16S-4*	2	16	D	35	110	250	325	
16-7*	2	16	A	80	110	250	280	
	1	8						
16S-8	5	16	A	–	170	265	–	
16-9	2	16	A	35	110	250	325	
	2	12						
16-10	3	12	A	90	180	270	–	
16-11	2	12	A	35	110	250	325	
16-12	1	4	A	–	–	–	–	
16-13	2	12	A	35	110	250	325	One alumel and one chromel contact
18-1	10	16	A (B,C,F,G) Inst. (All Others)	70	145	215	290	
18-4	4	16	D	35	110	250	325	
18-5	1	16	D	80	110	250	280	
	2	12						
18-6*	1	4	D	–	–	–	–	
18-7*	1	8	B	–	–	–	–	
18-8	7	16	A	70	–	–	290	
	1	12						
18-9	5	16	Inst.	80	110	250	280	
	2	12						
18-10**	4	12	A	–	120	240	–	
18-11	5	12	A	–	170	265	–	
18-12*	6	16	A	80	–	–	280	
18-13	3	12	A	80	110	250	280	
	1	8						
18-14*	1	16	A	80	110	250	280	
	1	4						
18-15*	4	12	A	–	120	240	–	

*Consult AMP for availability.
**Inactive for new design.

SOURCE: Catalog 82647

Specifications subject to change.
1-800-522-6752 Product Information Center/ AMP FAX Service
1-800-722-1111 Tooling/Technical Assistance Center

MIL-C-5015 (Continued)

Insert Arrangement and Clocking Chart (Continued)

Shell Size & Insert Arrangement	Contacts Quantity	Contacts Size	Service Rating	Alternate Insert Positions L Degrees W	X	Y	Z	Remarks
18-16*	1	12	C	–	–	–	–	
18-17	5	16	Inst.	Insert rotated 100° C/W in shell				Made from 18-9
	2	12						
18-18	5	16	Inst.	Insert rotated 250° C/W in shell				Made from 18-9
	2	12						
18-19**	10	16	A	–	120	240	–	
18-22**	3	16	D	70	145	215	290	
18-23	4	16	A (B,C,F,G)	Insert rotated 100° C/W in shell				Made from 18-1
	6	16	Inst. (All Others)					
18-24	4	16	A (B,C,F,G)	Insert rotated 250° C/W in shell				Made from 18-1
	6	16	Inst. (All Others)					
18-27	1	16	D	Insert rotated 100° C/W in shell				Made from 18-5
	2	12						
18-28	1	16	D	Insert rotated 250° C/W in shell				Made from 18-5
	2	12						
20-2	1	0	D	–	–	–	–	
20-4	4	12	D	45	110	250	–	
20-7	4	16	D (A,B,G,H)	80	110	250	280	
	4	16	A (C,D,E,F)					
20-8	4	16	Inst.	80	110	250	280	
	2	8						
20-9*	1	12	D (H)	80	110	250	280	
	7	16	A (All Others)					
20-14	3	12	A	80	110	250	280	
	2	8						
20-15	7	12	A	80	–	–	280	
20-16	7	16	A	80	110	250	280	
	2	12						
20-17	1	16	A	90	180	270	–	
	5	12						
20-18	6	16	A	35	110	250	325	
	3	12						
20-21	8	16	A	35	110	250	325	
	1	12						
20-22	3	16	A	80	110	250	280	
	3	8						
20-24	2	16	A	35	110	250	325	
	2	8						
20-27	14	16	A	35	110	250	325	
20-29	17	16	A	80	–	–	280	
20-32	4	16	D (A,B,G,H)	Insert rotated 260° C/W in shell				Made from 20-7
	4	16	A (All Others)					
20-33	11	16	A	–	–	–	–	
22-2	3	8	D	70	145	215	290	
22-4**	2	12	A	35	110	250	325	
	2	8						
22-5	4	16	D	35	110	250	325	
	2	12						
22-6**	1	16	D	80	110	250	280	
	2	8						
22-7*	1	0	E	–	–	–	–	
22-9*	3	12	E	70	145	215	290	
22-10*	4	16	E	35	110	250	325	
22-11*	2	16	B	35	110	250	325	
22-12*	3	16	D	80	110	250	280	
	2	8						
22-14	19	16	A	80	110	250	280	
22-15*	1	16	E (D)	80	110	250	280	
	5	12	A (All Others)					
22-17*	1	16	D (A)	80	110	250	280	
	7	16	A					
	1	12	A (All Others)					
22-18*	3	16	A (C,D,E)	80	110	250	280	
	5	16	D (All Others)					
22-19	14	16	A	80	110	250	280	
22-21	2	16	A	80	110	250	280	
	1	0						
22-22	4	8	A	–	110	250	–	
22-23	1	12	D (H)	35	–	250	–	
	7	12	A (All Others)					
22-27*	1	8	D (J)	80	–	250	280	
	8	16	A (All Others)					

*Consult AMP for availability.
**Inactive for new design.

SOURCE: Catalog 82647

Specifications subject to change.

1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

MIL-C-5015 (Continued)

Insert Arrangement and Clocking Chart (Continued)

Shell Size & Insert Arrangement	Contacts Quantity	Contacts Size	Service Rating	Alternate Insert Positions L Degrees W	X	Y	Z	Remarks
22-30	19	16	A	Insert rotated 260° in shell				Made from 22-14
22-32	4	16	D	Insert rotated 260° in shell				Made from 22-5
	2	12						
22-36*	1	12	D (H)	90	–	270	–	
	7	12	A (All Others)					
24-1**	1	12	D	80	110	250	280	
	1	0						
24-2	7	12	D	80	–	–	280	
24-4*	3	16	D	80	110	250	280	
	1	0						
24-5**	16	16	A	80	110	250	280	
24-6*	3	12	D (A,G,H)	80	110	250	280	
	5	12	A (All Others)					
24-7	14	16	A	80	110	250	280	
	2	12						
24-10	7	8	A	80	–	–	280	
24-11	6	12	A	35	110	250	325	
	3	8						
24-12	3	12	A	80	110	250	280	
	2	4						
24-15	16	16	A	Insert rotated 100° C/W in shell				Made from 24-5
24-16*	3	16	D (A,B,F)	80	110	250	280	
	1	8	D (G)					
	3	12	A (All Others)					
24-20	9	16	D	80	110	250	280	
	2	12						
24-21*	9	16	D	80	110	250	280	
	1	8						
24-22	4	8	D	45	110	250	–	
24-24	16	16	A	Insert rotated 250° C/W in shell				Made from 24-5
24-27*	7	16	E	80	–	–	280	
24-28	24	16	Inst.	80	110	250	280	
24-80*	23	16	Inst.	35	145	240	300	

Shell Size & Insert Arrangement	Contacts Quantity	Contacts Size	Service Rating	Alternate Insert Positions L Degrees W	X	Y	Z	Remarks
28-1	2	12	D (A & E)	80	110	250	280	
	4	12	A (B,D,F,H)					
	1	8	D (J)					
	2	8	A (G & C)					
28-2	12	16	D	35	110	250	325	
	2	12						
28-3*	3	8	E	70	145	215	290	
28-4*	3	16	E (G,P,S)	80	110	250	280	
	4	16	D (A,B,E,F)					
	2	12	D (C & D)					
28-5*	2	16	D	35	110	250	325	
	1	12						
	2	4						
28-8*	2	12	E (L & M)	80	110	250	280	
	1	16	D (B)					
	9	16	A (All Others)					
28-9	6	16	D	80	110	250	280	
	6	12						
28-10	1	12	D (G)	80	110	250	280	
	2	12	A (A & F)					
	2	8	A (B & E)					
	2	4	A (C & D)					
28-11	18	16	A	80	110	250	280	
	4	12						
28-12	26	16	A	90	180	270	–	
28-13	26	16	A	Insert rotated 100° C/W in shell				Made from 28-12
28-15	35	16	A	80	110	250	280	
28-16**	20	16	A	80	110	250	280	
28-17	1	16	B (R)	80	110	250	280	
	3	16	D (M,N,P)					
	11	16	A (All Others)					
28-18*	1	16	C (M)	70	145	215	290	
	2	16	A (A & B)					
	4	16	Inst. (C,D,E,F)					
	5	16	D (All Others)					

*Consult AMP for availability.
**Inactive for new design.

SOURCE: Catalog 82647

Specifications subject to change.

1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

MIL-C-5015 (Continued)

Insert Arrangement and Clocking Chart (Continued)

Shell Size & Insert Arrangement	Contacts Quantity	Contacts Size	Service Rating	Alternate Insert Positions L Degrees W	X	Y	Z	Remarks
28-19*	2	16	B (H,M)	80	110	250	280	
	2	16	D (A,B)					
	2	16	(All Others)					
	4	12						
28-20	4	16	A	80	110	250	280	
	10	12						
28-21	37	16	A	80	110	250	280	
28-22	3	16	D	70	145	215	290	
	3	4						
32-1	1	12	E (A)	80	110	250	280	
	2	12	D (D & C)					
	2	0	D (B & E)					
32-2*	2	16	E	70	145	215	290	
	3	4						
32-3*	4	16	D	80	110	250	280	
	2	12						
	2	4						
	1	0						
32-6	16	16	A	80	110	250	280	
	2	12						
	3	8						
	2	4						
32-7	4	16	Inst. (A,B,H,J)	80	125	235	280	
	24	16	A (All Others)					
	7	12						
32-9	12	16	D	80	110	250	280	
	2	4						
32-13	18	16	D	80	110	250	280	
	5	12						
32-15	6	12	D	35	110	250	280	
	2	0						
32-16	16	16	A	Insert rotated 100° in shell				Made from 32-6
	2	12						
	3	8						
	2	4						
32-17	4	4	D	45	110	250	–	
32-19*	1	12	E (A)	Insert rotated 260° in shell				Made from 32-1
	2	12	D (D & C)					
	2	0	D (B & E)					
32-20	16	16	A	Insert rotated 260° in shell				Made from 32-6
	2	12						
	3	8						
	2	4						
32-22*	54	16	A	80	110	250	280	U=100°; V=260°
32-63	5	4	D	–	–	–	–	
32-73	46	16	A	36	–	–	–	
36-3	3	12	D	70	145	215	290	
	3	0						
36-5	4	0	A	–	120	240	–	
36-6	4	4	A	35	110	250	325	
	2	0						
36-7	40	16	A	80	110	250	280	
	7	12						
36-8	46	16	A	80	110	250	280	
	1	12						
36-9	14	16	A	80	125	235	280	
	14	12						
	2	8						
	1	4						
36-10	48	16	A	80	125	235	280	
36-11	48	16	A	Insert rotated 250° in shell				Made from 36-10
36-12	48	16	A	Insert rotated 260° in shell				Made from 38-10
36-15	35	16	D (M) A (All Others)	60	125	245	305	
36-16	40	16	A	Insert rotated 260° in shell				Made from 36-7
	7	12						
36-17	40	16	A	Insert rotated 250° in shell				Made from 36-7
	7	12						
36-18	14	16	A	Insert rotated 100° in shell				Made from 36-9
	14	12						
	2	8						
	1	4						

*Consult AMP for availability.
**Inactive for new design.

SOURCE: Catalog 82647

Specifications subject to change.

1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

MIL-C-5015 (Continued)

Insert Arrangement and Clocking Chart (Continued)

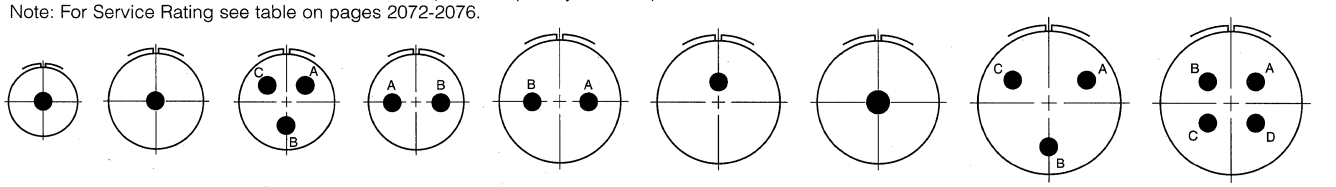
Shell Size & Insert Arrangement	Contacts Quantity	Contacts Size	Service Rating	Alternate Insert Positions L Degrees W	X	Y	Z	Remarks
36-21	14	16	A	Insert rotated 260° C/W in shell				Made from 36-9
	14	12						
	2	8						
	1	4						
36-52	52	16	A	72	144	216	288	
36-66*	52	16	A	110	250	260	280	
	4	12						
40-1	24	16	D	65	130	235	300	
	6	12						
40-2*	5	16	D (A,B,C,D,E)	80	110	250	280	
	18	16	D (All Others)					
40-3*	18	16	D	80	110	250	280	
	4	12						
	1	4						
40-4*	16	16	D	80	110	250	280	
	2	12						
	3	8						
	2	4						
40-5*	6	12	A	80	110	250	280	
	4	8						
	2	4						
	3	0						
40-6*	24	16	D	80	110	250	280	
	1	12						
	1	0						
40-7*	2	12	A (W & X)	80	110	250	280	
	2	0	A (U & V)					
	2	16	A (P & Q)					
	16	16	D (All Others)					
40-9	24	16	A	65	125	255	310	
	22	12						
	1	8						
40-10*	16	16	A	65	125	255	310	
	9	8						
	4	4						
40-11*	18	16	D	80	110	250	280	
	4	12						
	1	8						
	1	4						
	1	0						
40-56*	85	16	A	72	144	216	288	
40-62*	60	16	A	30	130	220	290	

**Inactive for new design.

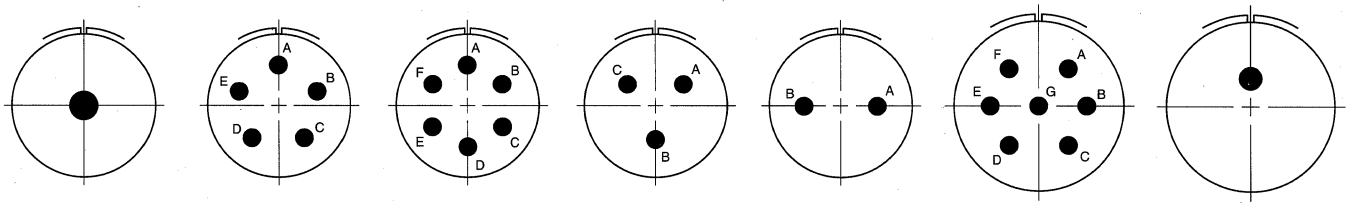
Insert Arrangements (Per MIL-STD-1651)

Numbering identification example: **10SL-3** (Insert Number)
2-#16 (Contact quantity and size)

Note: For Service Rating see table on pages 2072-2076.



8S-1 **1-#16** | **10S-2** **1-#16** | **10SL-3** **3-#16** | **10SL-4** **2-#16** | **12S-3** **2-#16** | **12S-4** **1-#16** | **12-5** **1-#12** | **14S-1**** **3-#16** | **14S-2** **4-#16**



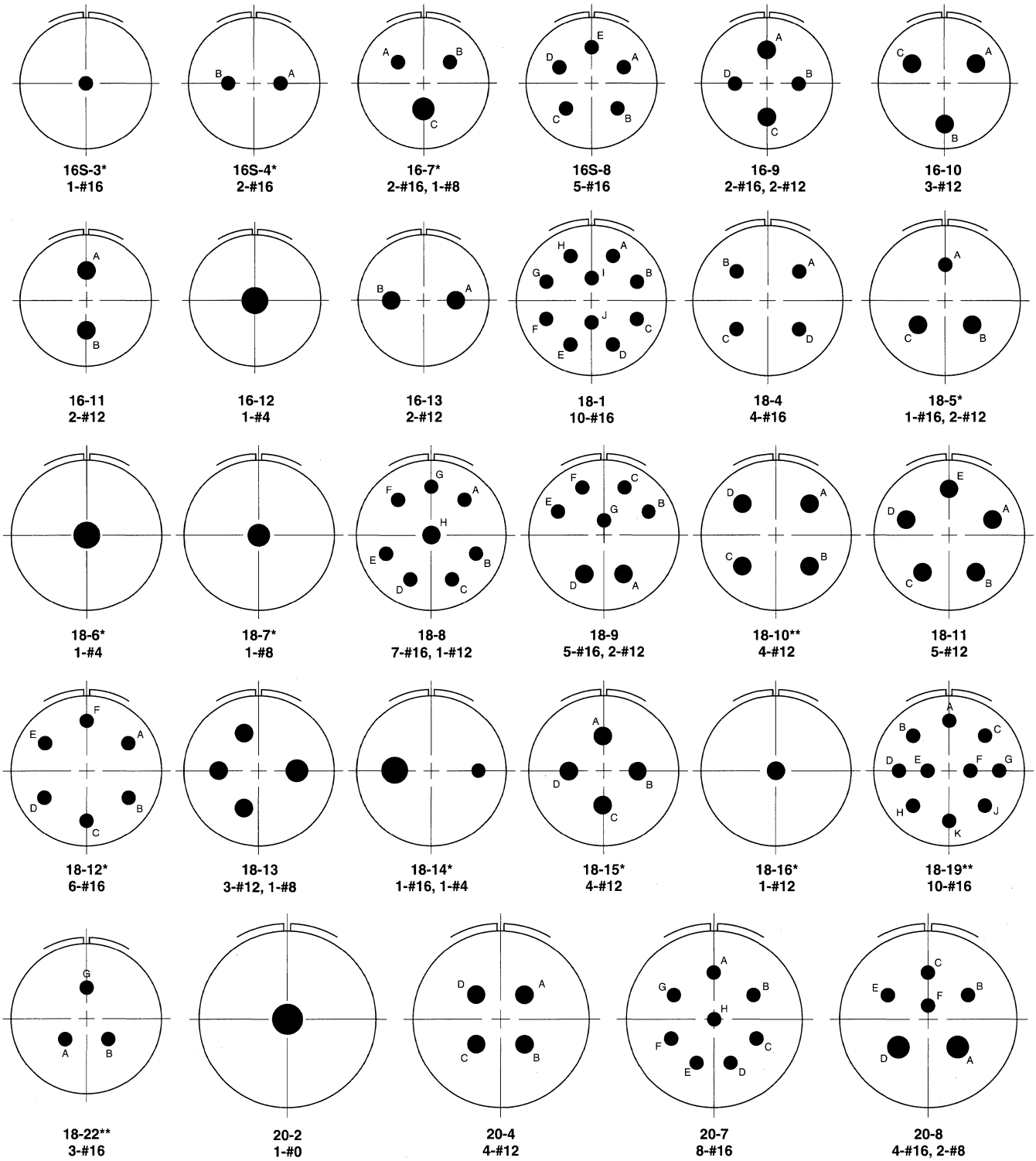
14-3 **1-#8** | **14S-5** **5-#16** | **14S-6** **6-#16** | **14S-7** **3-#16** | **14S-9**** **2-#16** | **16S-1** **7-#16** | **16-2*** **1-#12**

*Consult AMP for availability.
**Inactive for new design.
Note: Mating face of pin insert is shown. Socket insert is opposite.

Specifications subject to change.
1-800-522-6752 Product Information Center/ AMP FAX Service
1-800-722-1111 Tooling/Technical Assistance Center

MIL-C-5015 (Continued)

Insert Arrangements (Continued)



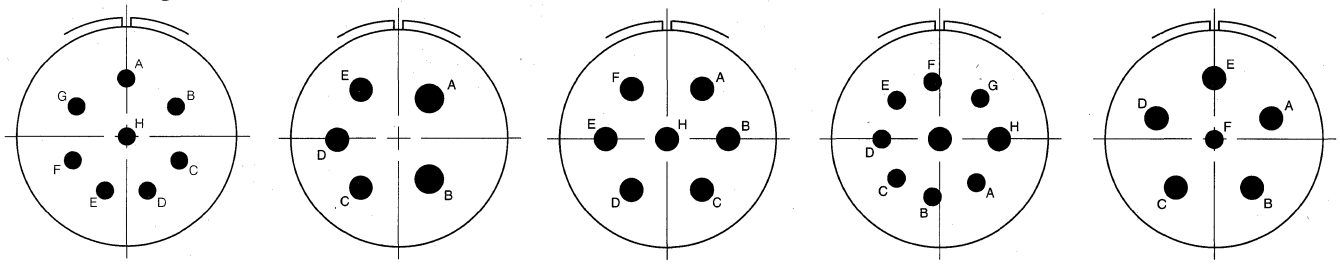
*Consult AMP for availability
**Inactive for new design
Note: Mating face of pin insert is shown. Socket insert is opposite.

SOURCE: Catalog 82647

Specifications subject to change.
1-800-522-6752 Product Information Center/ AMP FAX Service
1-800-722-1111 Tooling/Technical Assistance Center

MIL-C-5015 (Continued)

Insert Arrangements (Continued)



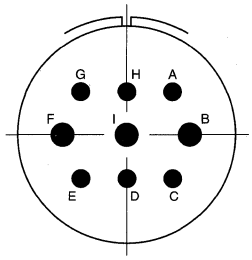
20-9*
1-#12, 7-#16

20-14
3-#12, 2-#8

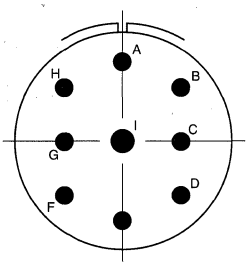
20-15
7-#12

20-16
7-#16, 2-#12

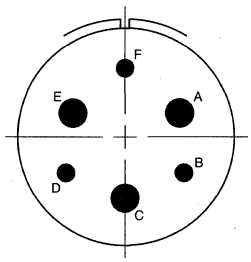
20-17
1-#16, 5-#12



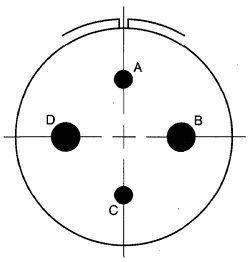
20-18
6-#16, 3-#12



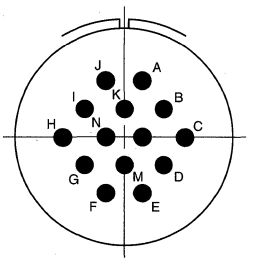
20-21
8-#16, 1-#12



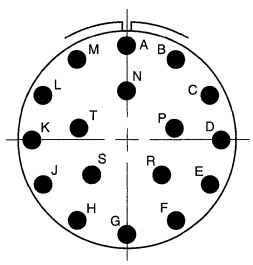
20-22
3-#16, 3-#8



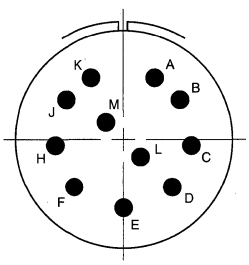
20-24
2-#16, 2-#8



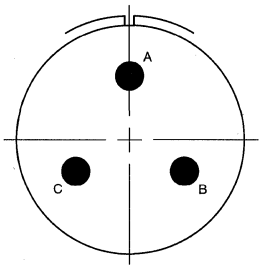
20-27
14-#16



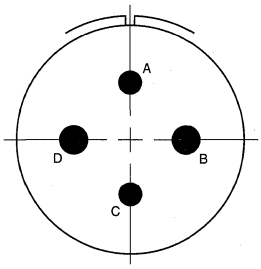
20-29
17-#16



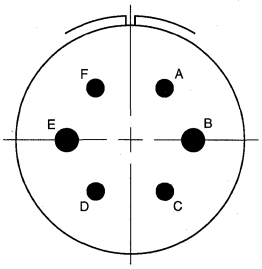
20-33
11-#16



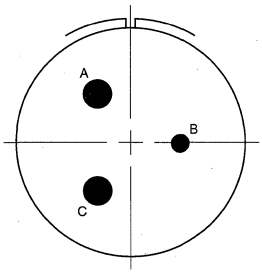
22-2
3-#8



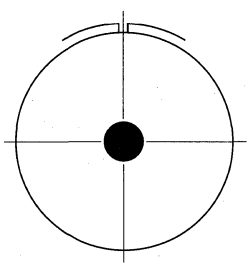
22-4**
2-#12, 2-#8



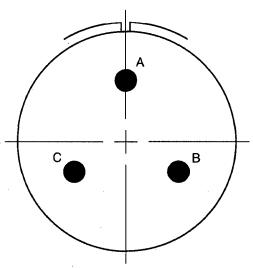
22-5
4-#16, 2-#12



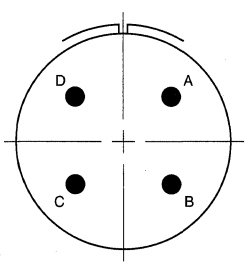
22-6**
1-#16, 2-#8



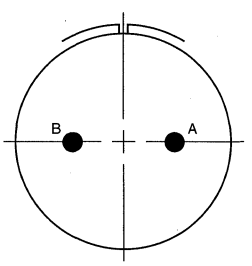
22-7*
1-#0



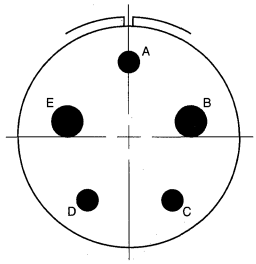
22-9*
3-#12



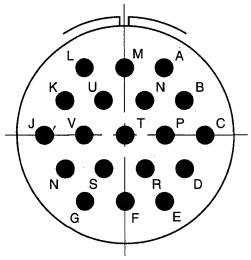
22-10*
4-#16



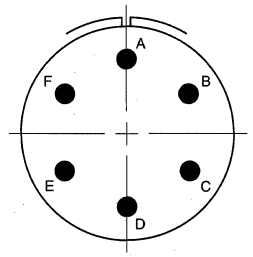
22-11*
2-#16



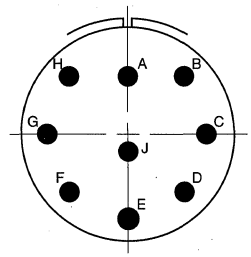
22-12*
3-#16, 2-#8



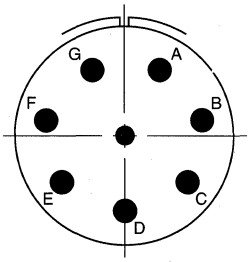
22-14
19-#16



22-15*
1-#16, 5-#12



22-17*
8-#16, 1-#12



22-18*
8-#16

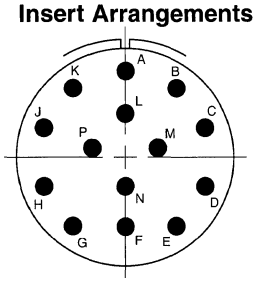
*Consult AMP for availability
**Inactive for new design
Note: Mating face of pin insert is shown. Socket insert is opposite.

SOURCE: Catalog 82647

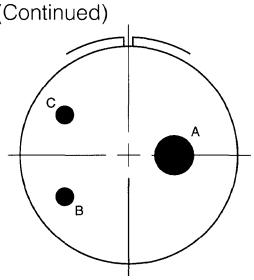
Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

MIL-C-5015 (Continued)

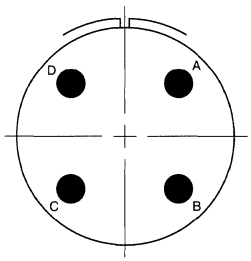
Insert Arrangements (Continued)



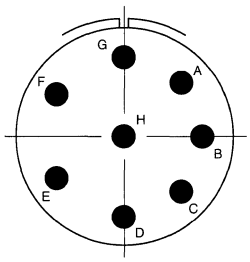
22-19
14-#16



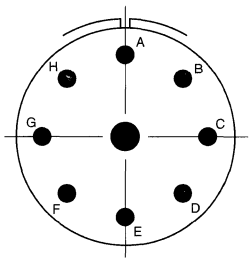
22-21
2-#16, 1-#0



22-22
4-#8



22-23
8-#12



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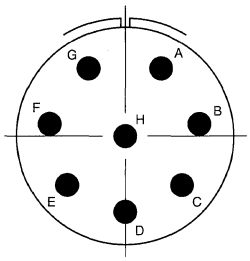

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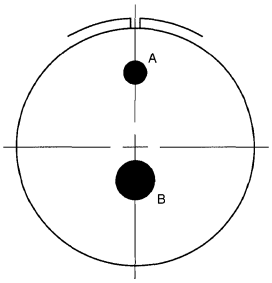
8-#12



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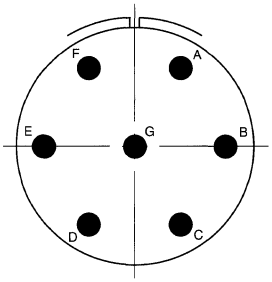
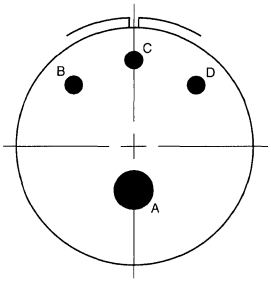


24-2
7-#12



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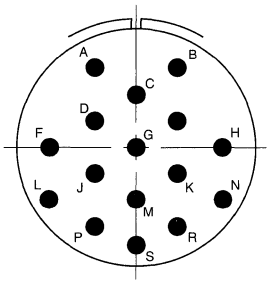

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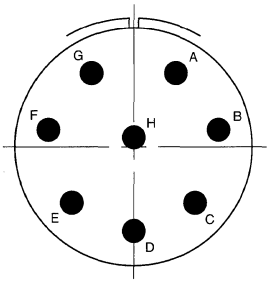

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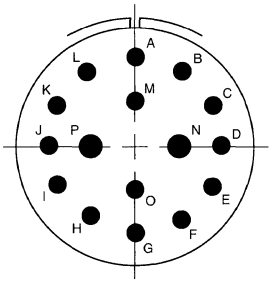
8-#12



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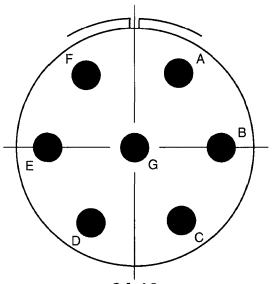
14-#16, 2-#12



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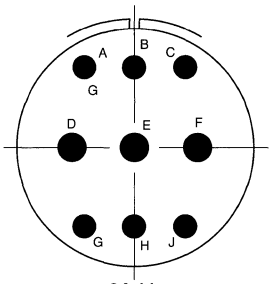

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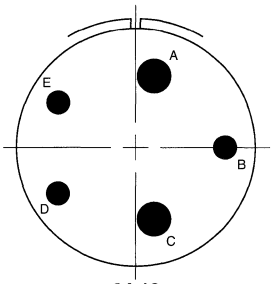

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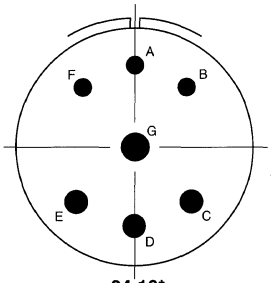

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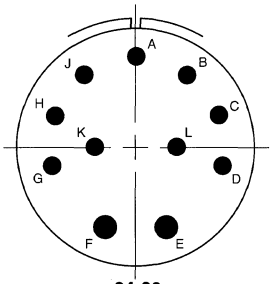
3-#16, 1-#8, 3-#12



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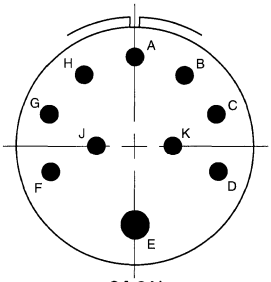

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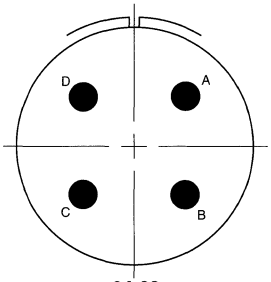

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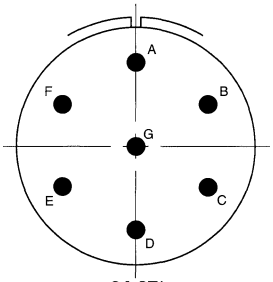

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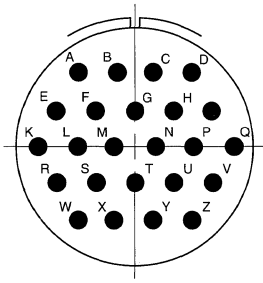

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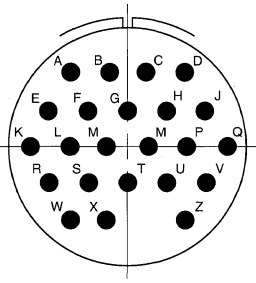
24-#16



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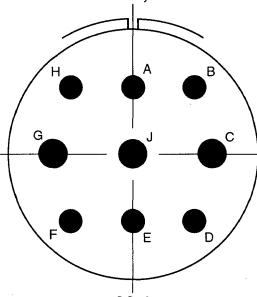
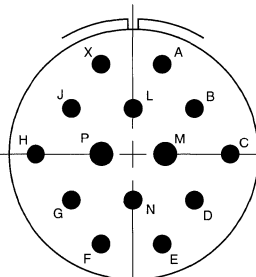
23-#16



28-1
6-#12, 3-#8



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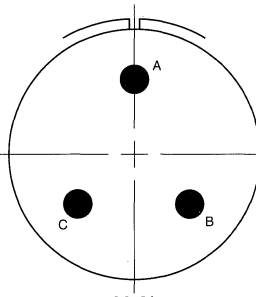
12-#16, 2-#12



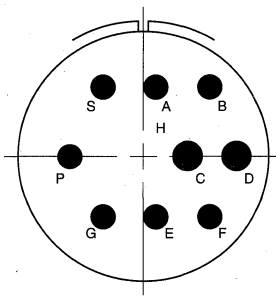
28-3*
3-#8

*Consult AMP for availability
**Inactive for new design
Note: Mating face of pin insert is shown. Socket insert is opposite.
SOURCE: Catalog 82647

Specifications subject to change.
1-800-522-6752 Product Information Center/ AMP FAX Service
1-800-722-1111 Tooling/Technical Assistance Center

MIL-C-5015 (Continued)

Insert Arrangements (Continued)



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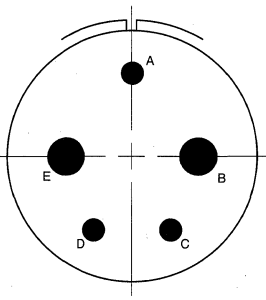

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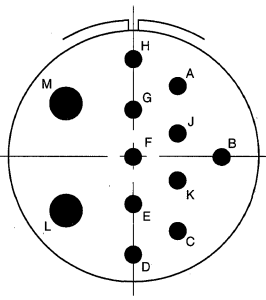

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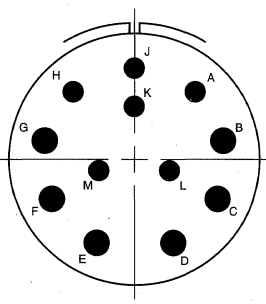

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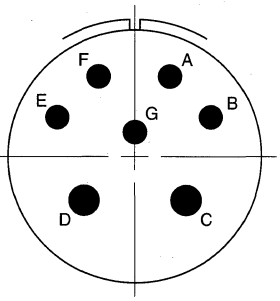

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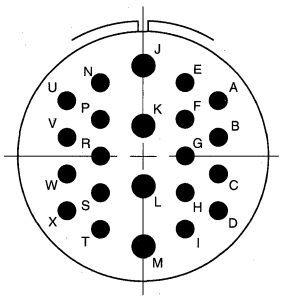

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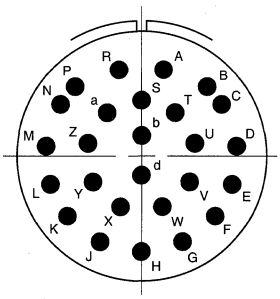

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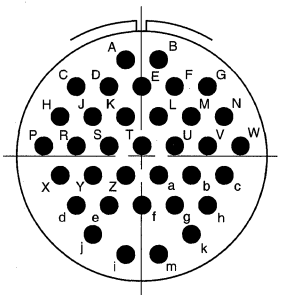
26-#16



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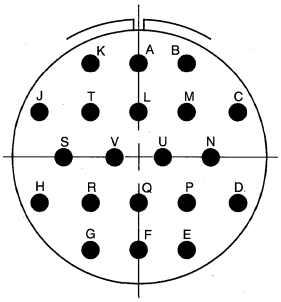

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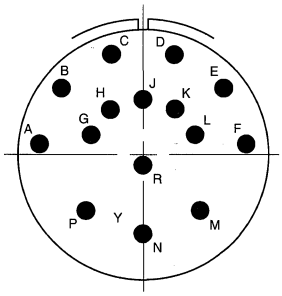

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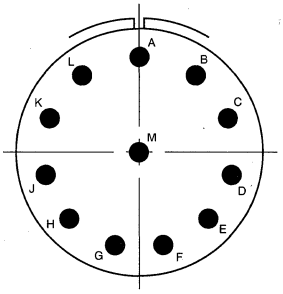

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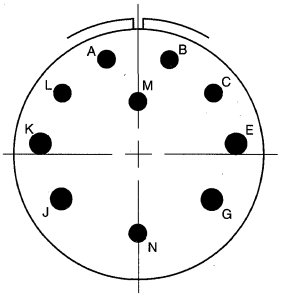

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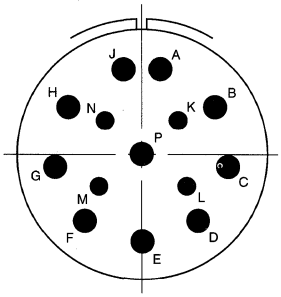

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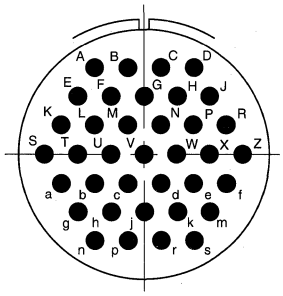

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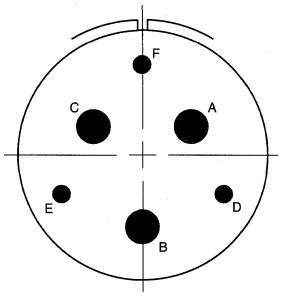
37-#16



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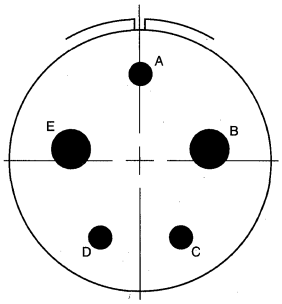

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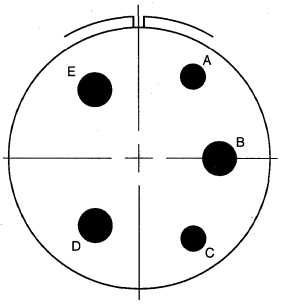

32-2*
2-#16, 3-#4

*Consult AMP for availability
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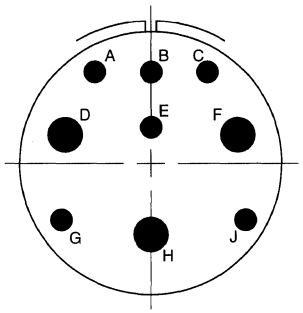
MIL-C-5015 (Continued)

Insert Arrangements (Continued)



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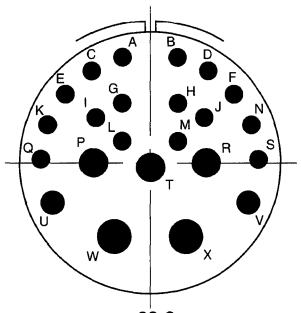

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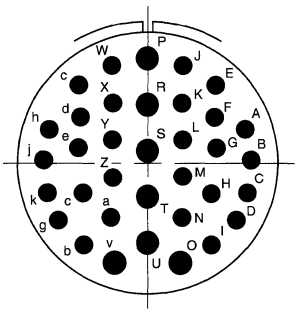

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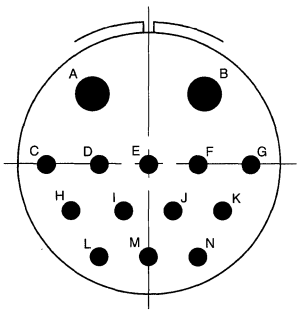

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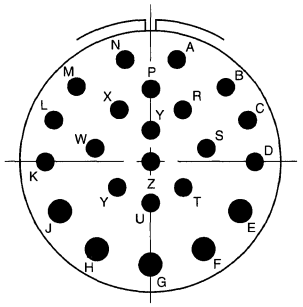

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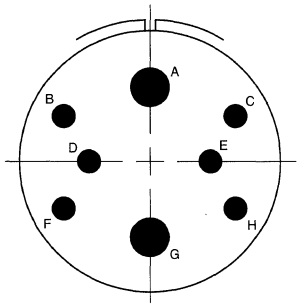

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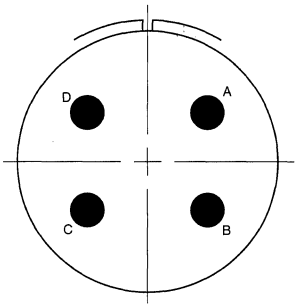

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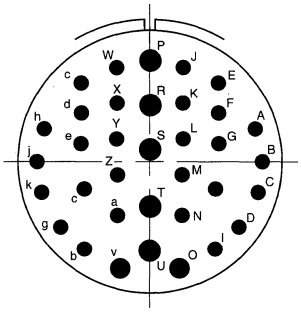

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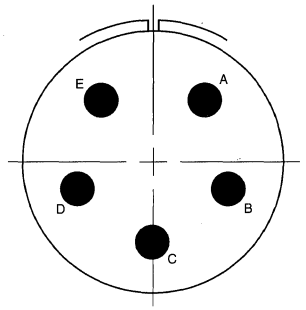

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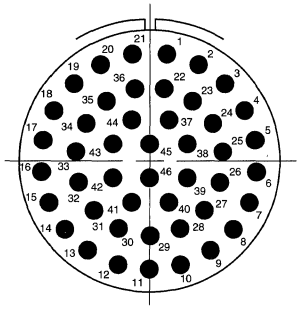

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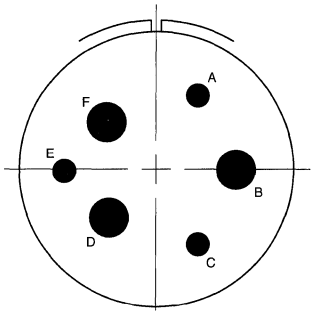
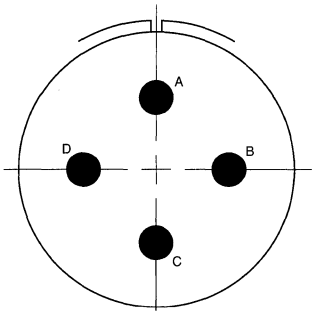
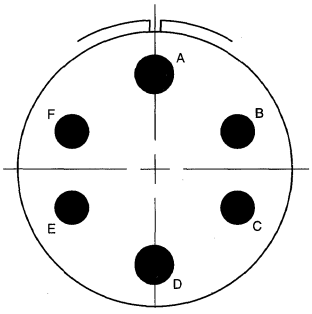
46-#16



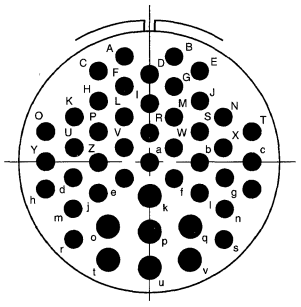
36-3
3-#12, 3-#0



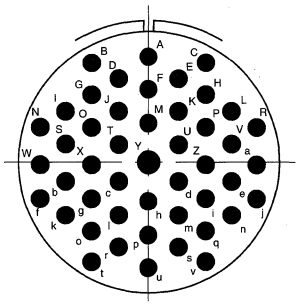
36-5
4-#0



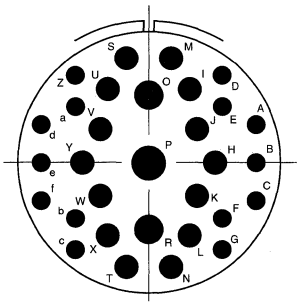
36-6
4-#4, 2-#0



36-7
40-#16, 7-#12



36-8
46-#16, 1-#12



36-9
14-#16, 14-#12, 2-#8, 1,#4

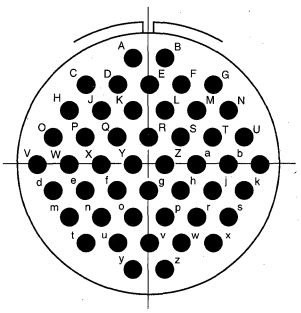
*Consult AMP for availability
**Inactive for new design
Note: Mating face of pin insert is shown. Socket insert is opposite.

SOURCE: Catalog 82647

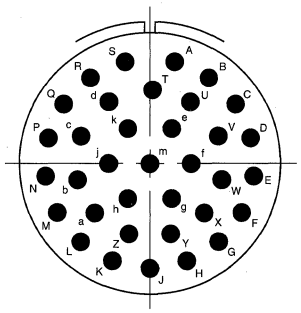
Specifications subject to change.
1-800-522-6752 Product Information Center/ AMP FAX Service
1-800-722-1111 Tooling/Technical Assistance Center

MIL-C-5015 (Continued)

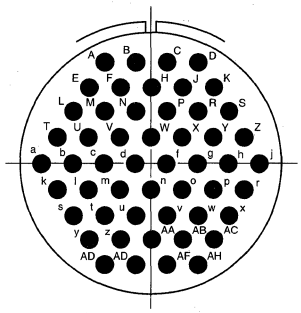
Insert Arrangements (Continued)



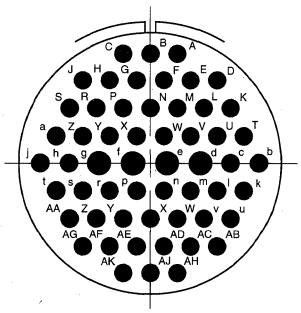
36-10
48-#16



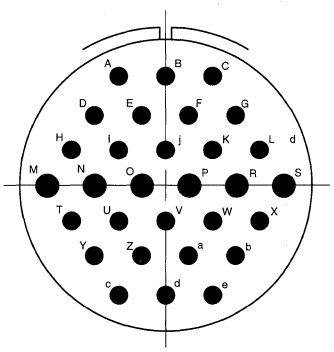
36-15
35-#16



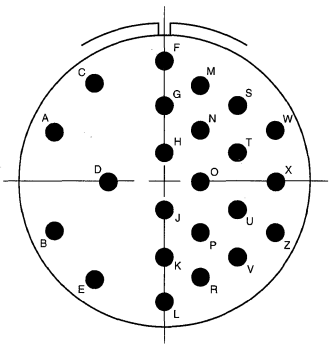
36-52
52-#16



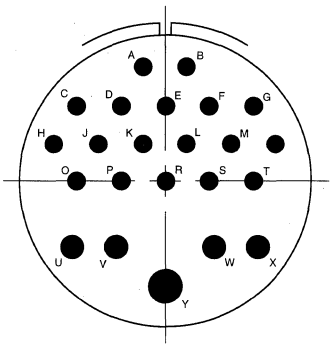
36-66
52-#16, 4-#12



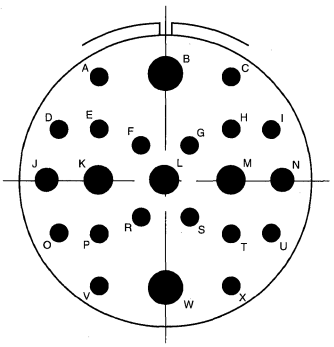
40-1
24-#16, 6-#12



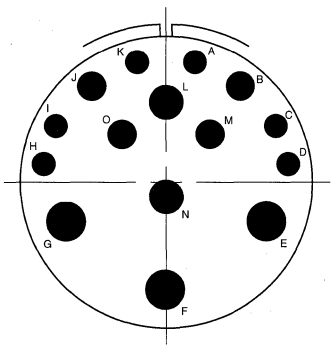
40-2*
23-#16



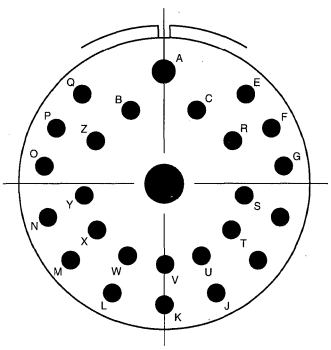
40-3*
18-#16, 4-#12, 1-#4



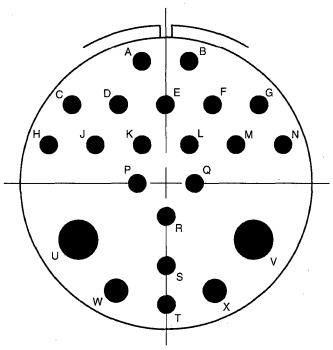
40-4*
16-#16, 2-#12, 3-#8, 2-#4



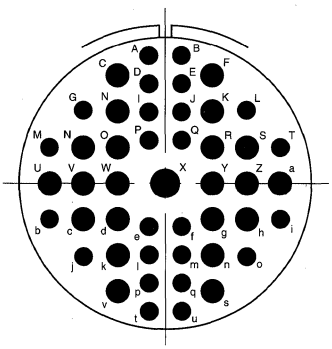
40-5*
6-#12, 4-#8, 2-#4, 3-#0



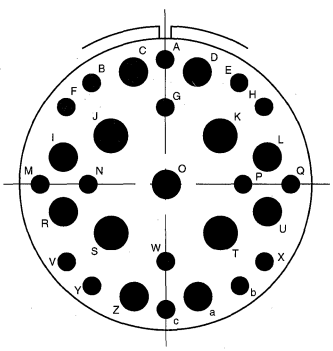
40-6*
24-#16, 1-#12, 1-#0



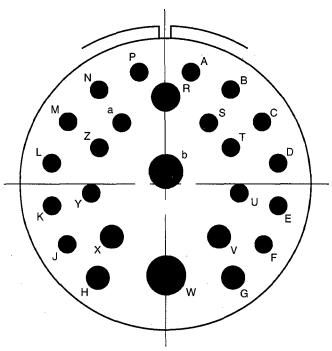
40-7*
2-#12, 2-#0, 18-#16



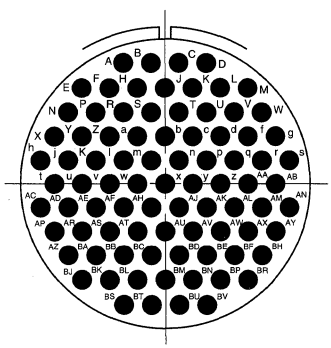
40-9
24-#16, 22-#12, 1-#8



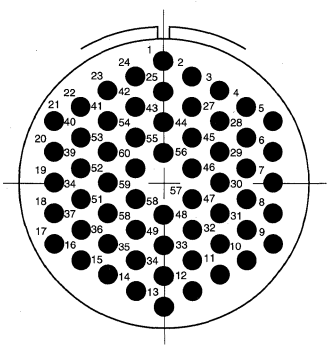
40-10*
16-#16, 9-#8, 4-#4



40-11*
18-#16, 4-#12, 1-#8, 1-#4, 1-#0



40-56*
85-#16



40-62*
60-#16

*Consult AMP for availability
**Inactive for new design
Note: Mating face of pin insert is shown. Socket insert is opposite.

SOURCE: Catalog 82647

Specifications subject to change.

1-800-522-6752
Product Information Center/ AMP FAX Service

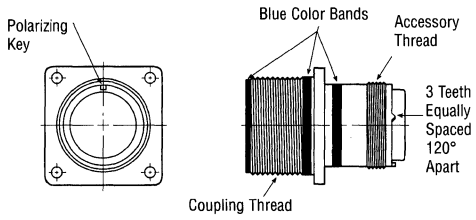
1-800-722-1111
Tooling/Technical Assistance Center

MIL-C-5015 (Continued)

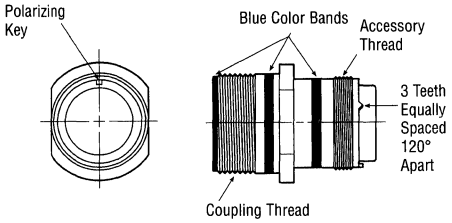
Shell Size:

8S
10S
10SL
12
12S
14
14S
16
16S
18
20
22
24
28
32
36
40

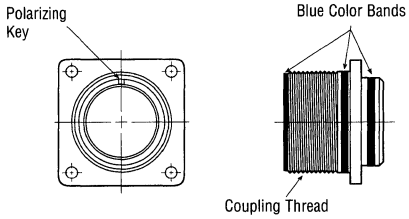
Receptacle Shell, Flange Wall Mount, Threaded Coupling
Military No. MS3450
MATRIX No. 9440



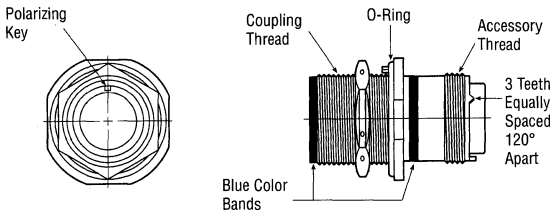
Receptacle Shell, Cable Connecting, Threaded Coupling
Military No. MS3451
MATRIX No. 9441



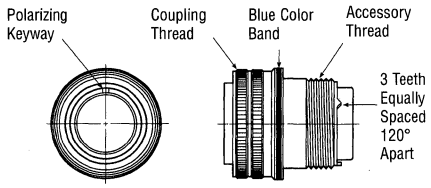
Receptacle Shell, Flange Box Mount, Threaded Coupling
Military No. MS3452
MATRIX No. 9442



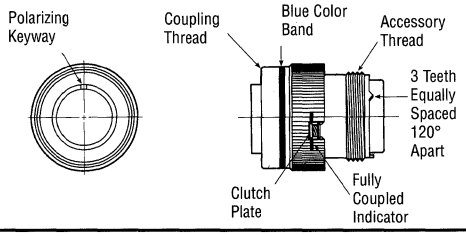
Receptacle Shell Jam Nut Mount, Threaded Coupling
Military No. MS3454
MATRIX No. 9444



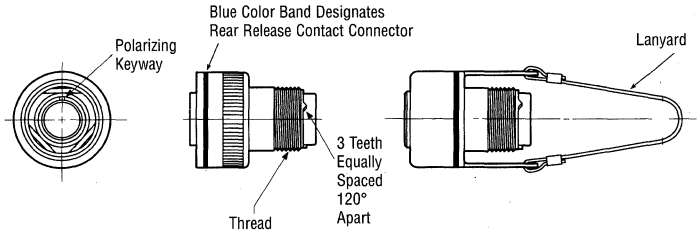
Plug Shell, Threaded Coupling
Military No. MS3456
MATRIX No. 9446



Plug Shell, Self-Locking, Threaded Coupling
Military No. MS3459
MATRIX No. 9816



Plug Shell, Quick-Disconnect
MATRIX No. 9817 (Connector w/ Lanyard) and 9818 (Connector)



Receptacle Adapter Ring
Required to mate Quick-Disconnect Plug with Receptacle.

Part No. 2500-008-0- * **

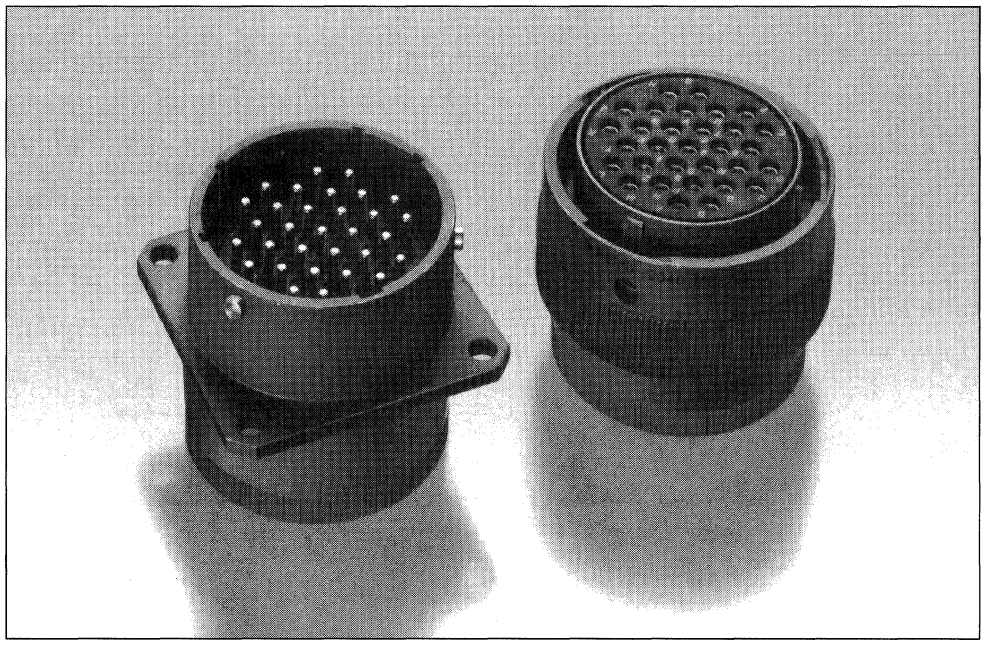
Shell Size

Finish
0 - Electroless nickel
1 - Black anodize
2 - Cadmium/olive drab
3 - Cres, passivated

SOURCE: Catalog 82647

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

MIL-C-26482
Series I



MIL-C-26482 Series I connectors are environmental circular connectors used in box- and panel-mount applications in tanks, aircraft, or ships. They are a front-release contact connector.

The captive free-rotating coupling nut of these connectors is always ready to mate, with no chance of precocking. Plugs, receptacles with front and rear wall-mount, rear box-mount, and jam nut-mount configurations are offered. Inserts in these connectors are retained permanently by a multiple interlock system.

The connectors are completely sealed against the environment, including individual contact seals and interfacial seal between contacts. The line includes shell sizes 10 through 24 and accepts size 16 and 20 contacts.

Series I connectors are the only ones available to fully meet both the military and the Douglas Aircraft Customer Specification (which requires resistance to SKYDROL).

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

MIL-C-26482
Series I (Continued)

Performance Specifications

Voltage Rating

Altitude		Service Rating	
ft.	m	Inst.	A
Sea Level	-	1500	2300
50,000	15 240	500	750
70,000	21 336	375	500
110,000	33 528	200	200

Note: When the voltage as indicated above is applied between shell and closest contact to the shell or between the two closest contacts for a period of 5 seconds, there shall be no evidence of flashover or breakdown.

Contact Current Rating and Retention

Contact Size*	DC Test Amperage	Contact Retention	
		Axial Load	
		lb	N
20	7.5	15	66.7
16	13.0	25	111.2

*Organize individual circuits to maintain heat rise within operating temperature requirements.

Operating Temperature Range
-55°C to +125°C (-67°F to +125°F)

Environmental Seal
Wired, mated connectors with the specified accessory attached, shall meet the environmental requirements of MIL-C-26482.

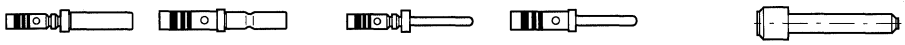
Durability
Minimum of 500 mating cycles.

Shock and Vibration Requirements
When tested as follows the connector shall sustain no physical damage or electrical discontinuity exceeding one microsecond.

Shock
Pulse of an approximate half sine wave of 50 g magnitude with duration of 11 milliseconds applied in three axes.

Vibration
Twelve hours of random vibration having a range of 10 to 2,000 Hz with a .06 [1.52] inch double amplitude (10-55 Hz) and a 15 G peak level (55 to 2,000 Hz).

Contacts, Sealing Plugs and Assembly Tools



Size 20 | Size 16 — Socket Contact

Size 20 | Size 16 — Pin Contact

Sealing Plug

Contact Size	Wire Range		Socket Contacts		Pin Contacts		Sealing Plugs	
	AWG	mm²	Military Part No.	MATRIX Part No.	Military Part No.	MATRIX Part No.	Military Part No.	MATRIX Part No.
20	24-20	0.2-0.6	M39029/32-259	5100-401-0020	M39029/31-240	5000-255-0020	MS27488-20	3400-043-0020
16	20-16	0.5-1.4	M39029/32-247	5100-401-0016	M39029/31-228	5000-255-0016	MS27488-16	3400-043-0016

Crimping Tools

Contact Size	Wire Range		Finished Wire Dia. Range		Military Part No.	
	AWG	mm²	inch	mm	Crimping Tool	Turret or Positioner
20	24-20	0.2-0.6	.040-.083	1.02-2.11	M22520/1-01	M22520/1-02
16	20-16	0.5-1.4	.053-.103	1.34-2.62	M22520/1-01	M22520/1-02

Note: Each connector is furnished with contacts. One spare for inserts requiring 1 to 26 of each contact and two spares for inserts with more than 26 contacts and a minimum of one sealing plug up to 15% of the number of contacts.

Insertion/Extraction Tools

Contact Size	Color Code	Military Part No.	MATRIX Part No.
20	Rd./Wh.	M81969/17-03 (MS24256A20)	M81969/19-07 (MS24256R20)
16	Bl./Wh.	M81969/17-04 (MS24256A16)	M81969/19-08 (MS24256R16)

SOURCE: Catalog 82647

Specifications subject to change.

1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

MIL-C-26482
Series I (Continued)

Military Part Number System

MS3120 E 12 - 10 P W

- **Alternate Insert Position**
  Leave blank for normal
  (Use W, X, Y, or Z for alternates)
- **Contact Style**
  P = Pin
  S = Socket
- **Insert Arrangement**
- **Shell Size** (Even Numbers 10 thru 24)
- **Class**
  E = Environmental, straight backshell
  (Except MS3122, no backshell)
  F = Environmental, straight strain
  relief backshell
  P = Potted seal
- **Military Basic Number**
  MS3120 = Wall mount receptacle
  MS3121 = Cable connecting receptacle
  MS3122 = Box Mount receptacle
  MS3124 = Jam nut mount receptacle
  MS3126 = Plug

MATRIX Part Number System

M B F2 0 E 12 W 10 P W

- **Alternate Insert Position**
  Leave blank for normal
  (use W, X, Y, or Z for alternates)
- **Contact Style**
  P = Pin
  S = Socket
- **Insert Arrangement**
- **Shell Finish**
  W = Aluminum shell, cadmium plate,
  olive drab
- **Shell Size** (Even numbers 10 thru 24)
- **Class**
  E = Environmental, straight backshell,
  (except box mount)
  F = Environmental, straight strain relief backshell
  P = Environmental, potting cup
- **Shell Style**
  0 = Wall Mount receptacle
  1 = Cable connecting receptacle
  2 = Box mount receptacle
  4 = Jam nut mount receptacle
  6 = Plug
- **Matrix MIL-C-26482 Series I**
  F2 = Front release contacts
- **Bayonet Coupling**
- **Matrix Science Corporation**

Specifications subject to change.
1-800-522-6752 Product Information Center/ AMP FAX Service
1-800-722-1111 Tooling/Technical Assistance Center

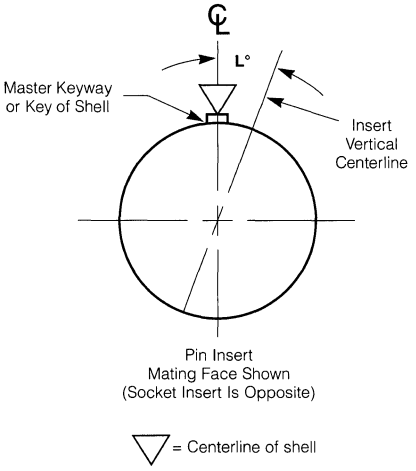
MIL-C-26482
Series I (Continued)

Polarization

Clocking Positions

1. In the normal insert clocking position (position N) the insert centerline coincides with the centerline of the master key/keyway of the shell.
2. In the alternate clocking position (W, X, Y, Z) the pin insert is rotated clockwise relative to the centerline of the master key-keyway as indicated in the figure and chart.

   The socket insert is rotated counter-clockwise.
3. Plugs have keys. Receptacles have keyways.



Insert Arrangement and Clocking Positions
(Per MIL-STD-1669)

Shell Size & Insert Arrangement	L Degrees					Service Rating
	N	W	X	Y	Z	
10-6	0	90	–	–	–	I
12-3	0	–	–	180	–	II
12-8	0	90	112	203	292	I
12-10	0	60	155	270	295	I
14-5	0	40	92	184	273	II
14-12	0	43	90	–	–	I
14-15	0	17	110	155	234	I
14-18	0	15	90	180	270	I
14-19	0	30	165	315	–	I
16-8	0	54	152	180	331	II
16-23	0	158	270	–	–	I
16-26	0	60	–	275	338	I
18-11	0	62	119	241	340	II
18-30	0	180	193	285	350	I
18-32	0	85	138	222	265	I
20-16	0	238	318	333	347	II
20-39	0	63	144	252	333	I
20-41	0	45	126	225	–	I
22-21	0	16	135	175	349	II
22-32	0	72	145	215	288	I
22-55	0	30	142	226	314	I
24-31	0	90	225	255	–	I
24-61	0	90	180	270	324	I

SOURCE: Catalog 82647

Specifications subject to change.

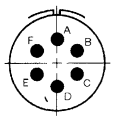
1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

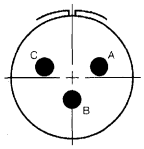
MIL-C-26482
Series I (Continued)

Insert Arrangements (Per MIL-STD-1669)
Numbering identification example: 1210 (Insert Arrangement No.)
10 #20 (Contact quantity and size)

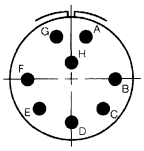
Note: For Service Rating see table on page 2087.



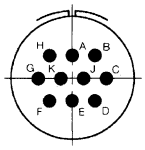
1006
6 #20



1203
3 #16



1208
8 #20



1210
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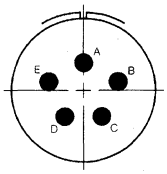

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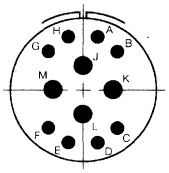

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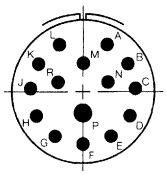
4 #6, 8 #20



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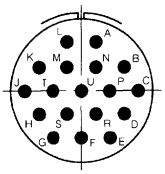

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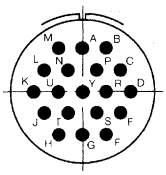

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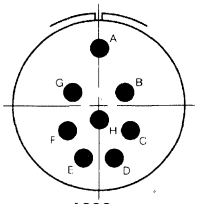

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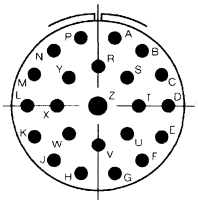

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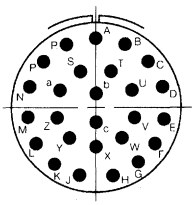

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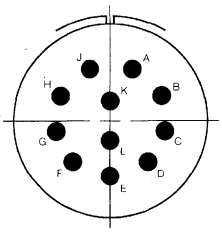

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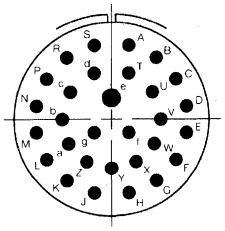

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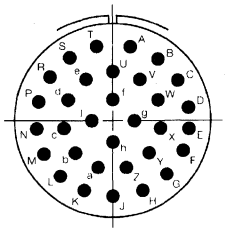

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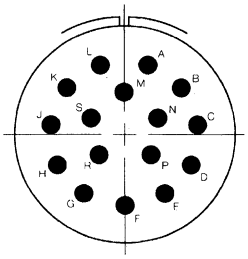

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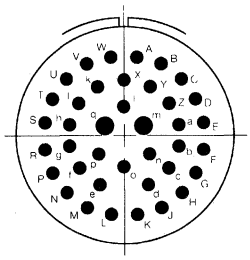

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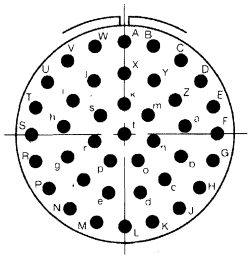

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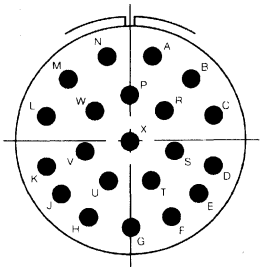

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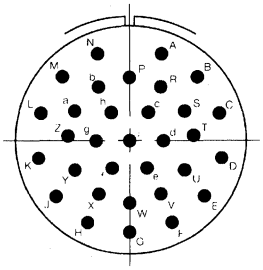
21 #16



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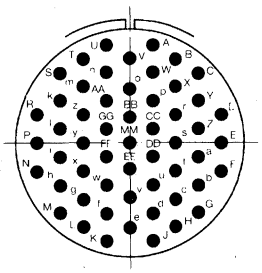

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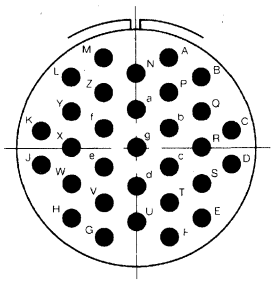

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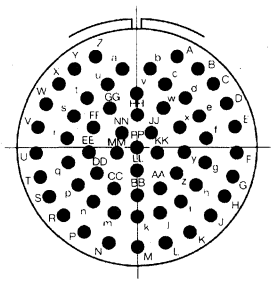
31 #16



2461
61 #20

Note: Mating face of pin insert is shown, socket insert is opposite.

SOURCE: Catalog 82647

Specifications subject to change.
1-800-522-6752
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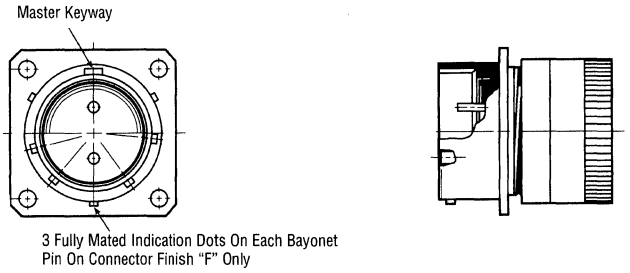
1-800-722-1111
Tooling/Technical Assistance Center

MIL-C-26482
Series I (Continued)

Shell Size:

10
12
14
16
18
20
22
24

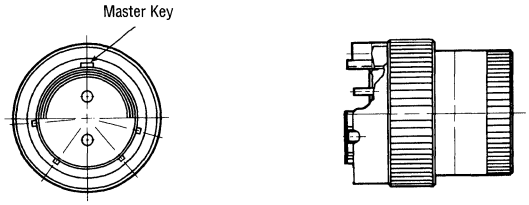
Receptacle Shell, Wall Mount, Bayonet Coupling
Military No. MS3120
MATRIX No. MBF20



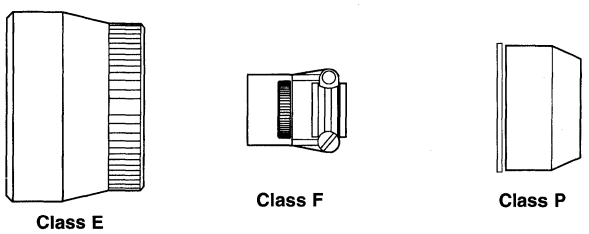
Plug Shell, Cable Connecting, Bayonet Coupling
Military No. MS3121
MATRIX No. MBF21

Receptacle Shell, Box Mount, Bayonet Coupling
Military No. MS3122
MATRIX No. MBF22

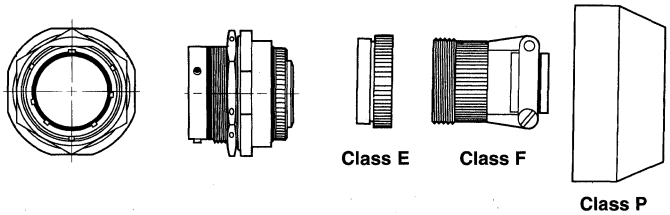
Plug Shell, Bayonet Coupling
Military No. MS3126
MATRIX No. MBF26



Backshells
(for 4 shells shown above)



Receptacle Shell, Jam Nut Mount, Bayonet Coupling
Military No. MS3124
MATRIX No. MBF24
and Backshells
(E, F, P)



SOURCE: Catalog 82647

Specifications subject to change.
1-800-522-6752
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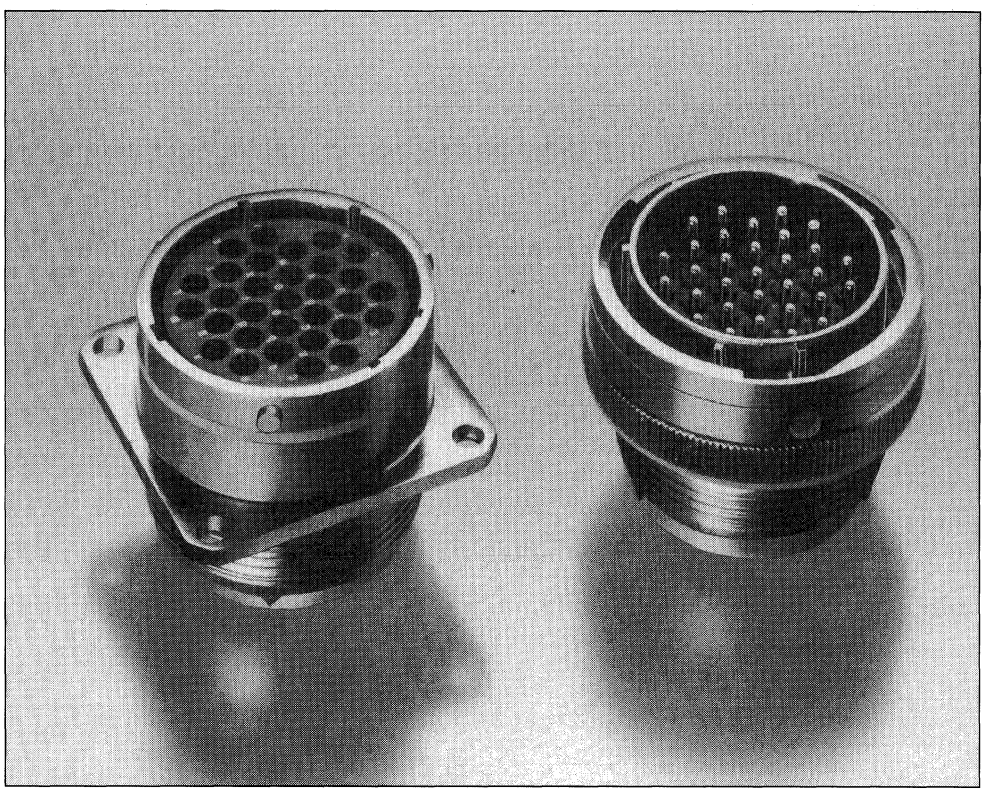
1-800-722-1111
Tooling/Technical Assistance Center

MIL-C-26482 Series II



MIL-C-26482 Series II connectors feature rear-release contacts. This connector is identical to the inactivated MIL-C-83723 Series I, which is used for existing applications. Connectors are marked with both military part numbers as applicable.

Contacts are qualified to MIL-C-39029 requirements and are BIN coded (three color bands) for identification. These contacts are crimped with a standard crimp tool per MIL-C-22520.

The contact retention system of this connector permits insertion and removal of contacts from the rear of the connector utilizing the same plastic tool specified for use with most qualified rear-release type connectors. Should an assembler ever misuse the tool when inserting or removing a contact, the tool is designed to break before causing damage to the connector.

Servicing the connector only from the rear helps prevent damage to the front that might affect the sealing characteristics.

Sealing grommets are constructed of tear-resistant elastomer and experience no degradation when exposed to a broad range of fluids. Sealing over a range of wire diameters is provided by a triple wire seal at the rear of the connector.

The closed entry socket side of the insert is designed with a lead-in chamfer and a hard face that will accept a pin contact bent within pre-established limits. The elastomer interfacial seal on the pin side has raised barriers around each pin which displace into the socket chamfer when mated, providing a positive moisture seal.

Square flange, jam nut single-hole mount and cable connecting receptacles are available as well as standard and RFI plugs. All are available in a range of shell sizes and insert arrangements.

Specifications subject to change.
1-800-522-6752 Product Information Center/ AMP FAX Service
1-800-722-1111 Tooling/Technical Assistance Center

MIL-C-26482
Series II (Continued)

Performance Specifications

Voltage Rating

Altitude		Mated Service Rating	
ft.	m	I	II
Sea Level	–	1500	2300
50,000	15 240	500	750
70,000	21 336	375	500
100,000	30 480	200	200

Note: When the voltage as indicated above is applied between shell and closest contact to the shell or between the two closest contacts for a period of 5 seconds, there shall be no evidence of flashover or breakdown.

Contact Current Rating and Retention

Contact Size*	DC Test Amperage	Contact Retention Axial Load	
		lb	N
20	7.5	15	66.7
16	13.0	25	111.2
12	23.0	30	133.4

*Organize individual circuits to maintain heat rise within operating temperature requirements.

Operating Temperature Range
-65° C to +200° C (-85°F to +392°F)

Environmental Seal
Wired, mated connectors with the specified accessory attached, shall meet the altitude-immersion test specified in MIL-C-26482.

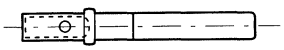
Durability
Minimum of 500 mating cycles.

Shock and Vibration Requirements
When tested as follows the connector shall sustain no physical damage, or electrical discontinuity exceeding one microsecond.

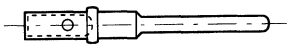
Shock
Pulse of an approximate half sine wave of 300 g magnitude with duration of 3 milliseconds applied in three axes.

Vibration
Sixteen hours of random vibration having a range of 50 to 2,000 Hz with a 41.7 G peak level.

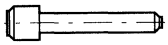
Contacts, Sealing Plugs and Assembly Tools



Socket Contact



Pin Contact



Sealing Plug

Contact Size	Wire Range		Socket Contacts		Pin Contacts		Sealing Plugs	
	AWG	mm²	Military Part No.	MATRIX Part No.	Military Part No.	MATRIX Part No.	Military Part No.	MATRIX Part No.
20	24-20	0.2-0.6	M39029/5-115	5100-001-0020	M39029/4-110	5000-054-0020	MS27488-20	3400-043-0020
16	20-16	0.5-1.4	M39029/5-116	5100-001-0016	M39029/4-111	5000-054-0016	MS27488-16	3400-043-0016
12	14-12	2-3	M39029/5-118	5100-001-0012	M39029/4-113	5000-054-0012	MS27488-12	3400-043-0012

Crimping Tools

Contact Size	Wire Range		Finished Wire Dia. Range		Military Part No.	
	AWG	mm²	inch	mm	Crimping Tool	Turret or Positioner
20	24-20	0.2-0.6	.040-.083	1.02-2.11	M22520/1-01 or /2-01	M22520/1-02 or /2-02
16	20-16	0.5-1.4	.053-.103	1.34-2.62	M22520/1-01	M22520/1-02
12	14-12	2-3	.097-.158	2.46-4.01	M22520/1-01	M22520/1-02

Insertion/Extraction Tools

Contact Size	Color Code	Military Part No.	MATRIX Part No.
20	Rd./Wh.	M81969/14-11	6500-001-0020
16	Bl./Wh.	M81969/14-03	6500-001-0016
12	Yel./Wh..	M81969/14-04	6500-001-0012

Note: Each connector is furnished with contacts. One spare for inserts requiring 1 to 26 of each contact and two spares for inserts with more than 26 contacts and a minimum of one sealing plug up to 15% of the number of contacts.

SOURCE: Catalog 82647

Specifications subject to change.

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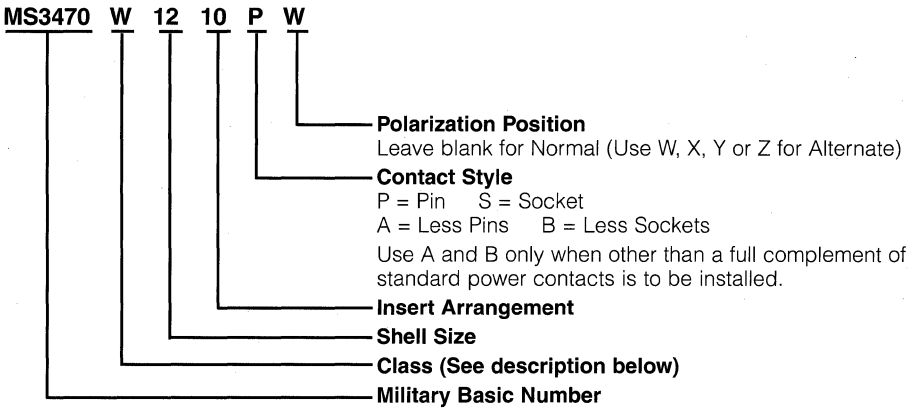
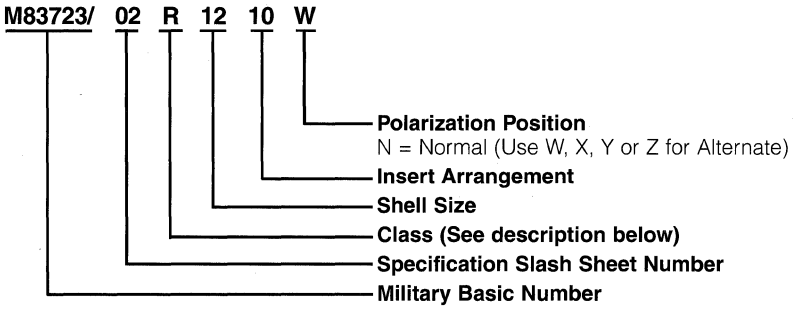
MIL-C-26482
Series II (Continued)

Military Part Number System

MIL-C-26482 Series II



MIL-C-83723 Series I



Equivalent Connector Classes — Cross Reference

MATRIX MB1 Series	MIL-C-26482 Series II	MIL-C-83723 Series I	Description
R	L	R	Aluminum shell, electroless nickel finish
—	E*	—	Superseded, (see notes below)
—	R*	F**	Superseded, (see notes below)
A	A	A	Aluminum shell, anodized finish, black
G	S	G	Stainless steel, passivated †
W	W	—	Aluminum shell, olive drab cadmium plated

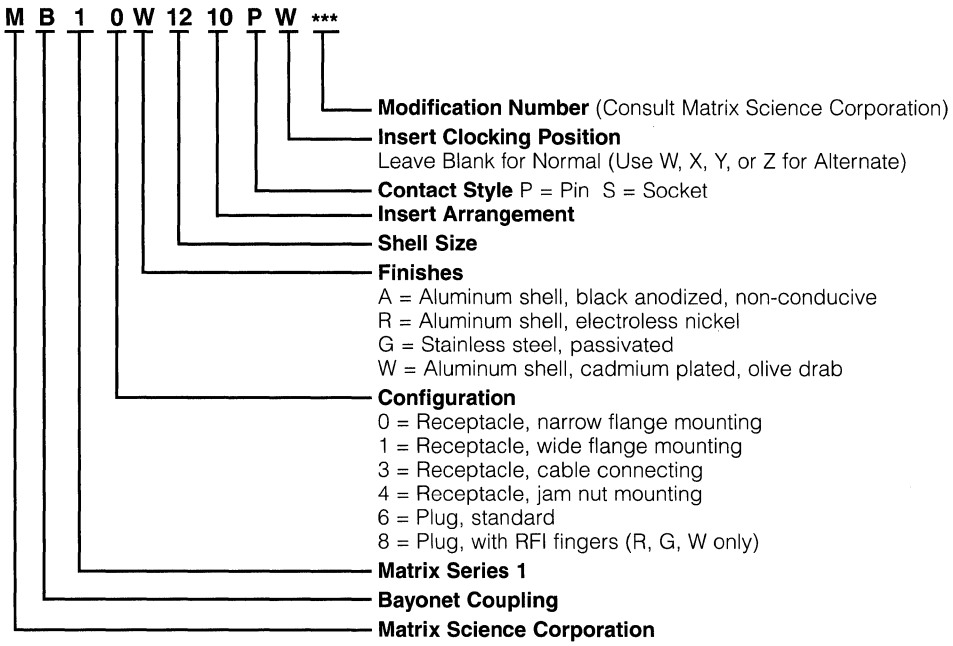
* Class E & R Inactive in favor of Class L (Ref. MIL-C-26482)
** Class F Inactive in favor of Class R (Ref. MIL-C-26482)
† Not on QPL, can be supplied to MATRIX Part Number only.

SOURCE: Catalog 82647

Specifications subject to change.
1-800-522-6752 Product Information Center/ AMP FAX Service
1-800-722-1111 Tooling/Technical Assistance Center

MIL-C-26482
Series II (Continued)

MATRIX Part Number System



SOURCE: Catalog 82647

Specifications subject to change.
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MIL-C-26482
Series II (Continued)

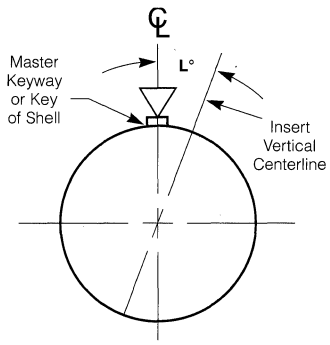
Polarization

Clocking Positions

1. In the Normal insert clocking position (position N) the insert centerline coincides with the centerline of the master key/keyway of the shell.

2. In the Alternate insert clocking position (W, X, Y, Z) the pin insert is rotated clockwise relative to the centerline of the master key/keyway as indicated in the figure and chart. The socket insert is rotated counter-clockwise.

3. Plugs have keys, receptacles have keyways.



Pin Insert
Mating Face Shown
(Socket Insert Is Opposite)

▽ = Centerline of Shell Master Key or Keyway

Insert Arrangement and Clocking Positions (Per MIL-STD-1669)

Shell Size & Insert Arrangement	L Degrees					Service Rating
	N	W	X	Y	Z	
8-3	0	60	210	–	–	I
8-4	0	45	–	–	–	I
8-33	0	90	–	–	–	I
8-98	0	–	–	–	–	I
10-6	0	90	–	–	–	I
10-98	0	90	180	240	270	I
12-3	0	–	–	180	–	II
12-8	0	90	112	203	292	I
12-10	0	60	155	270	295	I
14-4	0	45	–	–	–	I
14-5	0	40	92	184	273	I
14-9	0	15	90	180	270	I
14-12	0	43	90	–	–	I
14-15	0	17	110	155	234	I
14-18	0	15	90	180	270	I
14-19	0	30	165	315	–	I
14-22	0	45	–	–	–	I
16-8	0	54	152	180	331	II
16-14	0	25	78	180	240	I
16-23	0	158	270	–	–	I
16-26	0	60	–	275	338	I
16-95	0	25	90	153	–	I
16-99	0	66	156	223	340	I
18-8	0	180	–	–	–	I
18-11	0	62	119	241	340	II
18-30	0	18	193	285	350	I
18-32	0	85	138	222	265	I
18-85	0	45	90	180	240	I
18-88	0	12	45	168	202	I
20-16	0	238	318	333	347	II
20-24	0	70	145	215	290	I
20-27	0	72	14	216	288	I
20-39	0	63	144	252	333	I
20-41	0	45	126	225	–	I
20-90	0	18	60	240	270	I
22-12	0	–	–	–	–	I
22-19	0	15	90	225	308	I
22-21	0	16	135	175	349	II
22-32	0	72	145	215	288	I
22-34	0	62	142	218	298	I
22-41	0	39	135	264	–	I
22-55	0	30	142	226	314	I
22-95	0	26	180	266	–	I
22-96	0	19	41	–	–	I
24-19	0	30	165	315	–	II
24-27	0	45	110	140	225	I
24-31	0	90	225	255	–	I
24-61	0	90	180	270	324	I

SOURCE: Catalog 82647

Specifications subject to change.

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Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

MIL-C-26482
Series II (Continued)

Insert Arrangements (Per MIL-STD-1669)

Number identification example: **0833** (Insert Arrangement No.)
3 #20 (Contact quantity and size)

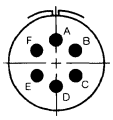
Note: For service rating see table on page 2094.

0803*
3 #20
(MIL-C-83723 Series I only Solder Contacts)

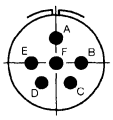
0804*
4 #20

0833
3 #20

0898
3 #20



1006
6 #20



1098*
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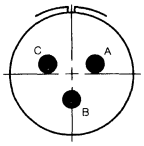

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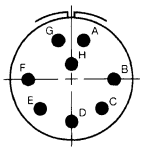

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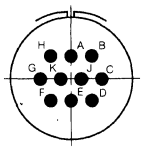

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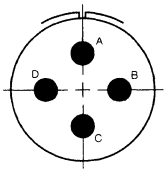

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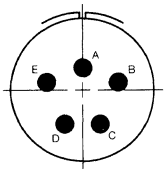

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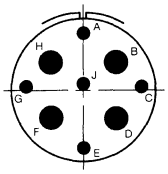
5 #16



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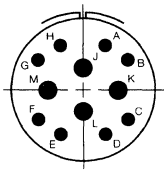
5 #20, 4 #12



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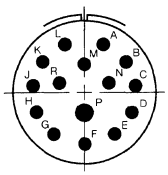

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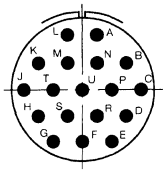
1 #16, 14 #20



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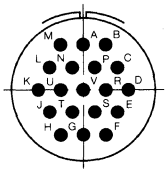

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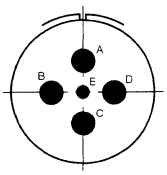
19 #20



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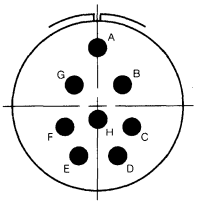

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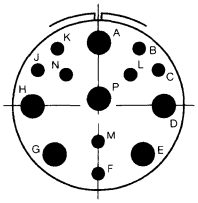
8 #16



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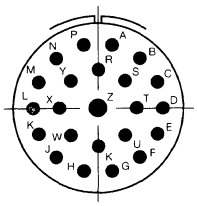

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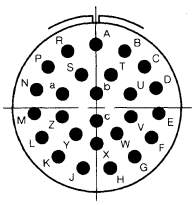

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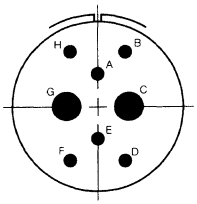
26 #20



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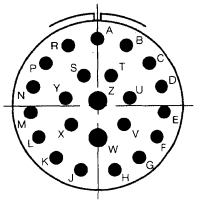
6 # 20, 2 #8
Shielded



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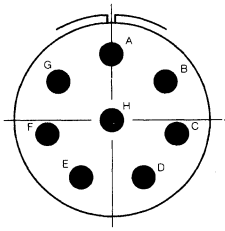

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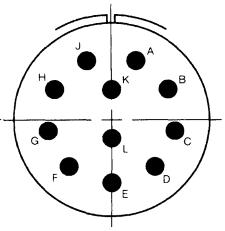

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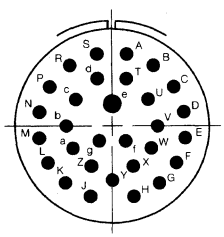

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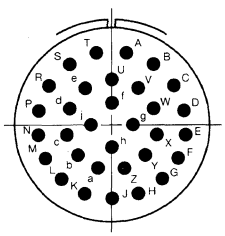

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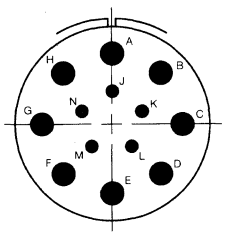
32 #20



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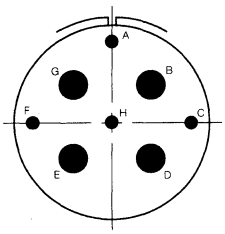

1888*
4 #20, 4 #8
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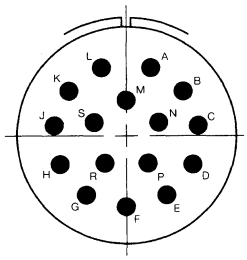


2016
16 #16

* Consult AMP for availability.
Note: Mating face of pin insert is shown, socket is opposite.

SOURCE: Catalog 82647

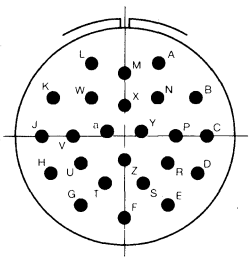
Specifications subject to change.

1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

MIL-C-26482
Series II (Continued)

Insert Arrangements (Continued)



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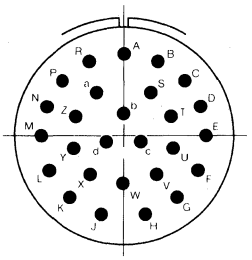
24 #20



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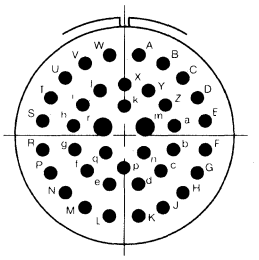
27 #20



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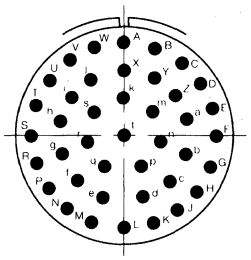
2 #16, 37 #20



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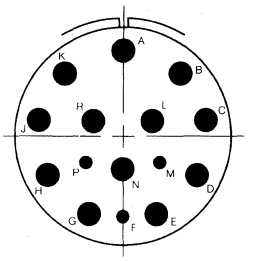
41 #20



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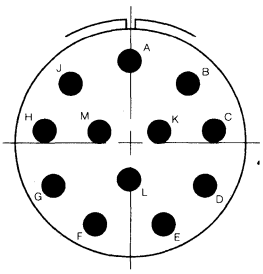

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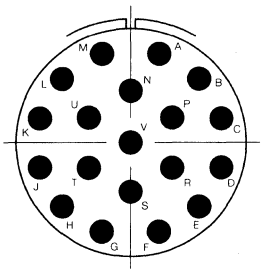

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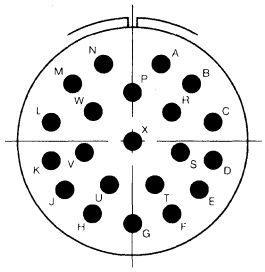
19 #12



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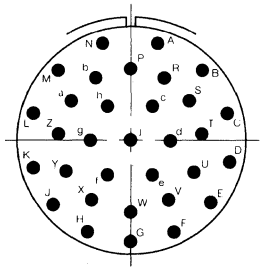

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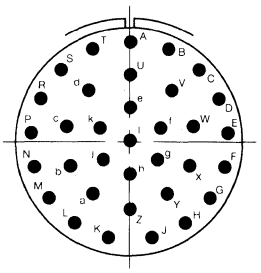
32 #20



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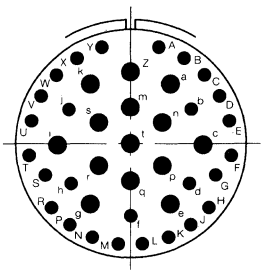
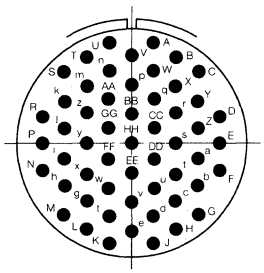
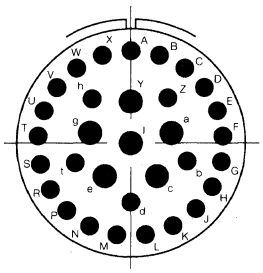
34 #20



2241
14 #16, 27 #20



2255
55 #20



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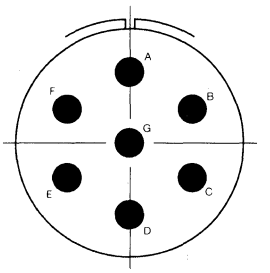
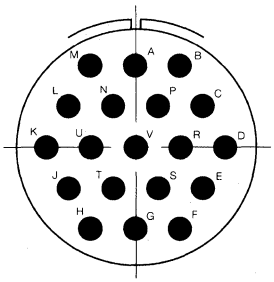
6 #12, 26 #20



2296*
7 #8 Shielded



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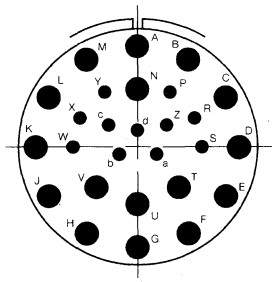

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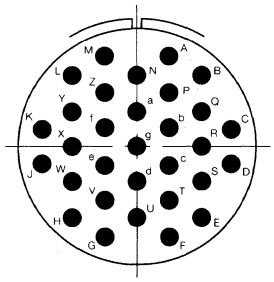

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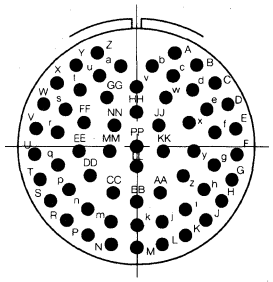
31 #16



2461
61 #20

* Consult AMP for availability.
Note: Mating face of pin insert is shown, socket is opposite.

SOURCE: Catalog 82647

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

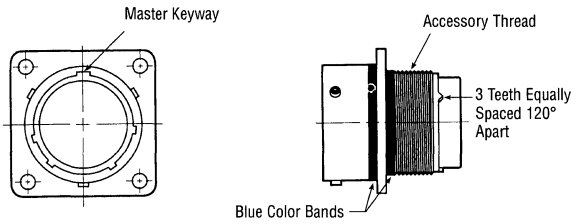
MIL-C-26482
Series II (Continued)

Shell Size:

8
10
12
14
16
18
20
22
24

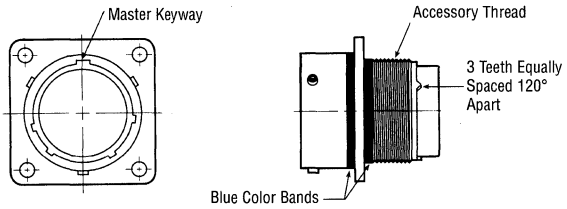
Receptacle Shell, Wall Mount, Narrow Flange, Bayonet Coupling

Military No. MS3470, M83723/01 & /02
MATRIX No. MB10



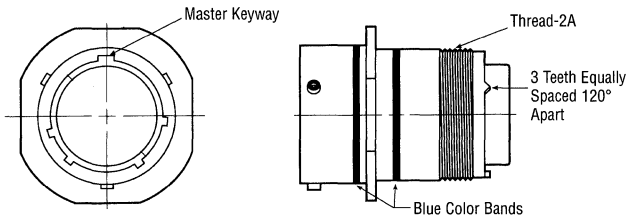
Receptacle Shell, Wall Mount, Wide Flange, Bayonet Coupling

Military No. MS3472, M83723/03 & /04
MATRIX No. MB11



Receptacle Shell, Cable Connecting, Bayonet Coupling

Military No. MS3471, M83723/07 & /08
MATRIX No. MB13



SOURCE: Catalog 82647

Specifications subject to change.
1-800-522-6752 Product Information Center/ AMP FAX Service
1-800-722-1111 Tooling/Technical Assistance Center

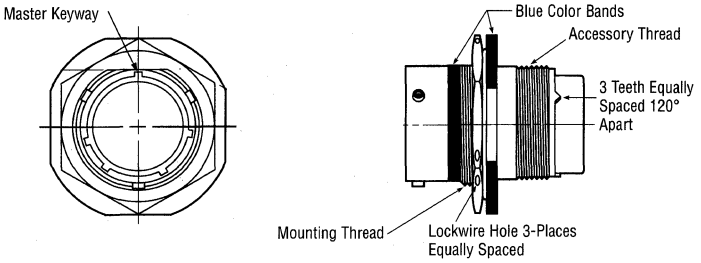
MIL-C-26482
Series II (Continued)

Shell Size:

8
10
12
14
16
18
20
22
24

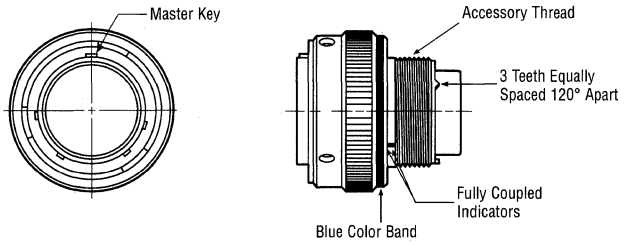
Receptacle Shell, Jam Nut Mount, Bayonet Coupling

Military No. MS3474, M83723/05 & /06
MATRIX No. MB14



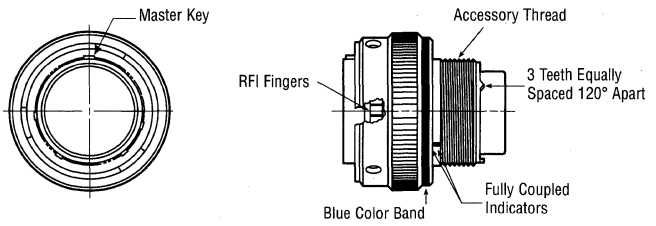
Plug Shell, Bayonet Coupling

Military No. MS3476, M83723/13 & /14
MATRIX No. MB16



Plug Shell, RFI Grounding, Bayonet Coupling

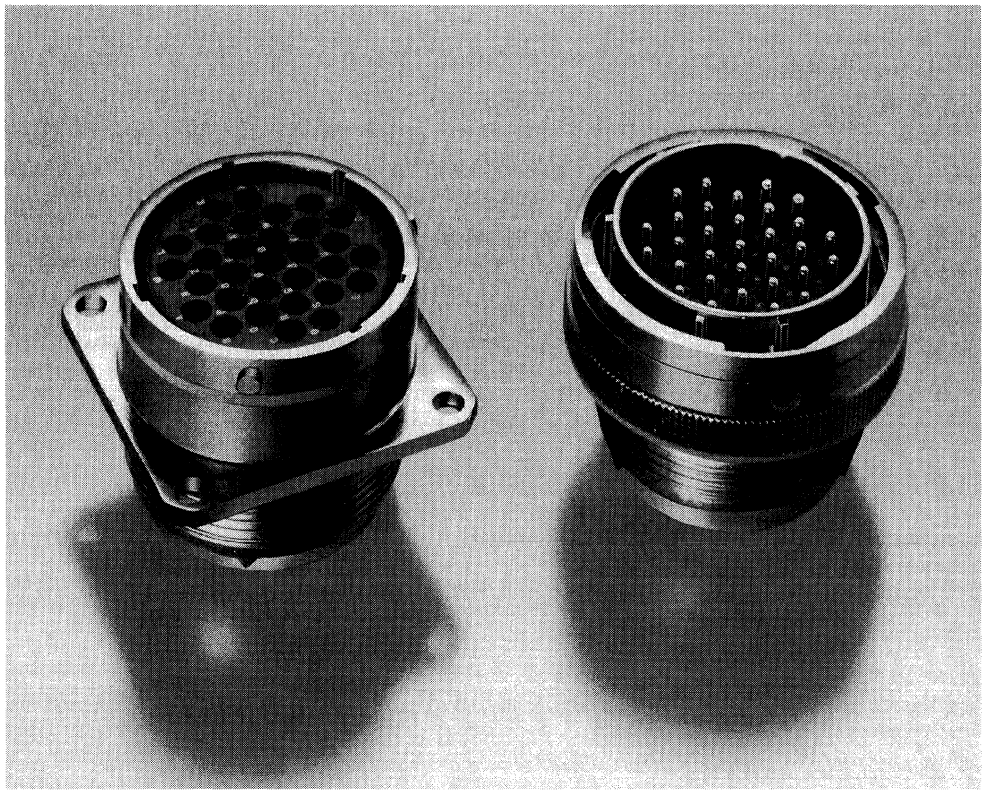
Military No. MS3475, M83723/42 & /43
Matrix No. MB18



SOURCE: Catalog 82647

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

MIL-C-83723 Series I



MIL-C-83723 Series I connectors are identical to MIL-C-26482 Series II connectors, and are marked with both military part numbers as applicable. The Department of Defense has inactivated MIL-C-83723 Series I in favor of MIL-C-26482 Series II. MIL-C-83723 Series I connectors are now used for existing applications.

Contacts are qualified to MIL-C-39029 requirements and are BIN coded (three color bands) for identification. These contacts are crimped with a standard crimp tool per MIL-C-22520.

The contact retention system of this connector permits insertion and removal of contacts from the rear of the connector utilizing the same plastic tool specified for use with most qualified rear-release type connectors. Should an assembler ever misuse the tool when inserting or removing a contact, the tool is designed to break before causing damage to the connector.

Servicing the connector only from the rear helps prevent damage to the front that might affect the sealing characteristics.

Sealing grommets are constructed of tear-resistant elastomer and experience no degradation when exposed to a broad range of fluids. Sealing over a range of wire diameters is provided by a triple wire seal at the rear of the connector.

The closed entry socket side of the insert is designed with a lead-in chamfer and a hard face that will accept a pin contact bent within pre-established limits. The elastomer interfacial seal on the pin side has raised barriers around each pin which displace into the socket chamfer when mated, providing a positive moisture seal.

Square flange, jam nut single-hole mount and cable connecting receptacles are available as well as standard and RFI plugs. All are available in a range of shell sizes and insert arrangements.

SOURCE: Catalog 82647

Specifications subject to change.

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1-800-722-1111
Tooling/Technical Assistance Center

MIL-C-83723
Series I (Continued)

Performance Specifications

Voltage Rating

Altitude		Mated Service Rating	
ft.	m	I	II
Sea Level	—	1500	2300
50,000	15 240	500	750
70,000	21 336	375	500
100,000	30 480	200	200

Note: When the voltage as indicated above is applied between shell and closest contact to the shell or between the two closest contacts for a period of 5 seconds, there shall be no evidence of flashover or breakdown.

Contact Current Rating and Retention

Contact Size*	DC Test Amperage	Contact Retention Axial Load	
		lb	N
20	7.5	15	66.7
16	13.0	25	111.2
12	23.0	30	133.4

*Organize individual circuits to maintain heat rise within operating temperature requirements.

Operating Temperature Range
-65°C to +200°C (-85°F to +392°F)

Environmental Seal
Wired, mated connectors with the specified accessory attached, shall meet the altitude-immersion test specified in MIL-C-26482.

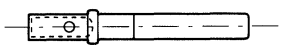
Durability
Minimum of 500 mating cycles.

Shock and Vibration Requirements
When tested as follows the connector shall sustain no physical damage, or electrical discontinuity exceeding one microsecond.

Shock
Pulse of an approximate half sine wave of 300 g magnitude with duration of 3 milliseconds applied in three axes.

Vibration
Sixteen hours of random vibration having a range of 50 to 2,000 Hz with a 41.7 G peak level.

Contacts, Sealing Plugs and Assembly Tools



Socket Contact

Pin Contact

Sealing Plug

Contact Size	Wire Range		Socket Contacts		Pin Contacts		Sealing Plugs	
	AWG	mm²	Military Part No.	MATRIX Part No.	Military Part No.	MATRIX Part No.	Military Part No.	MATRIX Part No.
20	24-20	0.2-0.6	M39029/5-115	5100-001-0020	M39029/4-110	5000-054-0020	MS27488-20	3400-043-0020
16	20-16	0.5-1.4	M39029/5-116	5100-001-0016	M39029/4-111	5000-054-0016	MS27488-16	3400-043-0016
12	14-12	2-3	M39029/5-118	5100-001-0012	M39029/4-113	5000-054-0012	MS27488-12	3400-043-0012

Crimping Tools

Contact Size	Wire Range		Finished Wire Dia. Range		Military Part No.	
	AWG	mm²	inch	mm	Crimping Tool	Turret or Positioner
20	24-20	0.2-0.6	.040-.083	1.02-2.11	M22520/1-01 or /2-01	M22520/1-02 or /2-02
16	20-16	0.5-1.4	.053-.103	1.34-2.62	M22520/1-01	M22520/1-02
12	14-12	2-3	.097-.158	2.46-4.01	M22520/1-01	M22520/1-02

Note: Each connector is furnished with contacts. One spare for inserts requiring 1 to 26 of each contact and two spares for inserts with more than 26 contacts and a minimum of one sealing plug up to 15% of the number of contacts.

Insertion/Extraction Tools

Contact Size	Color Code	Military Part No.	MATRIX Part No.
20	Rd./Wh.	M81969/14-11	6500-001-0020
16	Bl./Wh.	M81969/14-03	6500-001-0016
12	Yel./Wh.	M81969/14-04	6500-001-0012

SOURCE: Catalog 82647

Specifications subject to change.
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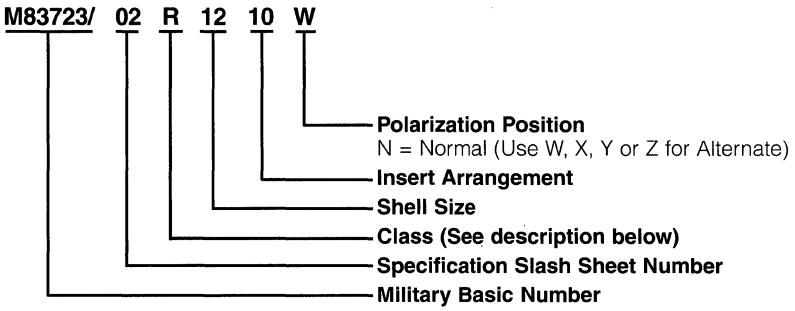
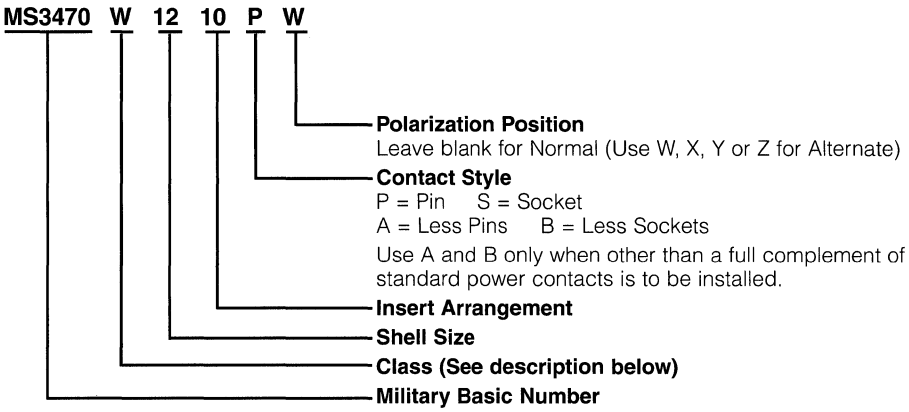
MIL-C-83723
Series I (Continued)

Military Part Number System

MIL-C-83723 Series I



MIL-C-26482 Series II



Equivalent Connector Classes — Cross Reference

MATRIX MB1 Series	MIL-C-26482 Series II	MIL-C-83723 Series I	Description
R	L	R	Aluminum shell, electroless nickel finish
—	E*	—	Superseded, (see notes below)
—	R*	F**	Superseded, (see notes below)
A	A	A	Aluminum shell, anodized finish, black
G	S	G	Stainless steel, passivated †
W	W	—	Aluminum shell, olive drab cadmium plated

* Class E & R Inactive in favor of Class L (Ref. MIL-C-26482)
** Class F Inactive in favor of Class R (Ref. MIL-C-26482)
† Not on QPL, can be supplied to MATRIX Part Number only.

SOURCE: Catalog 82647

Specifications subject to change.
1-800-522-6752 Product Information Center/ AMP FAX Service
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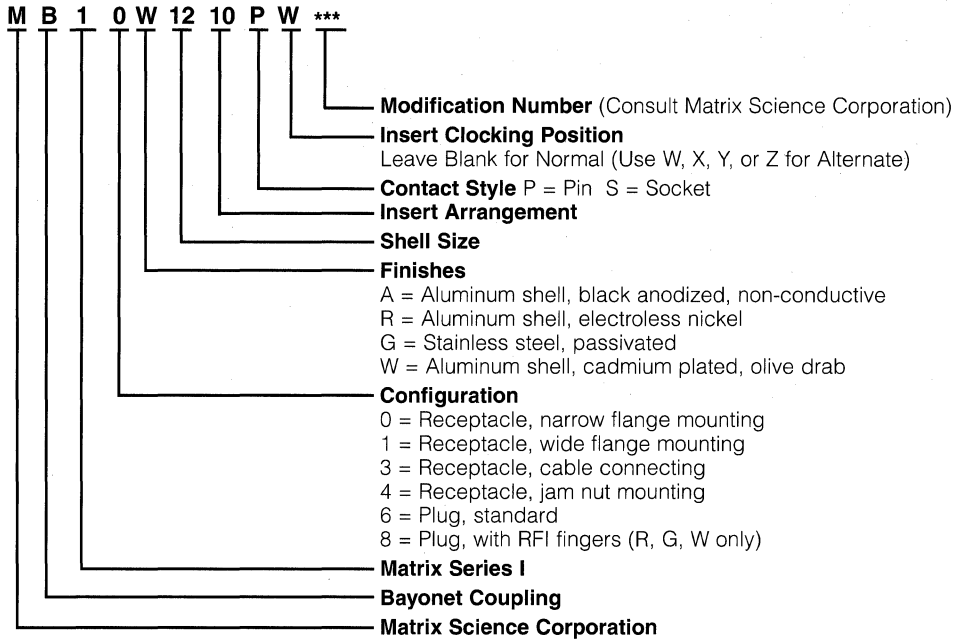
MIL-C-83723
Series I (Continued)

MATRIX Part Number System



SOURCE: Catalog 82647

MIL-C-83723
Series I (Continued)

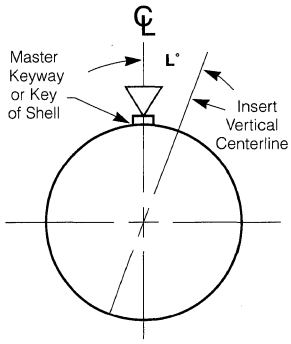
Polarization

Clocking Positions

1. In the Normal insert clocking position (position N) the insert centerline coincides with the centerline of the master key/keyway of the shell.

2. In the Alternate insert clocking position (W, X, Y, Z) the pin insert is rotated clockwise relative to the centerline of the master key/keyway as indicated in the figure and chart. The socket insert is rotated counter-clockwise.

3. Plugs have keys, receptacles have keyways.



Insert Arrangement and Clocking Positions (Per MIL-STD-1669)

Shell Size & Insert Arrangement	L Degrees					Service Rating
	N	W	X	Y	Z	
8-3	0	60	210	–	–	I
8-4	0	45	–	–	–	I
8-33	0	90	–	–	–	I
8-98	0	–	–	–	–	I
10-6	0	90	–	–	–	I
10-98	0	90	180	240	270	I
12-3	0	–	–	180	–	II
12-8	0	90	112	203	292	I
12-10	0	60	155	270	295	I
14-4	0	45	–	–	–	I
14-5	0	40	92	184	273	I
14-9	0	15	90	180	270	I
14-12	0	43	90	–	–	I
14-15	0	17	110	155	234	I
14-18	0	15	90	180	270	I
14-19	0	30	165	315	–	I
14-22	0	45	–	–	–	I
16-8	0	54	152	180	331	II
16-14	0	25	78	180	240	I
16-23	0	158	270	–	–	I
16-26	0	60	–	275	338	I
16-95	0	25	90	153	–	I
16-99	0	66	156	223	340	I
18-8	0	180	–	–	–	I
18-11	0	62	119	241	340	II
18-30	0	18	193	285	350	I
18-32	0	85	138	222	265	I
18-85	0	45	90	180	240	I
18-88	0	12	45	168	202	I
20-16	0	238	318	333	347	II
20-24	0	70	145	215	290	I
20-27	0	72	14	216	288	I
20-39	0	63	144	252	333	I
20-41	0	45	126	225	–	1
20-90	0	18	60	240	270	I
22-12	0	–	–	–	–	I
22-19	0	15	90	225	308	I
22-21	0	16	135	175	349	II
22-32	0	72	145	215	288	I
22-34	0	62	142	218	298	I
22-41	0	39	135	264	–	I
22-55	0	30	142	226	314	I
22-95	0	26	180	266	–	I
22-96	0	19	41	–	–	I
24-19	0	30	165	315	–	II
24-27	0	45	110	140	225	I
24-31	0	90	225	255	–	I
24-61	0	90	180	270	324	I

SOURCE: Catalog 82647

Specifications subject to change.
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MIL-C-83723
Series I (Continued)

Insert Arrangements (Per MIL-STD-1669)
Number identification example: 0833 (Insert Arrangement No.)
3 #20 (Contact quantity and size)

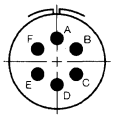
Note: For rating see table on page 2103.

0803*
3 #20
(MIL-C-83723 Series I only Solder Contacts)

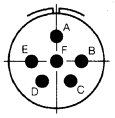
0804*
4 #20

0833
3 #20

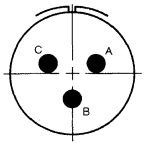
0898
3 #20



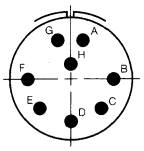
1006
6 #20



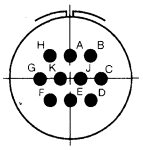
1098*
6 #20



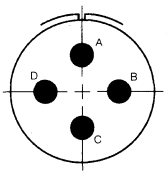
1203
3 #16



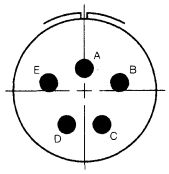
1208
8 #20



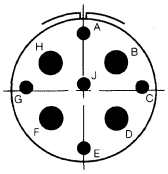
1210
10 #20



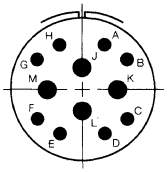
1404
4 #12



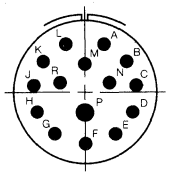
1405
5 #16



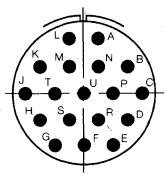
1409
5 #20, 4 #12



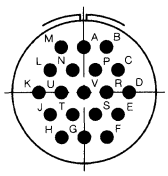
1412
4 #16, 8 #20



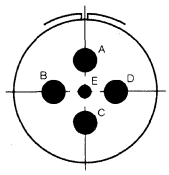
1415
1 #16, 14 #20



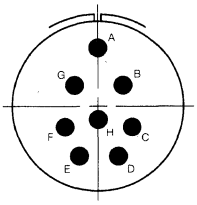
1418
18 #20



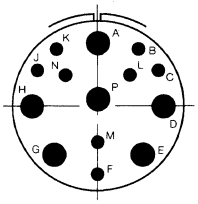
1419
19 #20



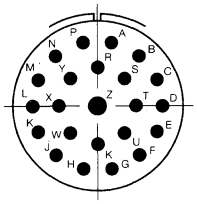
1422*
4 #12, 1 #20



1608
8 #16



1614*
8 #20, 6 #12



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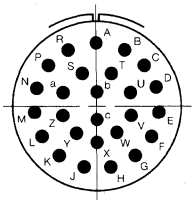
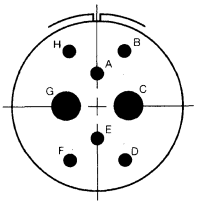
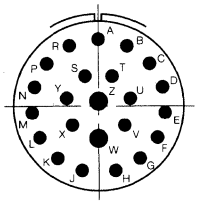
1 #16, 22 #20



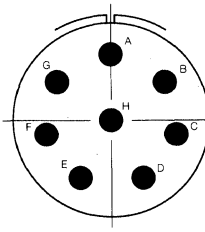
1626
26 #20



1695*
6 #20, 2 #8
Shielded



1699*
2 #16, 21 #20



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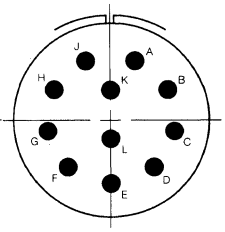
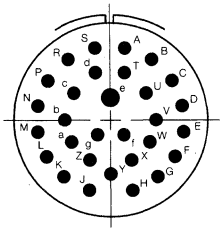
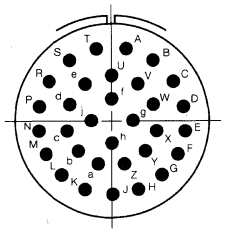
8 #12



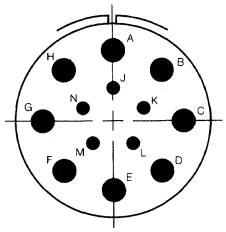
1811
11 #16



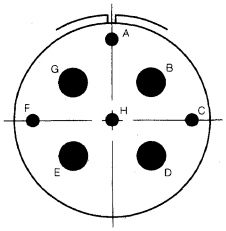
1830
1 #16, 29 #20



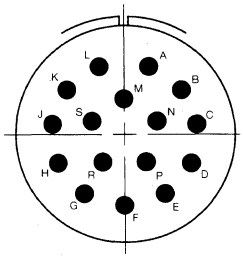
1832
32 #20



1885*
5 #20, 8 #12



1888*
4 #20, 4 #8
Shielded



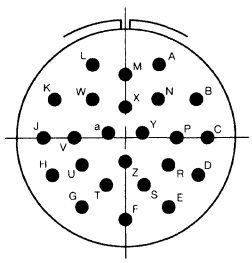
2016
16 #16

* Consult AMP for availability.
Note: Mating face of pin insert is shown, socket is opposite.

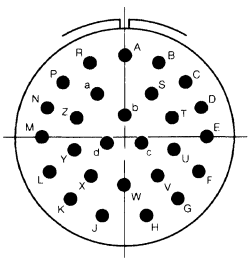
SOURCE: Catalog 82647

MIL-C-83723
Series I (Continued)

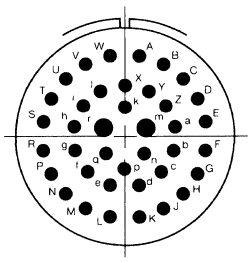
Insert Arrangements (Continued)



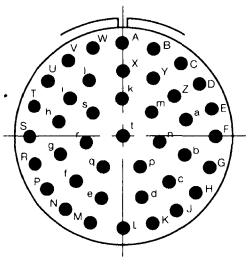
2024
24 #20



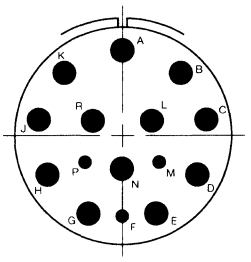
2027*
27 #20



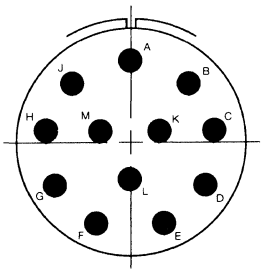
2039
2 #16, 37 #20



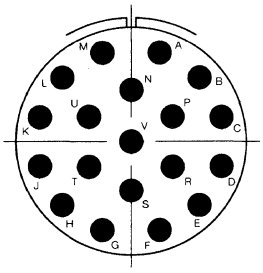
2041
41 #20



2090*
3 #20, 12 #12



2212
12 #12



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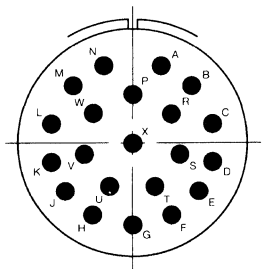
19 #12



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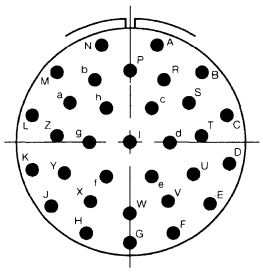

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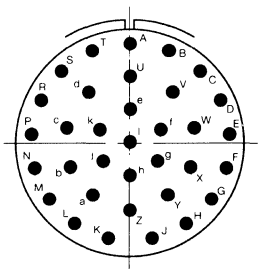
32 #20



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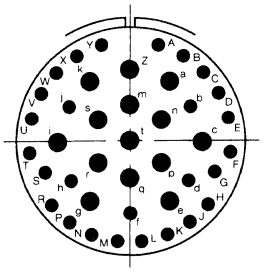
34 #20



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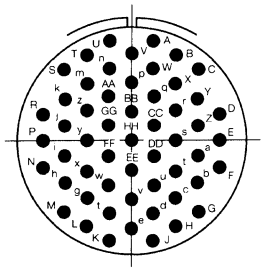

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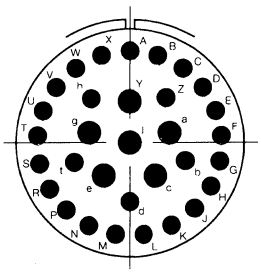

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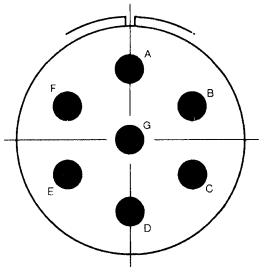
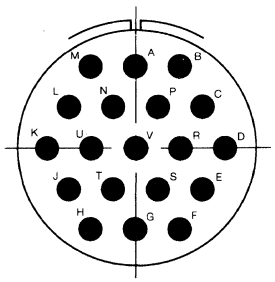
6 #12, 26 #20



2296*
7 #8 Shielded



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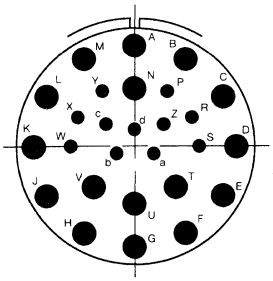
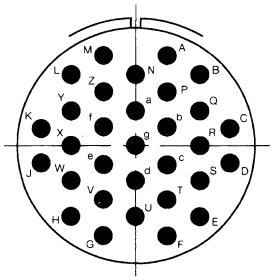
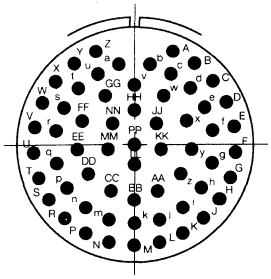
19 #12



2427*
11 #20, 16 #12



2431
31 #16



2461
61 #20

* Consult AMP for availability.
Note: Mating face of pin insert is shown, socket is opposite.

SOURCE: Catalog 82647

Specifications subject to change.
1-800-522-6752
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Tooling/Technical Assistance Center

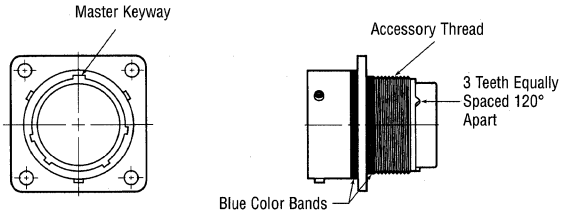
MIL-C-83723
Series I (Continued)

Shell Size:

8
10
12
14
16
18
20
22
24

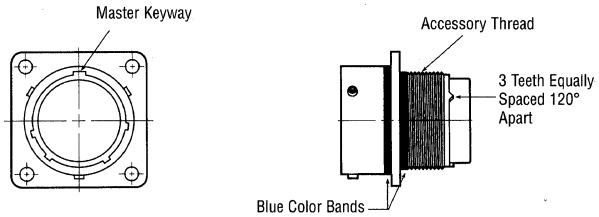
Receptacle Shell, Wall Mount, Narrow Flange, Bayonet Coupling

Military No. MS3470, M83723/01 & /02
MATRIX No. MB10



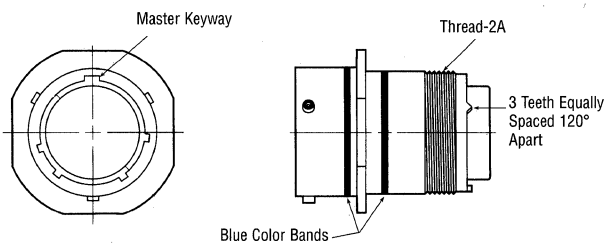
Receptacle Shell, Wall Mount, Wide Flange, Bayonet Coupling

Military No. MS3472, M83723/03 & /04
MATRIX No. MB11



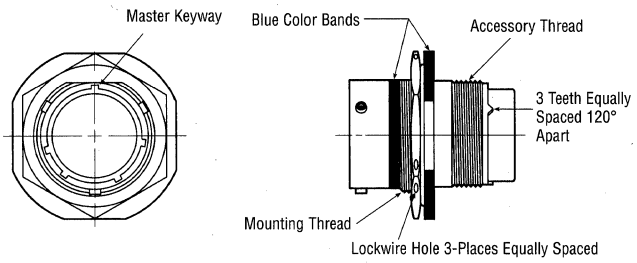
Receptacle Shell, Cable Connecting, Bayonet Coupling

Military No. MS3471, M83723/07 & /08
MATRIX No. MB13



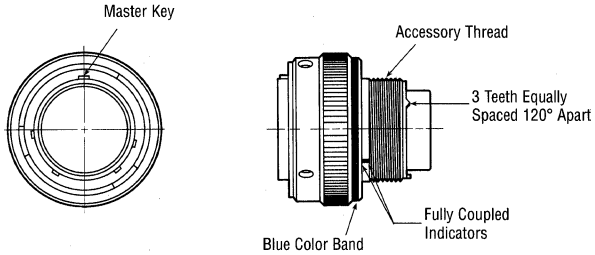
Receptacle Shell, Jam Nut Mount, Bayonet Coupling

Military No. MS3474, M83723/05 & /06
MATRIX No. MB14



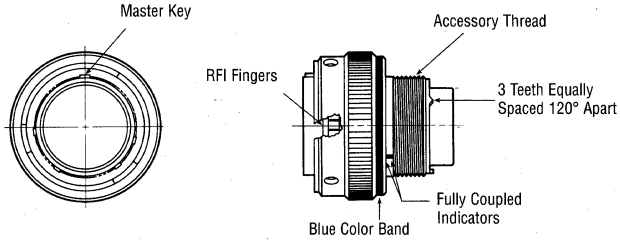
Plug Shell, Bayonet Coupling

Military No. MS3476, M83723/13 & /14
MATRIX No. MB16



Plug Shell, RFI Grounding, Bayonet Coupling

Military No. MS3475, M83723/42 & /43
MATRIX No. MB18



SOURCE: Catalog 82647

Specifications subject to change.
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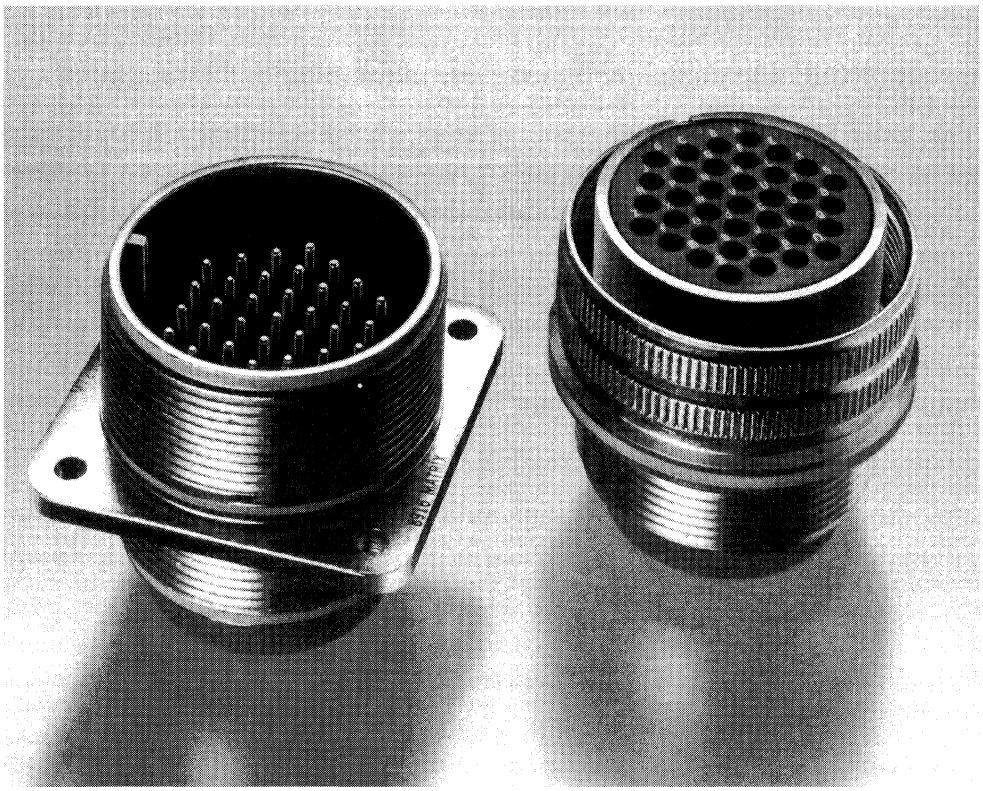
1-800-722-1111
Tooling/Technical Assistance Center

MIL-C-83723 Series II



The MATRIX M723 Series Circular Connectors with threaded coupling are designed and qualified to Series II of MIL-C-83723. This specification was developed to provide crimp contacts in an entirely environmentally sealed connector, which would supersede and replace the older solder-type connectors covered by MIL-C-5015. This series provides high reliability in most severe aerospace and industrial type applications.

The connector contact retention system permits insertion, release and removal of contacts from the rear of the connector utilizing the same plastic tool specified for use with most qualified rear-release type connectors. Should an assembler ever misuse the tool when inserting or removing a contact, the tool is designed to break before causing damage to the connector. Servicing the connector from the rear helps prevent damage to the front that might affect the sealing characteristics.

These MIL-C-83723 Series II connectors utilize the same pin and socket contacts that are used in MIL-C-5015 connectors. And, they are all crimped with standard MS crimping tools.

Both square flange and single-hole mounting type receptacles and their mating plugs are available in a full range of shell sizes. These shells accept the same large selection of inserts used in the MIL-C-5015 connectors. Inserts feature rear grommets of tear-resistant elastomer that do not show any degradation when exposed to a broad range of fluids. Sealing over the min./max. range of wire diameter is provided by a triple wire seal design.

The closed entry socket side insert is designed with a lead-in chamfer that will accept a pin contact that is slightly bent. A silicone interfacial seal on the pin side has raised barriers around each pin. This barrier displaces into this chamfer when mated, providing a positive moisture seal.

SOURCE: Catalog 82647

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

MIL-C-83723
Series II (Continued)

Performance Specifications

Voltage Rating

Altitude		Service Rating					
ft.	m	Inst.	A	D	E	B	C
Sea Level	—	1000	2000	2800	3500	4500	7000
50,000	15 240	400	600	675	750	825	975
70,000	21 326	260	360	400	440	480	560
110,000	33 528	200	200	200	200	200	200

Contact Current Rating and Retention

Contact Size*	Current Rating		Contact Retention	
	Amperes Max.	Voltage Drop Millivolts	Axial Load lb	Axial Load N
16	13	50	25	111.2
12	23	50	30	133.4
8	46	25	50	222.4
4	80	14	60	266.9
0	150	12	75	333.6

*Organize individual circuits to maintain heat rise within operating temperature requirements.

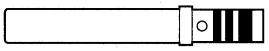
Operating Temperature Range
-55°C to +200°C [-75°F to +392°F]

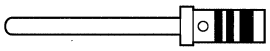
Environmental Seal
Wired, mated connectors with the specified accessory attached will meet the altitude immersion test specified in MIL-C-5015.

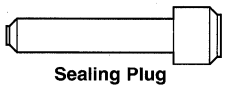
Durability
Minimum of 100 mating cycles

Shock
Wired, mated connectors are subjected to one shock in each of three mutually perpendicular axes with pulse of an approximate half sine wave of 50 g magnitude for a duration of 11 milliseconds. All contacts wired in series circuit with 100±10 milliamperes of current flow.

Contacts, Sealing Plugs and Assembly Tools


Socket Contact


Pin Contact


Sealing Plug

Contact Size	Wire Range		Socket Contacts		Pin Contacts		Sealing Plugs	
	AWG	mm²	Military Part No.	MATRIX Part No.	Military Part No.	MATRIX Part No.	Military Part No.	MATRIX Part No.
16S**	20-16	0.5-1.4	M39029/30-217	5100-033-1601	M39029/29-212	5000-029-0016	MS27488-16	3400-043-0016
16	20-16	0.5-1.4	M39029/30-218	5100-033-1602	M39029/29-212	5000-029-0016	MS27488-16	3400-043-0016
12	14-12	2-3	M39029/30-219	5100-033-0012	M39029/29-213	5000-029-0012	MS27488-12	3400-043-0012
8	10-8†	5-8.5	M39029/30-220	5100-033-0008	M39029/29-214	5000-029-0008	MS27488-8	3400-043-0008
4	6-4†	13-21	M39029/30-221	5100-033-0004	M39029/29-215	5000-029-0004	MS27488-4	3400-043-0004
0	2-0†	34-60	M39029/30-222	5100-033-0000	M39029/29-216	5000-029-0000	MS27488-0	3400-043-0000

** Shorter wire barrel.
† Use MS3348 bushing to accommodate smaller wire.

Crimping Tools

Contact Size	Wire Range		Finished Wire Dia. Range		Color Code	Military Part No.	
	AWG	mm²	inch	mm		Crimping Tool	Turret or Positioner
16S	20-16	0.5-1.4	.053-.103	1.34-2.62	Rd./Wh.	M22520/1-01	M22520/1-02
16	20-16	0.5-1.4	.053-.103	1.34-2.62	Bl./Wh.	M22520/1-01	M22520/1-02
12	14-12	2-3	.085-.158	2.15-4.01	Yel./Wh.	M22520/1-01	M22520/1-02
8	10-8	5-8.5	.132-.255	3.35-6.48	Wh./Red.	M22520/23-01	M22520/23-02
4	6-4	13-21	.237-.370	6.01-9.40	Wh./Bl.	M22520/23-01	M22520/23-04
0	2-0	34-60	.360-.550	9.14-13.97	Wh./Yel.	M22520/23-01	M22520/23-06

Insertion/Extraction Tools

Contact Size	Color Code	Military Part No.	MATRIX Part No.
16	Bl./Wh.	M81969/14-03	6500-001-0016
12	Yel./Wh.	M81969/14-04	6500-001-0012
8	Wh./Red.	M81969/14-06	6500-018-0008
4	Wh./Bl.	M81969/14-07	6500-018-0004
0	Wh./Yel.	M81969/14-08	6500-018-0000

Note: Each connector is furnished with contacts. One spare for inserts requiring 1 to 26 of each contact and two spares for inserts with more than 26 contacts and a minimum of one sealing plug up to 15% of the number of contacts.

SOURCE: Catalog 82647

Specifications subject to change.
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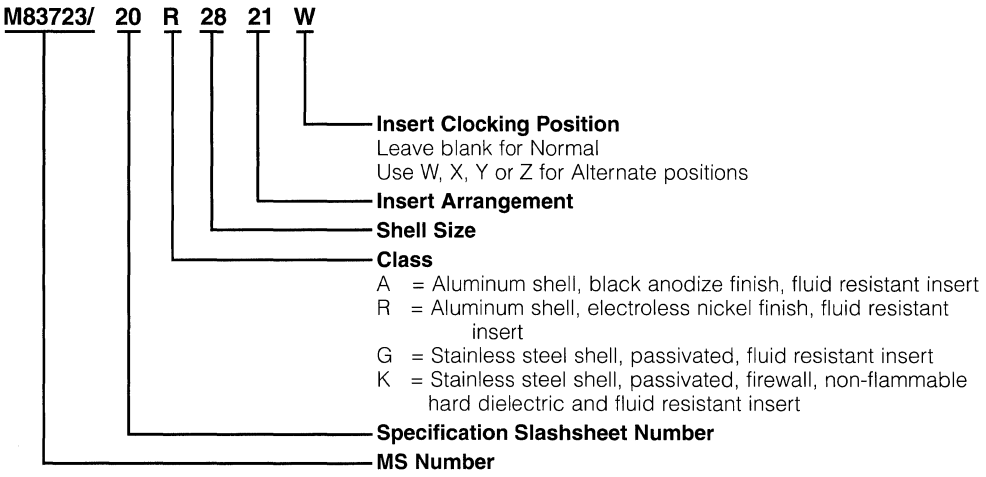
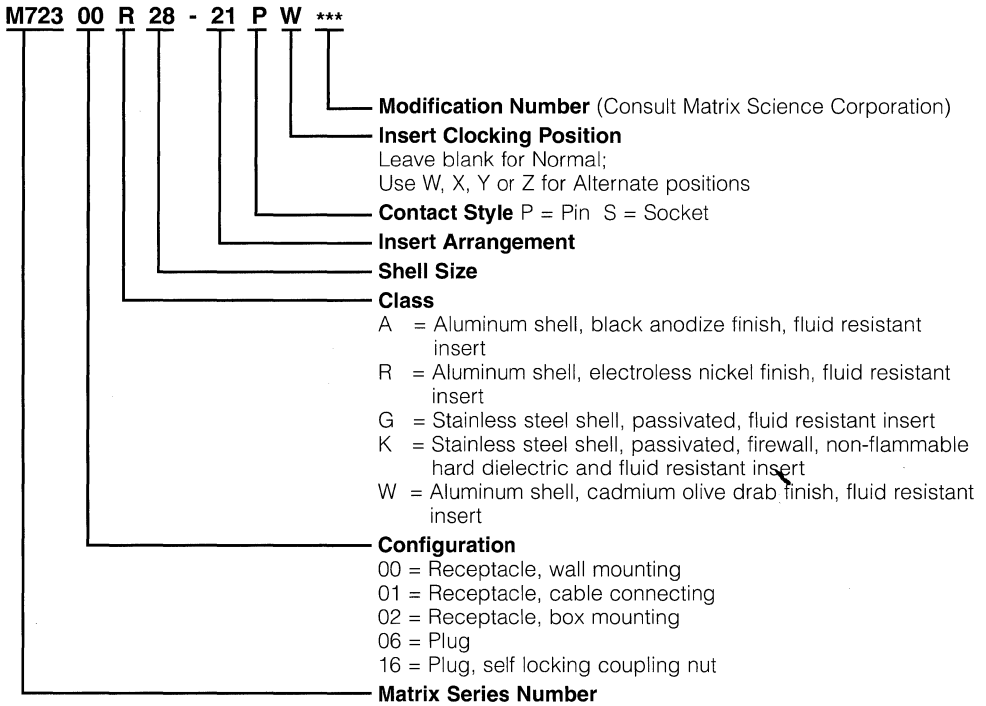
MIL-C-83723
Series II (Continued)

Military Part Number System



MATRIX Part Number System



SOURCE: Catalog 82647

Specifications subject to change.
1-800-522-6752 Product Information Center/ AMP FAX Service
1-800-722-1111 Tooling/Technical Assistance Center

MIL-C-83723 Series II (Continued)

Polarization

Clocking Positions (Per MIL-STD-1651)

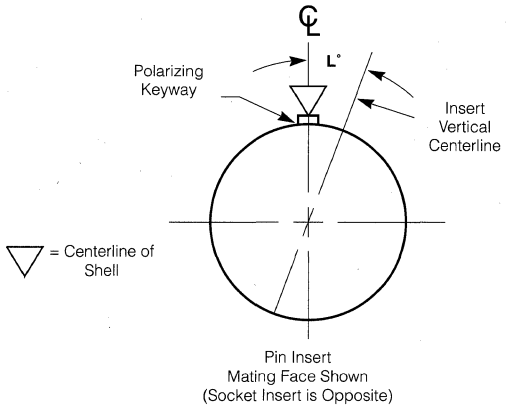
1. In the Normal position, the insert vertical centerline and key/keyway centerlines coincide: L=0°.
2. In the "Alternate" insert position (positions W, X, Y & Z), the insert is rotated relative to the centerline of the master key or keyway of the shell.

   a. In Alternate positions the pin insert is rotated clockwise within the shell so that the angle "L" between the indexing radius and the centerline of the master key or keyway of the shell is as required.

   b. In Alternate positions the socket insert is rotated counterclockwise within the shell so that the angle "A" between the indexing radius and the centerline of the master key or keyway of the shell is as required

Insert Arrangement and Clocking Chart (Per MIL-STD-1651)

Shell Size & Insert Arrangement	Contacts Quantity	Contacts Size	Service Rating	Alternate Insert Positions L Degrees W	X	Y	Z	Remarks
0801	1	16	A	–	–	–	–	
1002	1	16	A	–	–	–	–	
1103	3	16	A	–	–	–	–	Service Rating Inst. Class K
1104*	2	16	A	–	–	–	–	
1301*	2	16	A	Insert rotated 100° in shell				Made from 12S-3
1302*	2	16	A	Insert rotated 250° in shell				Made from 12S-3
1303	2	16	A	70	145	215	290	
1304	1	16	D	–	–	–	–	
1205	1	12	D	–	–	–	–	
1501*	3	16	A	–	–	–	–	
1502	4	16	Inst.	–	120	240	–	
1403	1	8	A	–	–	–	–	
1505	5	16	Inst.	–	110	–	–	
1506	6	16	Inst.	–	–	–	–	
1507	3	16	A	90	180	270	–	
1509	2	16	A	70	145	215	290	
1510*	4	16	Inst.	Insert rotated 100° in shell				Made from 14S-2
1511	4	16	Inst.	Insert rotated 250° in shell				Made from 14S-2
1512*	3	16	A	Insert rotated 100° in shell				Made from 14S-1
1513*	3	16	A	Insert rotated 260° in shell				Made from 14S-1
1701	7	16	A	80	–	–	280	
1602*	1	12	E	–	–	–	–	
1703*	1	16	B	–	–	–	–	
1704*	2	16	D	35	110	250	325	
1607*	2 / 1	16 / 8	A	80	110	250	280	



Shell Size & Insert Arrangement	Contacts Quantity	Contacts Size	Service Rating	Alternate Insert Positions L Degrees W	X	Y	Z	Remarks
1708	5	16	A	–	170	265	–	
1609	2 / 2	16 / 12	A	35	110	250	325	
1610	3	12	A	90	180	270	–	
1611	2	12	A	35	110	250	325	
1612	1	4	A	–	–	–	–	
1613	2	12	A	35	110	250	325	One alumel and one chromel contact
1801	10	16	A (B,C,F,G) Inst. (All Others)	70	145	215	290	
1804	4	16	D	35	110	250	325	
1805	1 / 2	16 / 12	D	80	110	250	280	
1806*	1	4	D	–	–	–	–	
1807*	1	8	B	–	–	–	–	
1808	7 / 1	16 / 12	A	70	–	–	290	
1809	5 / 2	16 / 12	Inst.	80	110	250	280	
1810	4	12	A	–	120	240	–	
1811	5	12	A	–	170	265	–	
1812*	6	16	A	80	–	–	280	
1813	3 / 1	12 / 8	A	80	110	250	280	
1814*	1 / 1	16 / 4	A	80	110	250	280	
1815*	4	12	A	–	120	240	–	

* Consult AMP for availability

SOURCE: Catalog 82647

MIL-C-83723 Series II (Continued)

Insert Arrangement and Clocking Chart (Continued))

Shell Size & Insert Arrangement	Contacts Quantity	Contacts Size	Service Rating	Alternate Insert Positions L Degrees W	X	Y	Z	Remarks
1816*	1	12	C	–	–	–	–	
1817*	5	16	Inst.	Insert rotated 100° C/W in shell				Made from 18-9
	2	12						
1818*	5	16	Inst.	Insert rotated 250° C/W in shell				Made from 18-9
	2	12						
1819*	10	16	A	–	120	240	–	
1822*	3	16	D	70	145	215	290	
1823*	4	16	A (B,C,F,G)	Insert rotated 100° C/W in shell				Made from 18-1
	6	16	Inst. (All Others)					
1824*	4	16	A (B,C,F,G)	Insert rotated 250° C/W in shell				Made from 18-1
	6	16	Inst. (All Others)					
1827*	1	16	D	Insert rotated 100° C/W in shell				Made from 18-5
	2	12						
1828*	1	16	D	Insert rotated 250° C/W in shell				Made from 18-5
	2	12						
2002	1	0	D	–	–	–	–	
2004	4	12	D	45	110	250	–	
2007	4	16	D (A,B,G,H)	80	110	250	280	
	4	16	A (C,D,E,F)					
2008	4	16	Inst.	80	110	250	280	
	2	8						
2009*	1	12	D (H)	80	110	250	280	
	7	16	A (All Others)					
2014	3	12	A	80	110	250	280	
	2	8						
2015	7	12	A	80	–	–	280	
2016	7	16	A	80	110	250	280	
	2	12						
2017	1	16	A	90	180	270	–	
	5	12						
2018	6	16	A	35	110	250	325	
	3	12						
2021	8	16	A	35	110	250	325	
	1	12						
2022	3	16	A	80	110	250	280	
	3	8						
2024	2	16	A	35	110	250	325	
	2	8						
2027	14	16	A	35	110	250	325	
2029	17	16	A	80	–	–	280	
2032*	4	16	D (A,B,G,H)	Insert rotated 260° C/W in shell				Made from 20-7
	4	16	A (All Others)					
2033	11	16	A	–	–	–	–	
2202	3	8	D	70	145	215	290	
2204	2	12	A	35	110	250	325	
	2	8						
2205	4	16	D	35	110	250	325	
	2	12						
2206*	1	16	D	80	110	250	280	
	2	8						
2207*	1	0	E	–	–	–	–	
2209	3	12	E	70	145	215	290	
2210*	4	16	E	35	110	250	325	
2211*	2	16	B	35	110	250	325	
2212*	3	16	D	80	110	250	280	
	2	8						
2214*	19	16	A	80	110	250	280	
2215*	1	16	E (D)	80	110	250	280	
	5	12	A (All Others)					
2217*	1	16	D (A)	80	110	250	280	
	7	16	A					
	1	12	A (All Others)					
2218	3	16	A (C,D,E)	80	110	250	280	
	5	16	D (All Others)					
2219	14	16	A	80	110	250	280	
2221	2	16	A	80	110	250	280	
	1	0						
2222	4	8	A	–	110	250	–	
2223	1	12	D (H)	35	–	250	–	
	7	12	A (All Others)					
2227*	1	8	D (J)	80	–	250	280	
	8	16	A (All Others)					

* Consult AMP for availability
**Inactive for new design.

SOURCE: Catalog 82647

Specifications subject to change.

1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

MIL-C-83723 Series II (Continued)

Insert Arrangement and Clocking Chart (Continued)

Shell Size & Insert Arrangement	Contacts Quantity	Contacts Size	Service Rating	Alternate Insert Positions L Degrees W	X	Y	Z	Remarks
2230*	19	16	A	Insert rotated 260° in shell				Made from 22-14
2232*	4	16	D	Insert rotated 260° in shell				Made from 22-5
	2	12						
2236*	1	12	D (H)	90	–	270	–	
	7	12	A (All Others)					
2401*	1	12	D	80	110	250	280	
	1	0						
2402	7	12	D	80	–	–	280	
2404	3	16	D	80	110	250	280	
	1	0						
2405*	16	16	A	80	110	250	280	
2406*	3	12	D (A,G,H)	80	110	250	280	
	5	12	A (All Others)					
2407	14	16	A	80	110	250	280	
	2	12						
2410	7	8	A	80	–	–	280	
2411	6	12	A	35	110	250	325	
	3	8						
2412	3	12	A	80	110	250	280	
	2	4						
2415*	16	16	A	Insert rotated 100° C/W in shell				Made from 24-5
2416*	3	16	D (A,B,F)	80	110	250	280	
	1	8	D (G)					
	3	12	A (All Others)					
2420	9	16	D	80	110	250	280	
	2	12						
2421	9	16	D	80	110	250	280	
	1	8						
2422	4	8	D	45	110	250	–	
2424	16	16	A	Insert rotated 250° C/W in shell				Made from 24-5
2427*	7	16	E	80	–	–	280	
2428	24	16	Inst.	80	110	250	280	
2480*	23	16	Inst.	35	145	240	300	

* Consult AMP for availability

Shell Size & Insert Arrangement	Contacts Quantity	Contacts Size	Service Rating	Alternate Insert Positions L Degrees W	X	Y	Z	Remarks
2801	2	12	D (A & E)	80	110	250	280	
	4	12	A (B,D,F,H)					
	1	8	D (J)					
	2	8	A (G & C)					
2802	12	16	D	35	110	250	325	
	2	12						
2803*	3	8	E	70	145	215	290	
2804*	3	16	E (G,P,S)	80	110	250	280	
	4	16	D (A,B,E,F)					
	2	12	D (C & D)					
2805*	2	16	D	35	110	250	325	
	1	12						
	2	4						
2808*	2	12	E (L & M)	80	110	250	280	
	1	16	D (B)					
	9	16	A (All Others)					
2809	6	16	D	80	110	250	280	
	6	12						
2810	1	12	D (G)	80	110	250	280	
	2	12	A (A & F)					
	2	8	A (B & E)					
	2	4	A (C & D)					
2811	18	16	A	80	110	250	280	
	4	12						
2812	26	16	A	90	180	270	–	
2813*	26	16	A	Insert rotated 100° C/W in shell				Made from 28-12
2815	35	16	A	80	110	250	280	
2816*	20	16	A	80	110	250	280	
2817	1	16	B (R)	80	110	250	280	
	3	16	D (M,N,P)					
	11	16	A (All Others)					
2818*	1	16	C (M)	70	145	215	290	
	2	16	A (A & B)					
	4	16	Inst. (C,D,E,F)					
	5	16	D (All Others)					

SOURCE: Catalog 82647

Specifications subject to change.

1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

MIL-C-83723 Series II (Continued)

Insert Arrangement and Clocking Chart (Continued)

Shell Size & Insert Arrangement	Contacts Quantity	Contacts Size	Service Rating	Alternate Insert Positions L Degrees W	X	Y	Z	Remarks
2819*	2	16	B (H,M)	80	110	250	280	
	2	16	D (A,B)					
	2	16	(All Others)					
	4	12						
2820	4	16	A	80	110	250	280	
	10	12						
2821	37	16	A	80	110	250	280	
2822	3	16	D	70	145	215	290	
	3	4						
3201	1	12	E (A)	80	110	250	280	
	2	12	D (D & C)					
	2	0	D (B & E)					
3202*	2	16	E	70	145	215	290	
	3	4						
3203*	4	16	D	80	110	250	280	
	2	12						
	2	4						
	1	0						
3206	16	16	A	80	110	250	280	
	2	12						
	3	8						
	2	4						
3207	4	16	Inst. (A,B,H,J)	80	125	235	280	
	24	16	A (All Others)					
	7	12						
3209	12	16	D	80	110	250	280	
	2	4						
3213	18	16	D	80	110	250	280	
	5	12						
3215	6	12	D	35	110	250	280	
	2	0						
3216*	16	16	A	Insert rotated 100° in shell				Made from 32-6
	2	12						
	3	8						
	2	4						

* Consult AMP for availability

Shell Size & Insert Arrangement	Contacts Quantity	Contacts Size	Service Rating	Alternate Insert Positions L Degrees W	X	Y	Z	Remarks
3217	4	4	D	45	110	250	–	
3219*	1	12	E (A)	Insert rotated 260° in shell				Made from 32-1
	2	12	D (D & C)					
	2	0	D (B & E)					
3220*	16	16	A	Insert rotated 260° in shell				Made from 32-6
	2	12						
	3	8						
	2	4						
3222*	54	16	A	80	110	250	280	U=100°; V=260°
3263	5	4	D	–	–	–	–	
3273	46	16	A	36	–	–	–	
3603	3	12	D	70	145	215	290	
	3	0						
3605	4	0	A	–	120	240	–	
3606	4	4	A	35	110	250	325	
	2	0						
3607	40	16	A	80	110	250	280	
	7	12						
3608	46	16	A	80	110	250	280	
	1	12						
3609	14	16	A	80	125	235	280	
	14	12						
	2	8						
	1	4						
3610	48	16	A	80	125	235	280	
3611*	48	16	A	Insert rotated 250° in shell				Made from 36-10
3612*	48	16	A	Insert rotated 260° in shell				Made from 38-10
3615	35	16	D (M) A (All Others)	60	125	245	305	
3616*	40	16	A	Insert rotated 260° in shell				Made from 36-7
	7	12						
3617*	40	16	A	Insert rotated 250° in shell				Made from 36-7
	7	12						
3618*	14	16	A	Insert rotated 100° in shell				Made from 36-9
	14	12						
	2	8						
	1	4						

SOURCE: Catalog 82647

Specifications subject to change.

1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

MIL-C-83723 Series II (Continued)

Insert Arrangement and Clocking Chart (Continued)

Shell Size & Insert Arrangement	Contacts Quantity	Contacts Size	Service Rating	Alternate Insert Positions L Degrees W	X	Y	Z	Remarks
3621	14	16	A	Insert rotated 260° C/W in shell				Made from 36-9
	14	12						
	2	8						
	1	4						
3652	52	16	A	72	144	216	288	
3666*	52	16	A	110	250	260	280	
	4	12						
4001	24	16	D	65	130	235	300	
	6	12						
4002*	5	16	D(A,B,C,D,E)	80	110	250	280	
	18	16	D (All Others)					
4003*	18	16	D	80	110	250	280	
	4	12						
	1	4						
4004*	16	16	D	80	110	250	280	
	2	12						
	3	8						
	2	4						
4005*	6	12	A	80	110	250	280	
	4	8						
	2	4						
	3	0						

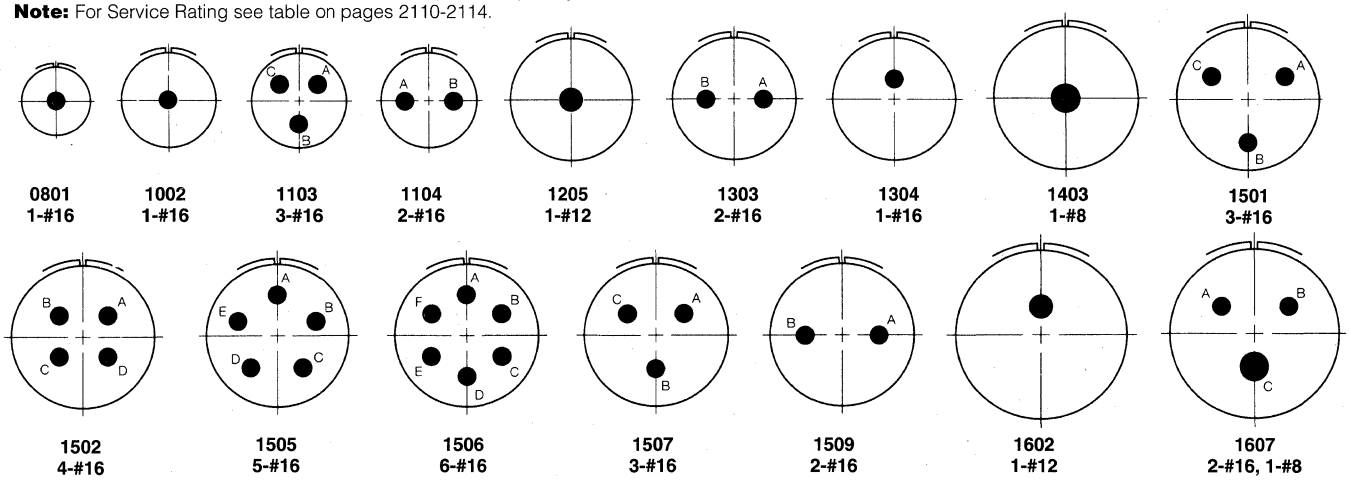
Shell Size & Insert Arrangement	Contacts Quantity	Contacts Size	Service Rating	Alternate Insert Positions L Degrees W	X	Y	Z	Remarks
4006*	24	16	D	80	110	250	280	
	1	12						
	1	0						
4007*	2	12	A (W & X)	80	110	250	280	
	2	0	A (U & V)					
	2	16	A (P & Q)					
	16	16	D (All Others)					
4009	24	16	A	65	125	255	310	
	22	12						
	1	8						
4010*	16	16	A	65	125	255	310	
	9	8						
	4	4						
4011*	18	16	D	80	110	250	280	
	4	12						
	1	8						
	1	4						
	1	0						
4056*	85	16	A	72	144	216	288	
4062*	60	16	A	30	130	220	290	

* Consult AMP for availability

Insert Arrangements (Per MIL-STD-1651)

Numbering identification example: 10SL-3 (Insert Number)
2-#16 (Contact quantity and size)

Note: For Service Rating see table on pages 2110-2114.



Note: Mating face of pin insert is shown. Socket insert is opposite.

SOURCE: Catalog 82647

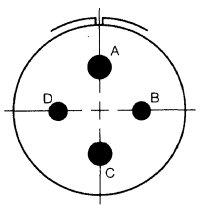
Specifications subject to change.

1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

MIL-C-83723
Series II (Continued)

Insert Arrangements (Continued)



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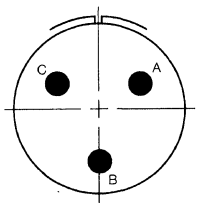
2-#16, 2-#12



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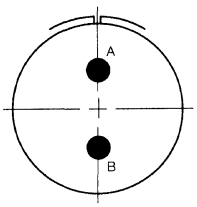
3-#12



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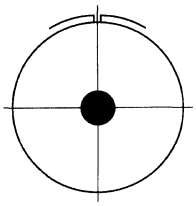
2-#12



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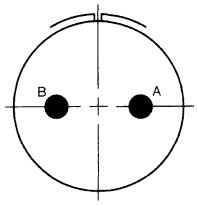

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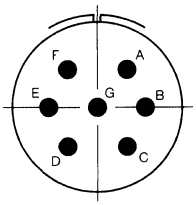
2-#12



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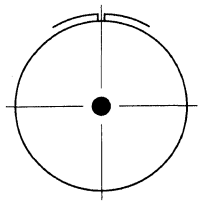
7-#16



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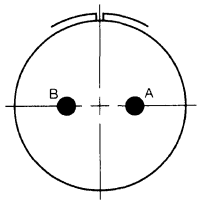
1-#16



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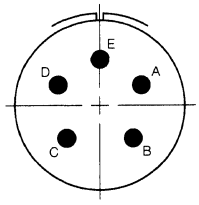
2-#16



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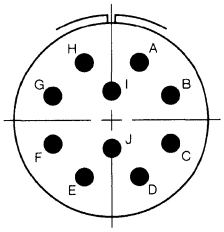
5-#16



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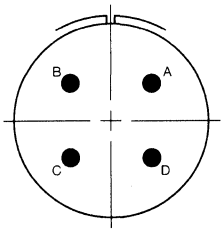
10-#16



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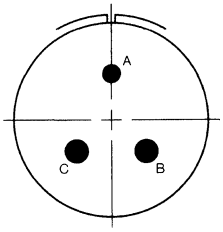
4-#16



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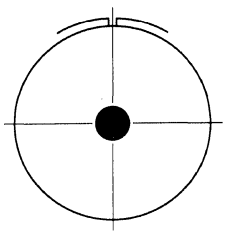
1-#16, 2-#12



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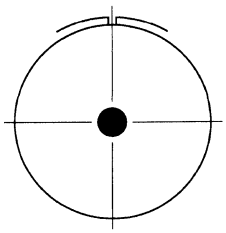
1-#4



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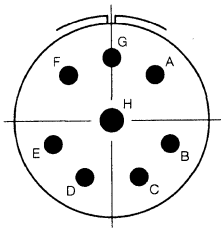
1-#8



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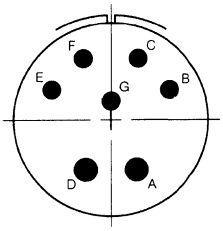
7-#16, 1-#12



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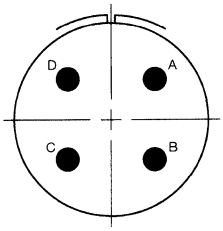
5-#16, 2-#12



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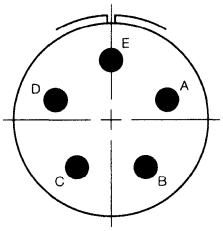
4-#12



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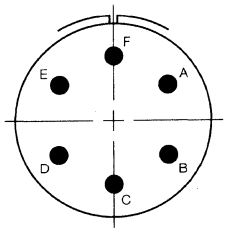
5-#12



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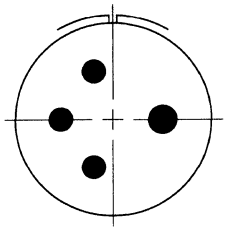

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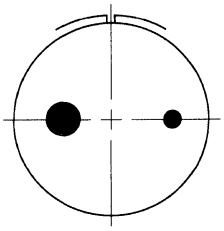
3-#12, 1-#8



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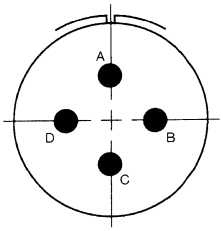

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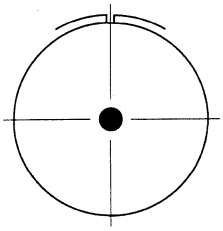
4-#12



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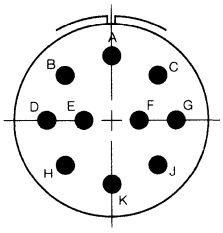

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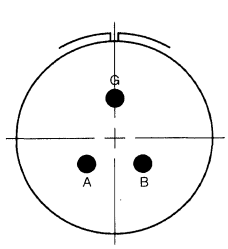

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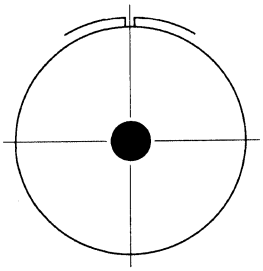

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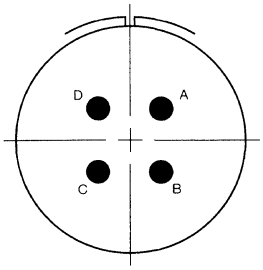

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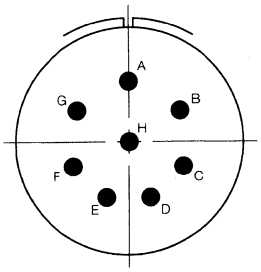
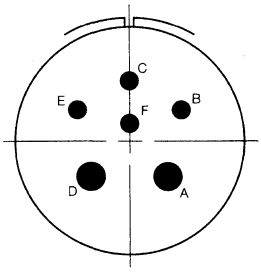


2007
8-#16



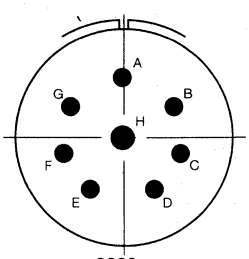
2008
4-#16, 2-#8

Note: Mating face of pin insert is shown. Socket insert is opposite.

SOURCE: Catalog 82647

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

MIL-C-83723
Series II (Continued)
Insert Arrangements (Continued)



2009
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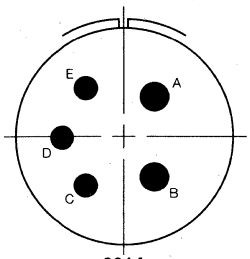

2014
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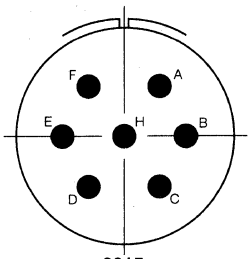
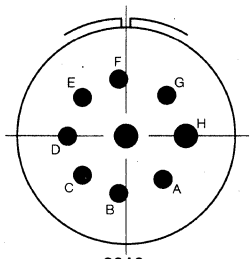


2015
7-#12



2016
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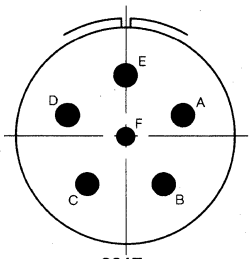

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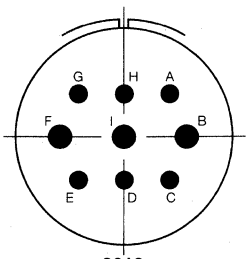

2018
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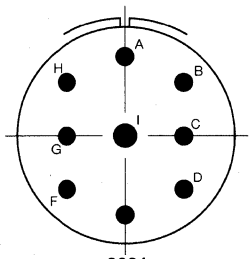

2021
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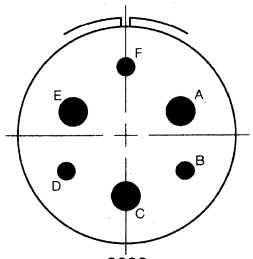
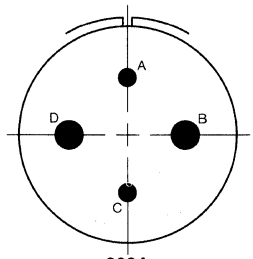


2022
3-#16, 3-#8



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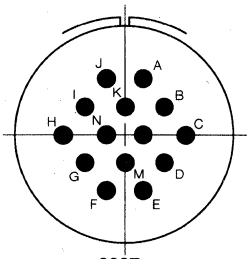
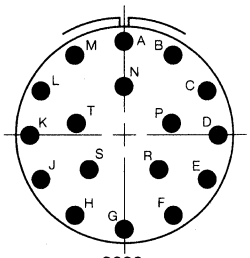
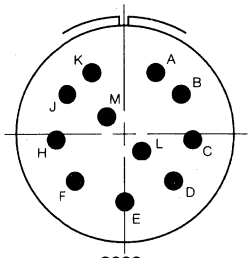


2027
14-#16



2029
17-#16



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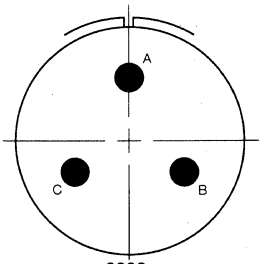
11-#16



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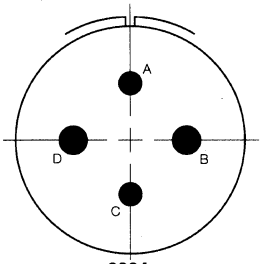
3-#8



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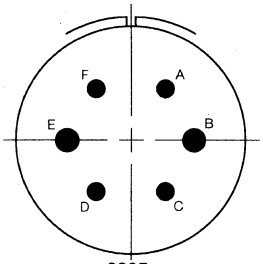

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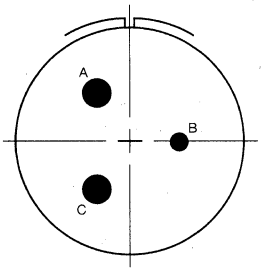
4-#16, 2-#12



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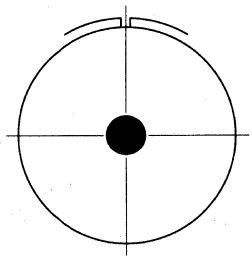
1-#16, 2-#8



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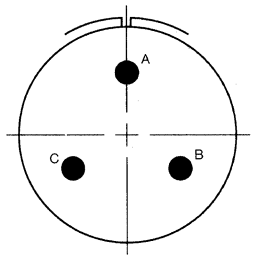
1-#0



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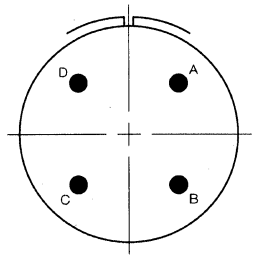
3-#12



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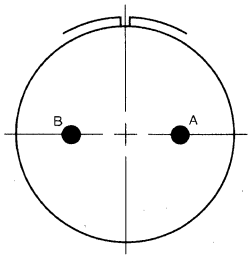
4-#16



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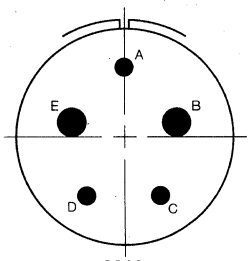
2-#16



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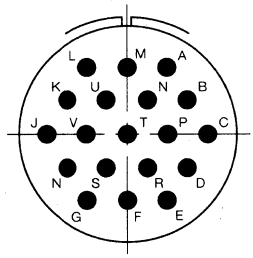
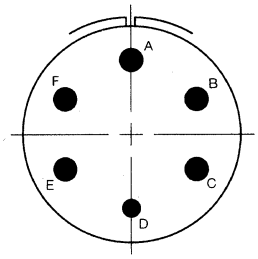
3-#16, 2-#8



2214
19-#16



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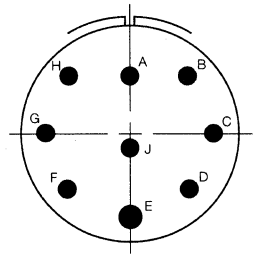
1-#16, 5-#12



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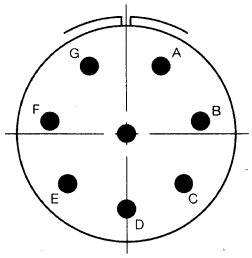
8-#16, 1-#12



2218
8-#16

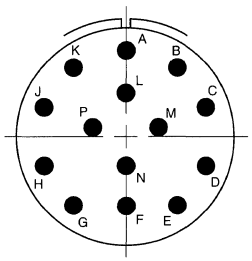
Note: Mating face of pin insert is shown. Socket insert is opposite

SOURCE: Catalog 82647

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

MIL-C-83723 Series II (Continued)

Insert Arrangements (Continued)



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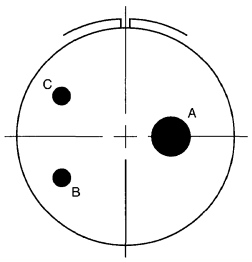
14-#16



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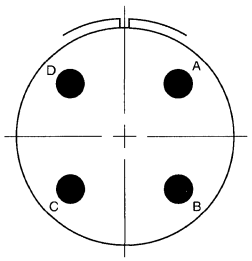
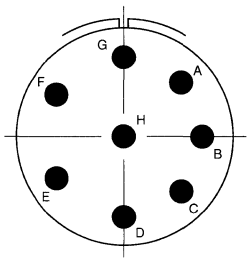


2222
4-#8



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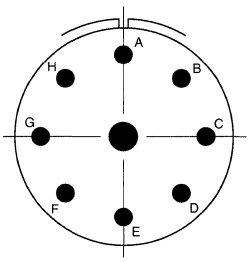

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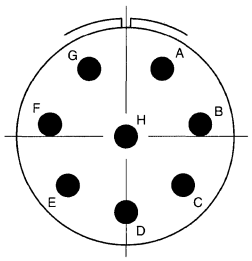
1-#8, 8-#16



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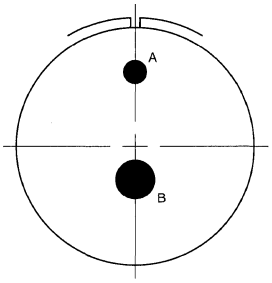
8-#12



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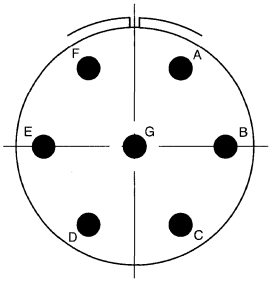

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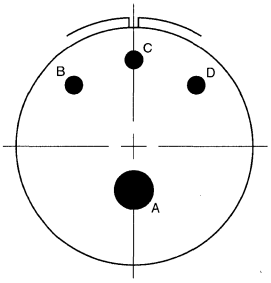
7-#12



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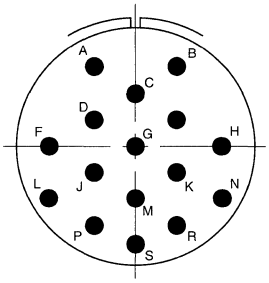

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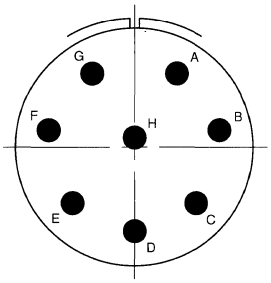
16-#16



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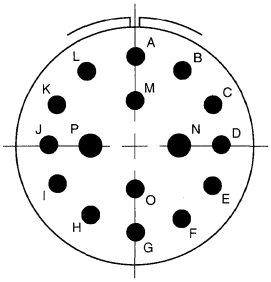

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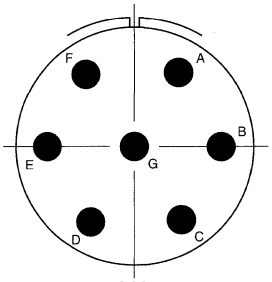

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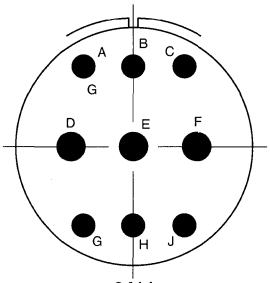
7-#8



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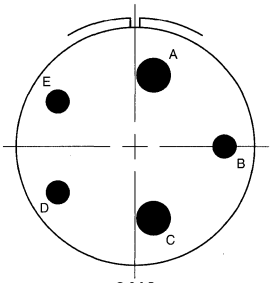
6-#12, 3-#8



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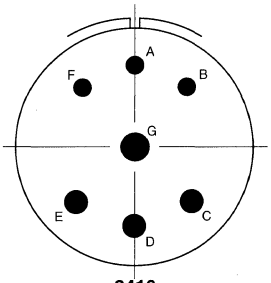
3-#12, 2-#4



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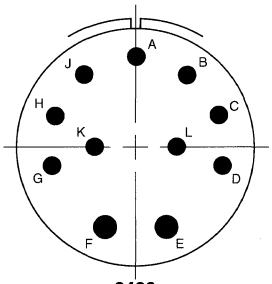
3-#16, 1-#8, 3-#12



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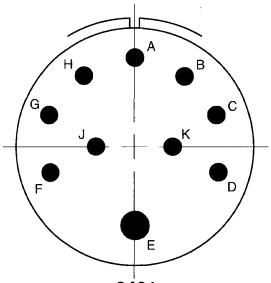
9#16, 2-#12



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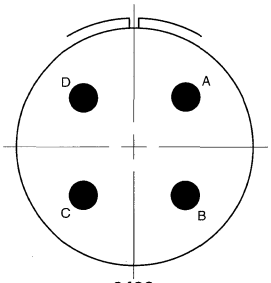

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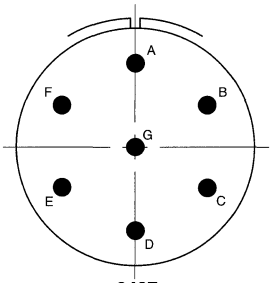
4-#8



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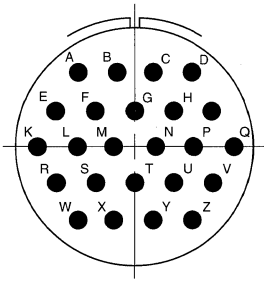
7-#16



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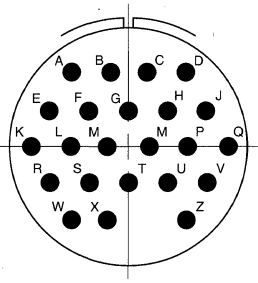
24-#16



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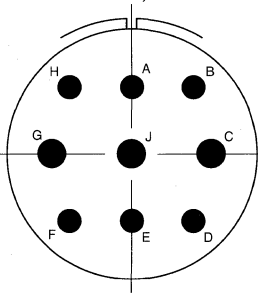
23-#16



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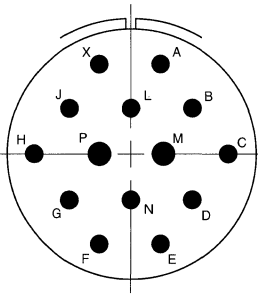

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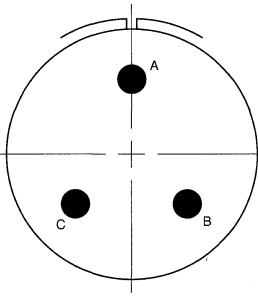
12-#16, 2-#12



2803
3-#8

Note: Mating face of pin insert is shown. Socket insert is opposite

SOURCE: Catalog 82647

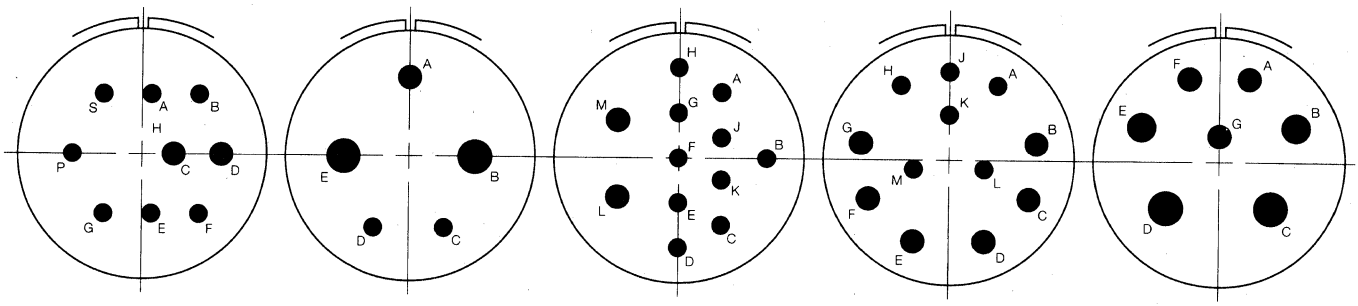
Specifications subject to change.

1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

MIL-C-83723
Series II (Continued)

Insert Arrangements (Continued)



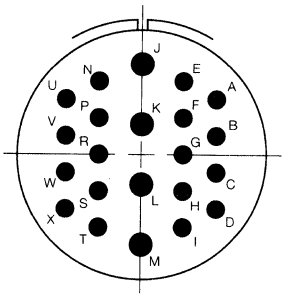
2804
7-#16, 2-#12

2805
2-#16, 1-#12, 2-#4

2808
2-#12, 10-#16

2809
6-#16, 6-#12

2810
3-#12, 2-#8, 2-#4



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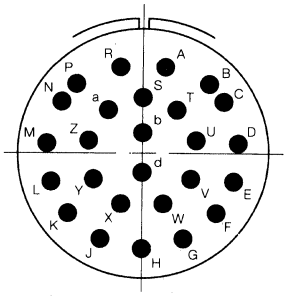
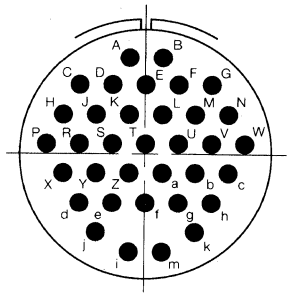
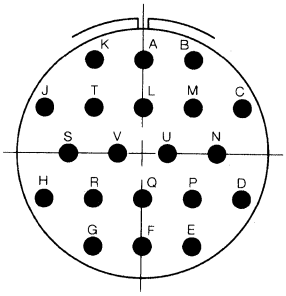
18-#16, 4-#12



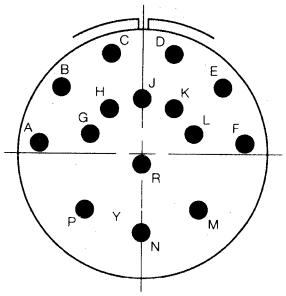
2812
26-#16



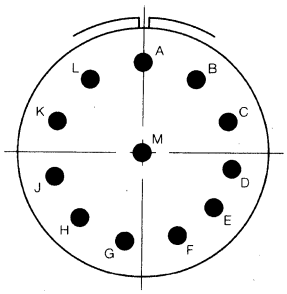
2815
35-#16



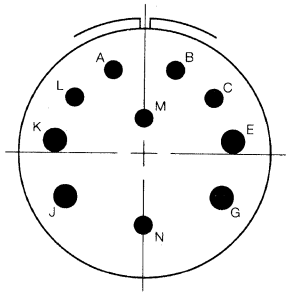
2816
20-#16



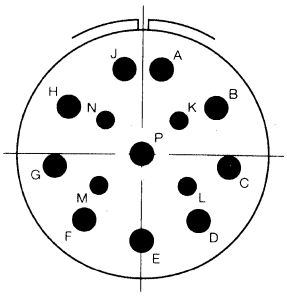
2817
15-#16



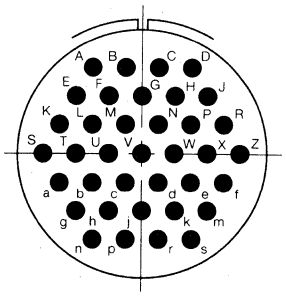
2818
12-#16



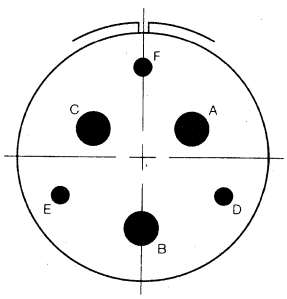
2819
6-#16, 4-#12



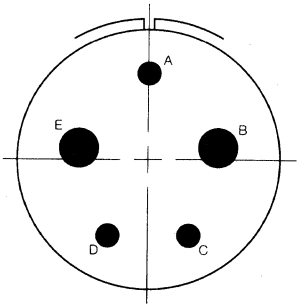
2820
4-#16, 10-#12



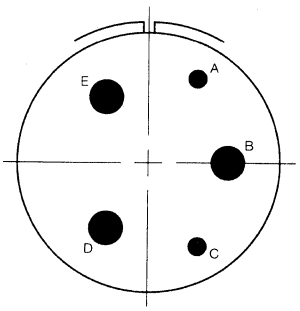
2821
37-#16



2822
3-#16, 3-#4



3201
3-#12, 2-#0



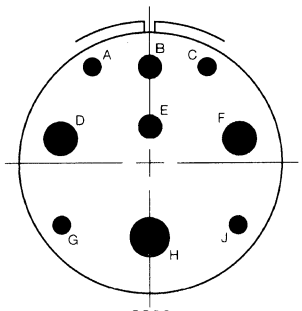
3202
2-#16, 3-#4

Note: Mating face of pin insert is shown. Socket insert is opposite.

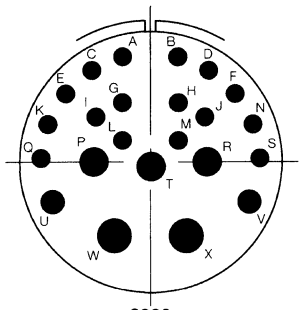
Specifications subject to change.
1-800-522-6752 Product Information Center/ AMP FAX Service
1-800-722-1111 Tooling/Technical Assistance Center

MIL-C-83723
Series II (Continued)

Insert Arrangements (Continued)



3203
4-#16, 2-#12, 2-#4, 1-#0



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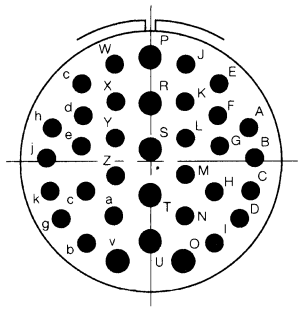
16-#16, 2-#12, 3-#8, 2-#4



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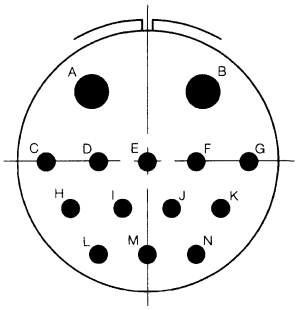
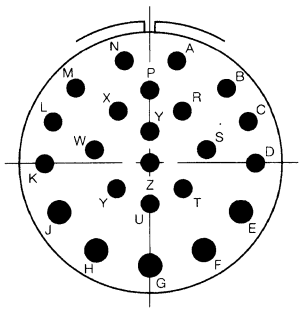
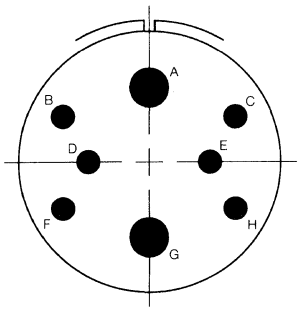
28-#16, 7-#12



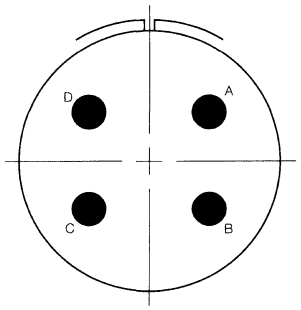
3209
12-#16, 2-#4



3213
18-#16, 5-#12



3215
6-#12, 2-#0



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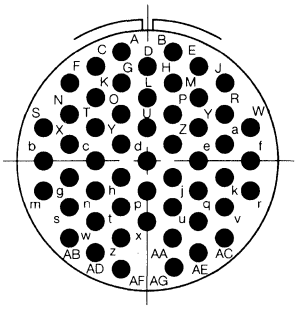
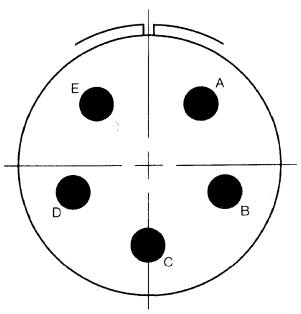
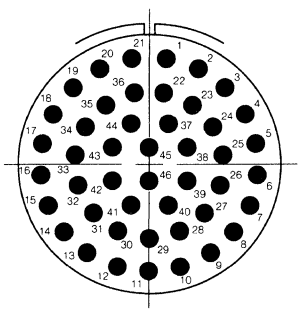
4-#4



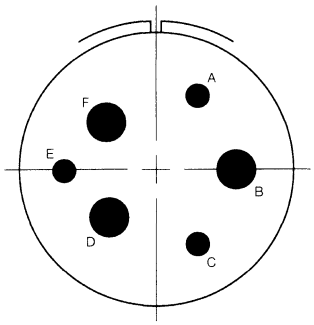
3222
54-#16



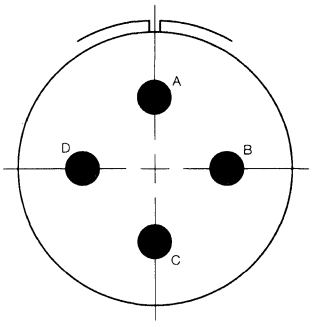
3263
5-#4



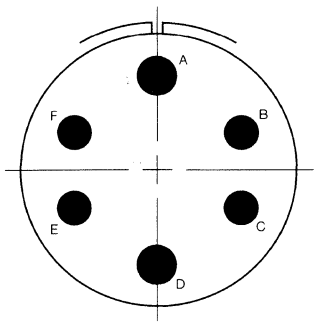
3273
46-#16



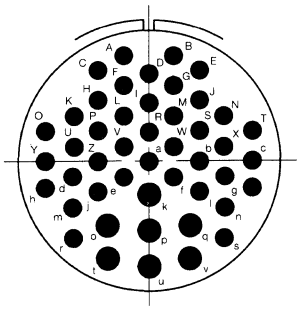
3603
3-#12, 3-#0



3605
4-#0



3606
4-#4, 2-#0



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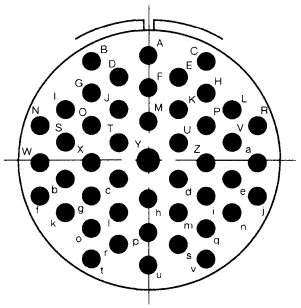
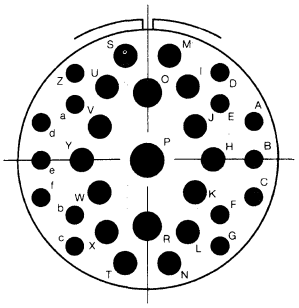
40-#16, 7-#12



3608
46-#16, 1-#12



3609
14-#16, 14-#12, 2-#8, 1,#4

Note: Mating face of pin insert is shown. Socket insert is opposite.

SOURCE: Catalog 82647

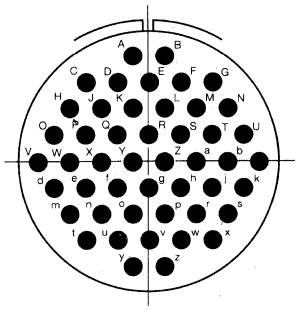
Specifications subject to change.

1-800-522-6752
Product Information Center/ AMP FAX Service

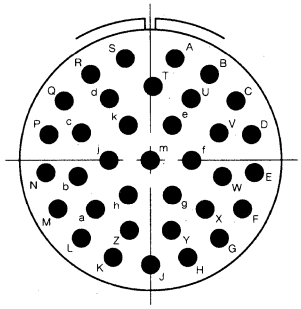
1-800-722-1111
Tooling/Technical Assistance Center

MIL-C-83723 Series II (Continued)

Insert Arrangements (Continued)



3610
48-#16



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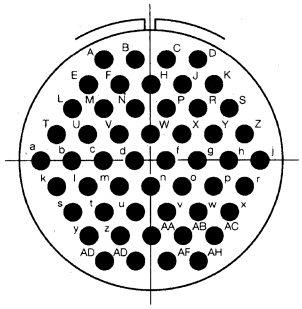
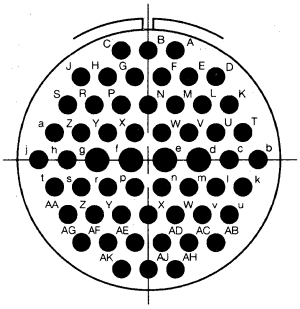
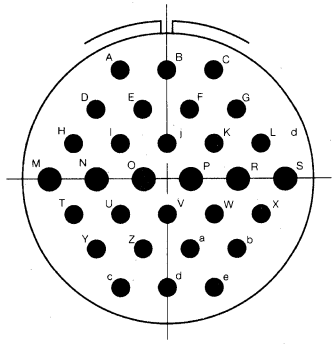
35-#16



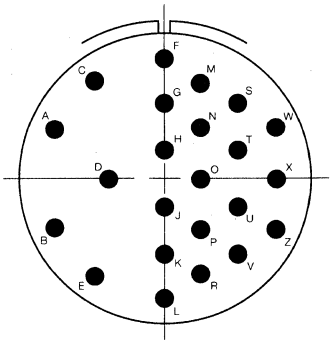
3652
52-#16



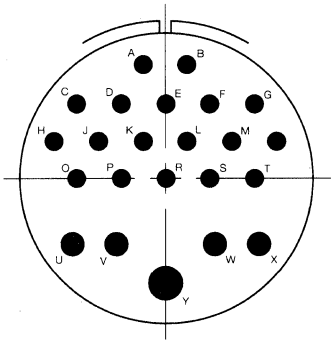
3666
52-#16, 4-#12



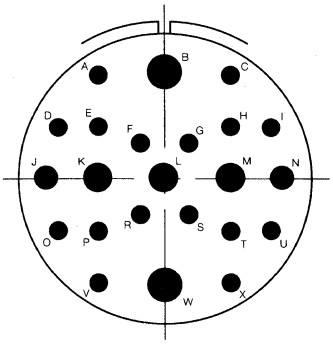
4001
24-#16, 6-#12



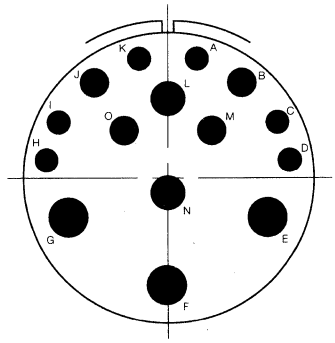
4002
23-#16



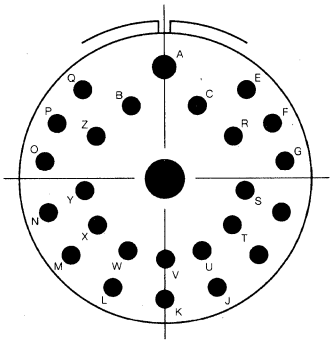
4003
18-#16, 4-#12, 1-#4



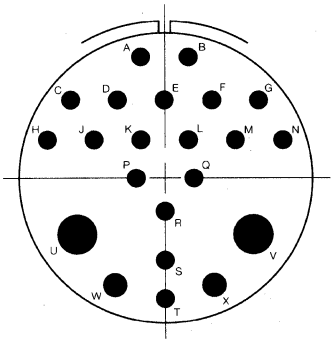
4004
16-#16, 2-#12, 3-#8, 2-#4



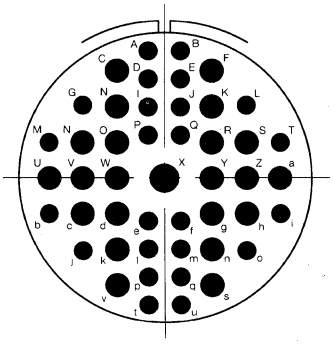
4005
6-#12, 4-#8, 2-#4, 3-#0



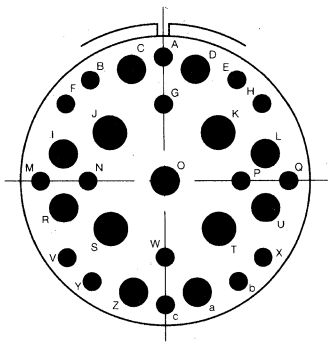
4006
24-#16, 1-#12, 1-#0



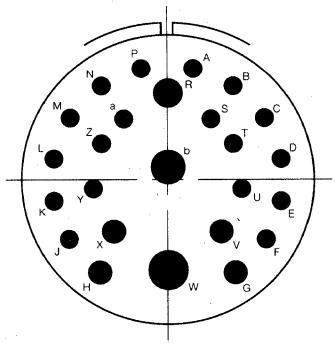
4007
2-#12, 2-#0, 18-#16



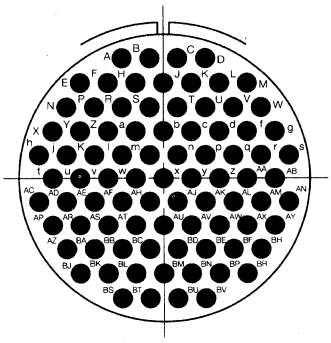
4009
24-#16, 22-#12, 1-#8



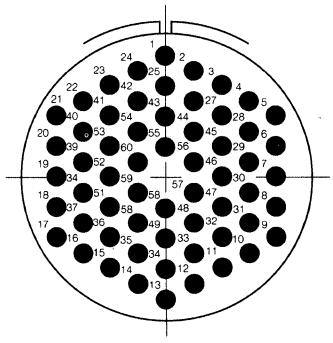
4010
16-#16, 9-#8, 4-#4



4011
18-#16, 4-#12, 1-#8, 1-#4, 1-#0



4056
85-#16



4062
60-#16

Note: Mating face of pin insert is shown. Socket insert is opposite.

SOURCE: Catalog 82647

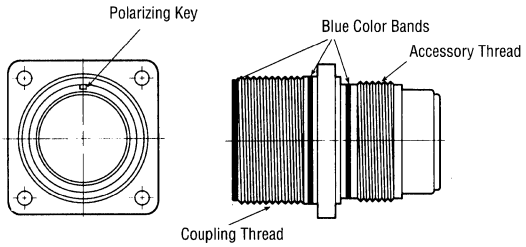
MIL-C-83723
Series II

Shell Size:

8S
10S
10SL
12
12S
14
14S
16
16S
18
20
22
24
28
32
36
40

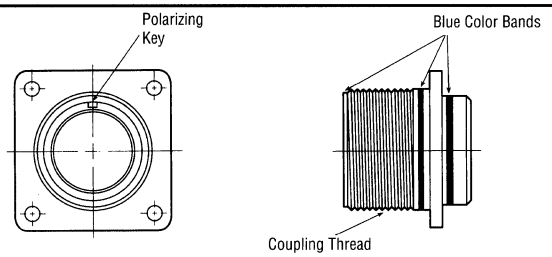
Receptacle Shell, Flange Wall Mount, Threaded Coupling

Military No.
M83723/19 & /20
MATRIX No. M72300



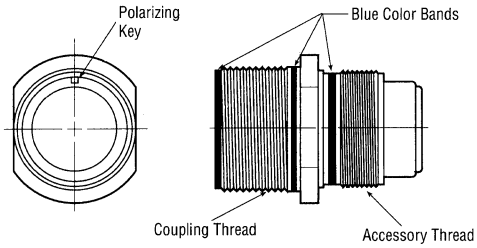
Receptacle Shell, Flange Box Mount, Threaded Coupling

Military No.
M83723/21 & /22
MATRIX No. M72302



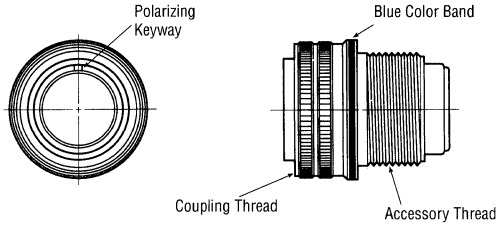
Receptacle Shell, Cable Connecting, Threaded Coupling

Military No.
M83723/17 & /18
MATRIX No. M72301



Plug Shell, Threaded Coupling

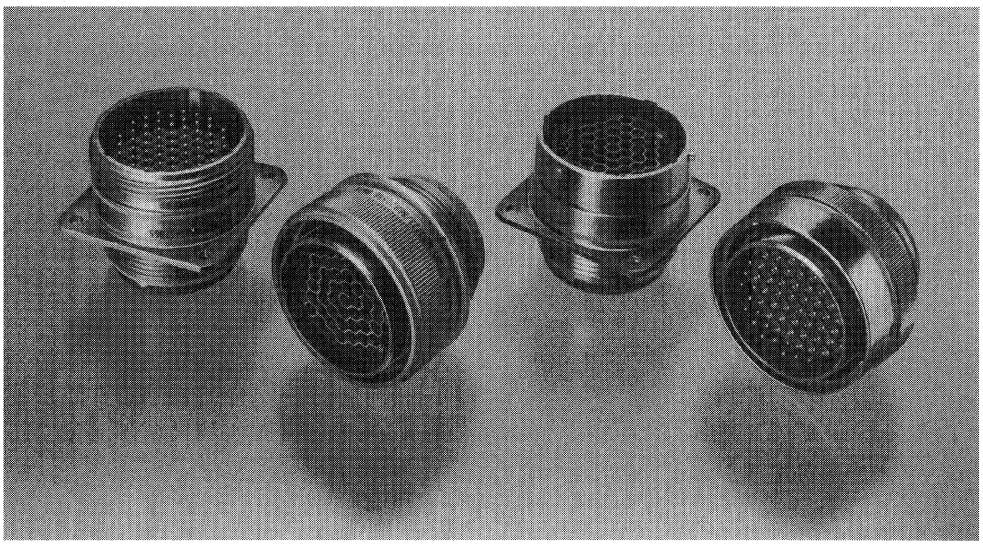
Military No.
M83723/23 & /24
MATRIX No. M72306



SOURCE: Catalog 82647

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

MIL-C-83723 Series III



MIL-C-83723 allows great diversity within a single specification for circular metal-shell connectors. The Series III group offers connectors with bayonet coupling, threaded coupling and quick-disconnect coupling. With these choices the connectors are increasingly popular for panel-mount, box-mount, and the line-to-line applications in aircraft.

A wide selection of configurations includes square flange, jam nut, and hermetically sealed receptacles and EMI-shielded plugs. The captive coupling nut prevents tampering, while a reduced coupling ring ramp allows easier mating. The connector accepts 2 to 61 position inserts and crimp contacts in sizes 12 through 20.

Complete environmental sealing includes individual contact seals, an interfacial seal, a shell-to-shell seal, redundant rear wire seals, and a insert-to-shell seal.

For applications requiring extended service at temperatures to 260°C [112°F], request information on the MTE and MTS version connectors, which meet Class K requirements. The MTE accepts NAS 1599 high-temperature contacts and is qualified to Rolls Royce specification ESC10. The MTS increases the contact area between mated contacts and accepts the large insulation diameter of wires used in firewall and engine-zone applications.

Specifications subject to change.
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1-800-722-1111 Tooling/Technical Assistance Center

MIL-C-83723
Series III (Continued)

Performance Specifications

Voltage Rating

Altitude		Mated Service Rating	
ft.	m	I	II
Sea Level	-	1500	2300
50,000	15 240	500	750
70,000	21 336	375	500
110,000	33 528	200	200

Note: When the voltage as indicated above is applied between shell and closest contact to the shell or between the two closest contacts for a period of 5 seconds, there shall be no evidence of flashover or breakdown.

Contact Current Rating and Retention

Contact Size*	Current Rating		Contact Retention	
	Amperes Max.	Voltage Drop Millivotls	Axial Load lb	Axial Load N
20	7.5	35	20	89.0
16	13.0	25	25	111.2
12	23.0	25	30	133.4

*Organize individual circuits to maintain heat rise within operating temperature requirements.

Operating Temperature Range
-65°C to +200°C [-85°F to +392°F]

Environmental Seal
Wired, mated connectors with the specified accessory attached will meet the altitude immersion test specified in MIL-C-83723.

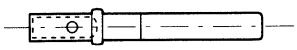
Durability
Minimum of 500 mating cycles.

Shock and Vibration Requirements
Wired, mated connectors shall not be damaged, nor shall there be a current interruption longer than one microsecond when subjected to the following:

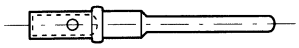
Shock
One shock in each of the three major axes, having a 100 g peak for a 6 millisecond duration (half-sine pulse).

Vibration
Twelve hours of random vibration having a range of 10 to 2,000 Hz with a .06 [1.5] double amplitude (10-55 Hz) and a 20 g peak level (55-2,000 Hz).

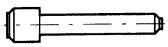
Contacts, Sealing Plugs and Assembly Tools



Socket Contact



Pin Contact



Sealing Plug

Contact Size	Wire Range		Socket Contacts		Pin Contacts		Sealing Plugs	
	AWG	mm²	Military Part No.	MATRIX Part No.	Military Part No.	MATRIX Part No.	Military Part No.	MATRIX Part No.
20	24-20	0.2-0.6	M39029/5-115	5100-001-0020	M39029/4-110	5000-054-0020	MS27488-20	3400-043-0020
16	20-16	0.5-1.4	M39029/5-116	5100-001-0016	M39029/4-111	5000-054-0016	MS27488-16	3400-043-0016
12	14-12	2-3	M39029/5-118	5100-001-0012	M39029/4-113	5000-054-0012	MS27488-12	3400-043-0012

Crimping Tools

Contact Size	Wire Range		Finished Wire Dia. Range		Military Part No.	
	AWG	mm²	inch	mm	Crimping Tool	Turret or Positioner
20	24-20	0.2-0.6	.040-.083	1.02-2.11	M22520/1-01 or /2-01	M22520/1-02 or /2-02
16	20-16	0.5-1.4	.053-.103	1.34-2.62	M22520/1-01	M22520/1-02
12	14-12	2-3	.097-.158	2.46-4.01	M22520/1-01	M22520/1-02

Note: Each connector is furnished with contacts. One spare for inserts requiring 1 to 26 of each contact and two spares for inserts with more than 26 contacts and a minimum of one sealing plug up to 10% of the number of contacts.

Insertion/Extraction Tools

Contact Size	Color Code	Military Part No.	MATRIX Part No.
20	Rd./Wh.	M81969/14-11	6500-001-0020
16	Bl./Wh.	M81969/14-03	6500-001-0016
12	Yel./Wh..	M81969/14-04	6500-001-0012

SOURCE: Catalog 82647

Specifications subject to change.

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1-800-722-1111
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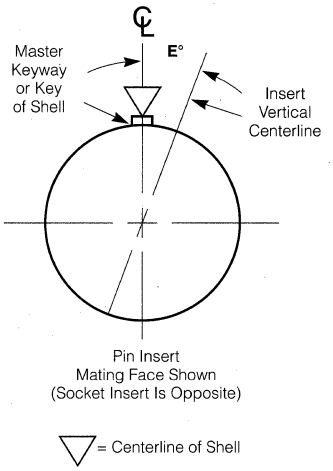
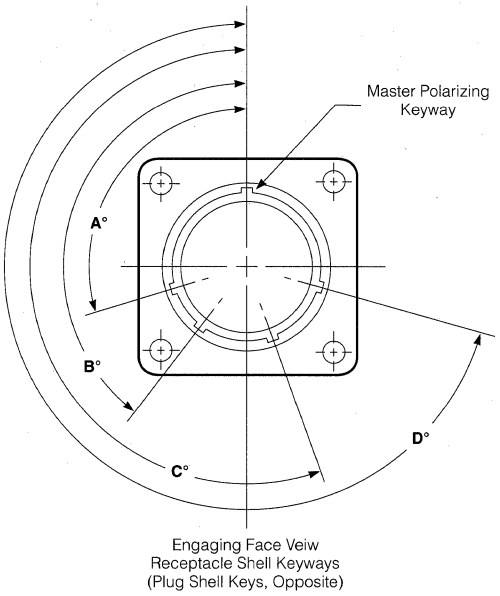
MIL-C-83723 Series III (Continued)

Polarization

Insert Clocking



Keying Positions



Insert Clocking (Per MIL-STD-1554)

Shell Size	Polarizing Position	Key/Keyway Positions A°	B°	C°	D°	Insert Position E°	Service Rating
8,10	N	105	140	215	265	0	Refer to Insert Arrangement Captions Pages 2125-2126
	1*	105	140	215	265	10	
	2*	105	140	215	265	20	
	3*	105	140	215	265	30	
	4*	105	140	215	265	40	
	5*	105	140	215	265	50	
12,14 16,18 20,22 24 & 28**	N	105	140	215	265	0	
	1*	105	140	215	265	10	
	2*	105	140	215	265	20	
	3*	105	140	215	265	30	
	4*	105	140	215	265	40	
	5*	105	140	215	265	50	

*Position 1 thru 5 inactive for new design, (Ref. MIL-STD-1554)

Keying Positions (Per MIL-STD-1554)

Shell Size	Polarizing Position	Key/Keyway Positions A°	B°	C°	D°	Insert Position E°	Service Rating
8 thru 24	N	105	140	215	265	0	Refer to Insert Arrangement Captions Pages 2125-2126
8 & 10	6	102	132	248	320	0	
	7	80	118	230	312	0	
	8	35	140	205	275	0	
	9	64	155	234	304	0	
10 only	Y*	25	115	220	270	0	
12, 14 16, 18 20, 22 24 & 28**	6	18	149	192	259	0	
	7	92	152	222	342	0	
	8	84	152	204	334	0	
	9	24	135	199	240	0	
	Y*	98	152	268	338	0	

*Positions 10 and Z designators are inactive, Superseded by Y. (Ref. MIL-STD-1554)
**Shell size 28 not military standard connector

Notes:

1. In the "Normal insert position" (position N), the insert center line coincides with the centerline of the master key/keyway of the shell.

2. In the "Alternate insert position" (positions 1, 2, 3 4 and 5), the socket insert is rotated clockwise relative to the centerline of the master key/keyway of the shell as indicated in the Figure and Table. The pin insert is rotated counter-clockwise.

3. Alternate polarizing positions 1, 2, 3, 4 and 5 are for interchangeability use only. Not recommended for new design, per MIL-C-83723.

4. In the "Alternate keying position" (positions 6, 7, 8 ,9 and Y), the minor keys/keyways are positioned with reference to master key/keyway as indicated in the keying position table.

5. All plugs have keys. All receptacles have keyways.

SOURCE: Catalog 82647

Specifications subject to change.
1-800-522-6752 Product Information Center/ AMP FAX Service
1-800-722-1111 Tooling/Technical Assistance Center

MIL-C-83723
Series III (Continued)

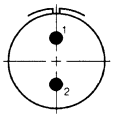
Insert Arrangements (Per MIL-STD-1554)

Numbering identification example: **0803** (Shell Size and Insert Number)
3 #20 (Contact quantity and size)
I (Service rating)

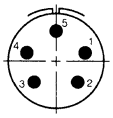
0802*
2 #20
I

0803
3 #20
I

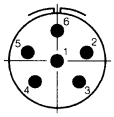
0898
3 #20
I



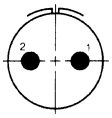
1002
2 #20
I



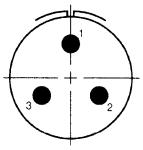
1005
5 #20
I



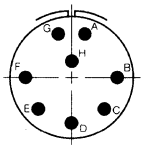
1006
6 #20
I



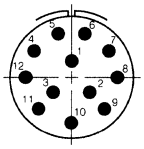
1020
2 #16
I



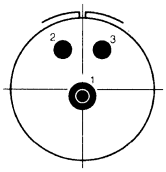
1203
3 #16
I



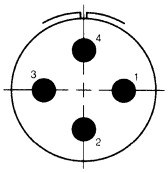
1208*
8 #20
I



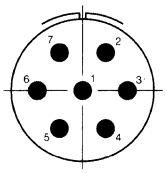
1212
12 #20
I



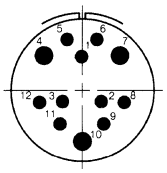
1403*
2 #16, 1 #20 Coax.



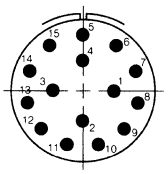
1404
4 #12
I



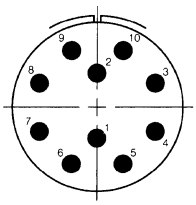
1407
7 #16
I



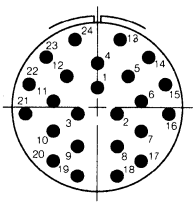
1412
9 #20, 3 #16
I



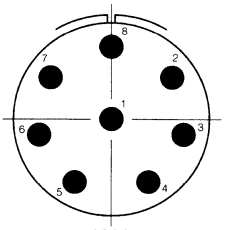
1415
15 #20
I



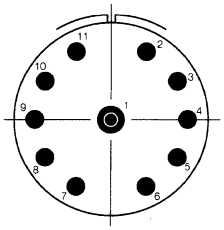
1610
10 #16
I



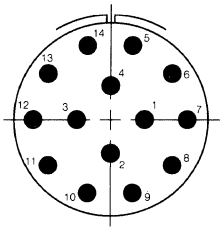
1624
24 #20
I



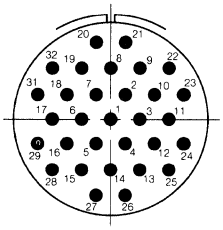
1808
8 #12
I



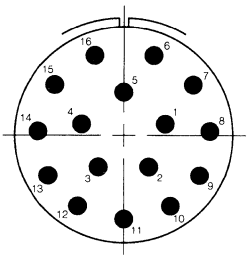
1811*
10 #16, 1 #20 Coax.
I



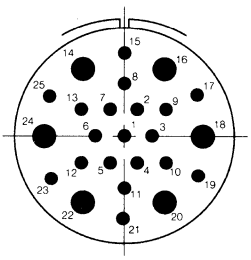
1814
14 #16
I



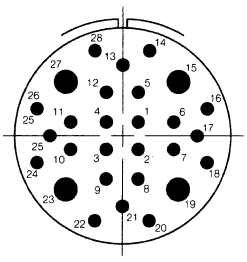
1831
31 #20
I



2016
16 #16
I



2025
19 #20, 6 #12
I



2028
24 #20, 4 # 12
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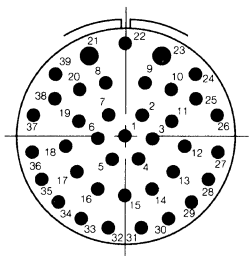
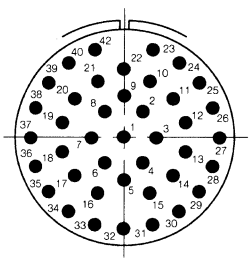
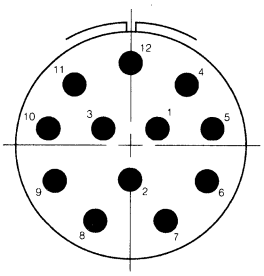


2039
37 #20, 2 #16
I



2041
41 #20
I



2212
12 #12
I

*Consult AMP for availability.
Note: Mating face of pin insert is shown. Socket insert is opposite.

SOURCE: Catalog 82647

Specifications subject to change.
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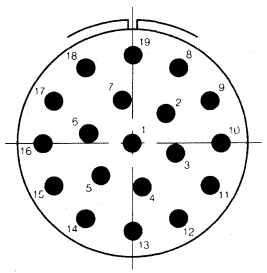
MIL-C-83723
Series III (Continued)

Insert Arrangements (Continued)



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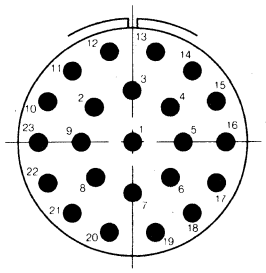
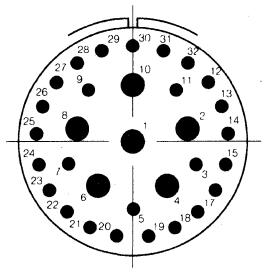
19 #16



2323*
23 #16



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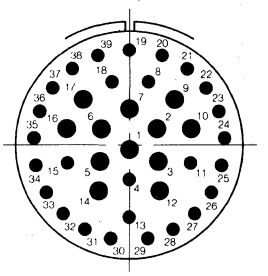
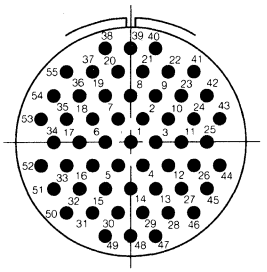
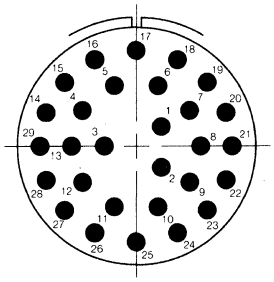
26 #20, 6 #12



2239*
27 #20, 12 #16



2255
55 #20



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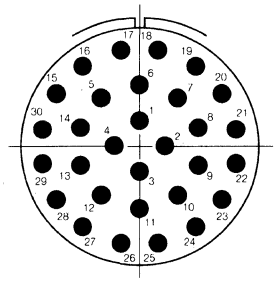
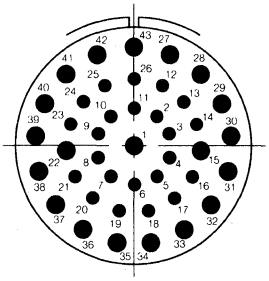
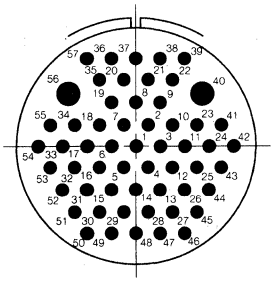
29 #16



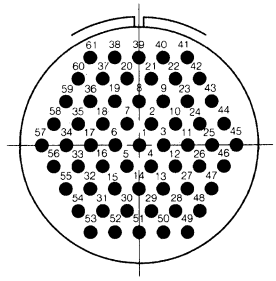
2430
30 #16



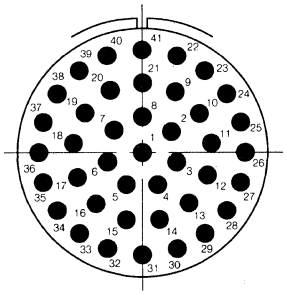
2443
23 #20, 20 #16



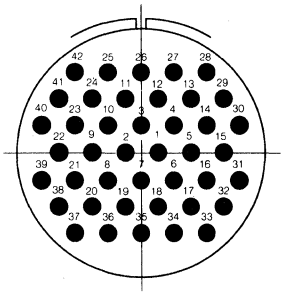
2457
55 #20, 2 #12



2461
61 #20



2841**
41 #16
(Not an MS layout)



2842**
42 #16
(Not an MS layout)

*Consult AMP for availability.
**Shell Size 28 not available in the MB3* series.
Note: Mating face of pin insert is shown. Socket insert is opposite.

Specifications subject to change.
1-800-522-6752
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1-800-722-1111
Tooling/Technical Assistance Center

MIL-C-83723 Series III (Continued) Bayonet Coupling

Miniature, circular bayonet connectors are built in accordance with Series III of MIL-C-83723. This specification combines the best features of miniature connector specifications MIL-C-26500 and NAS1599. This connector is intermateable with most of the MIL-C-26500 bayonet-coupling connectors and has the added advantages of the rear-release contact retention system.

The contact retention system, used in this connector, permits insertion and extraction of contacts from the rear, utilizing the same plastic tool specified for use with most qualified rear-release type connectors. Servicing the connector from the rear helps prevent damage to the front that might affect the sealing characteristics, therefore eliminating the need for recycling the entire connector circuitry.

Pin and socket contacts conform to MIL-C-39029 and use the standard MIL-C-22520 crimping tool.

Both square flange and single-hole, jam nut mounting type receptacles and their mating plugs are available in a full range of shell sizes and insert arrangements. The bayonet style coupling provides both positive mating and quick-disconnect.

Tear-resistant silicone grommets do not show any degradation when exposed to a broad range of fluids. Sealing over a wide range of wire diameters is provided by a triple wire seal.

The hard face closed entry socket insert is designed with a lead-in chamfer that will accept pin contacts that are bent within pre-established limits. The silicone interfacial seal on the pin side has raised barriers around each pin. This barrier displaces into the chamfer when mated, providing a positive moisture seal.

These connectors are available with aluminum shells having anodized, cadmium or nickel finish. Also available are shells made of passivated stainless steel.

SOURCE: Catalog 82647

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

MIL-C-83723 Series III Bayonet Coupling (Continued)

Military Part Number System

M83723/ 74 R 12 03 7

- **Insert Clocking or Keying Positions**
  Use N for Normal
  Use 1,2,3,4,5 for Alternate clocking positions
  Use 6,7,8,9,Y for Alternate keying positions
- **Insert Arrangement**
- **Shell Size** (8 thru 24 even numbers)
- **Class**
  A = Aluminum shell, black anodize finish, fluid resistant insert
  R = Aluminum shell, electroless nickel finish, fluid resistant insert
  G = Stainless steel shell, passivated, fluid resistant insert
  W = Aluminum shell, cadmium olive drab finish, fluid resistant insert
  H = Steel, hermetic seal
  Y = Stainless steel, hermetic seal
- **Specification Slashsheet Number**
- **MS Number**

MATRIX Part Number System

M B 3 4 R 12 03 P 7 - ***

- **Modification Number** (Consult Matrix Science Corporation)
- **Insert Clocking or Keying Position**
  Leave blank for Normal
  Use 1,2,3,4,5 for Alternate clocking positions
  Use 6,7,8,9,Y for Alternate keying positions
- **Contact Style** P = Pin S = Socket
- **Insert Arrangement**
- **Shell Size** (8 thru 24 even numbers)
- **Class**
  A = Aluminum shell, black anodize finish, fluid resistant insert
  R = Aluminum shell, electroless nickel finish, fluid resistant insert
  G = Stainless steel shell, passivated, fluid resistant insert
  W = Aluminum shell, cadmium olive drab finish, fluid resistant insert
  H = Steel, hermetic seal
  Y = Stainless steel, hermetic seal
- **Configuration**
  0 = Receptacle, flange mount
  4 = Receptacle, single hole mounting
  6 = Plug, standard
  8 = Plug, RFI (Class R, G and W)
- **Series III**
- **Coupling**
  B=Bayonet Coupling
- **Matrix Series Number**

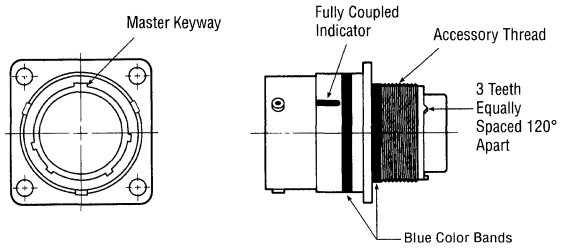
SOURCE: Catalog 82647

Specifications subject to change.
1-800-522-6752 Product Information Center/ AMP FAX Service
1-800-722-1111 Tooling/Technical Assistance Center

MIL-C-83723
Series III
Bayonet Coupling
(Continued)

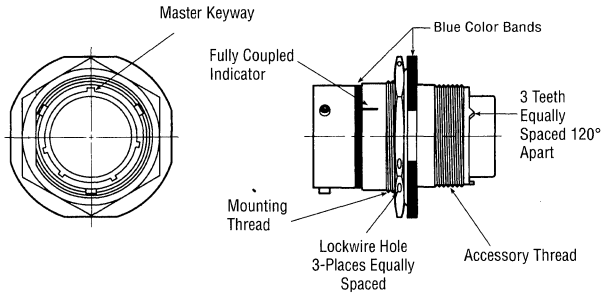
Receptacle Shell, Flange Mount, Bayonet Coupling

Military No.
MS83723/71 & /72
MATRIX No. MB30



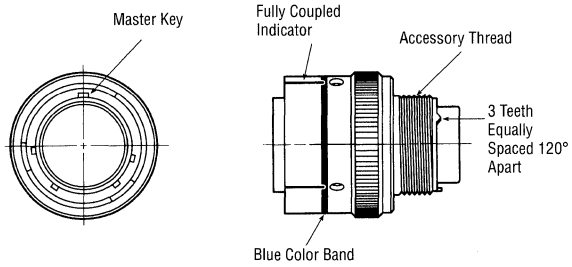
Receptacle Shell, Jam Nut Mount, Bayonet Coupling

Military No.
MS83723/73 & /74
MATRIX No. MB34



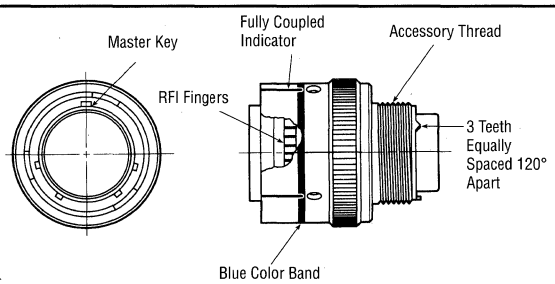
Plug Shell, Bayonet Coupling

Military No.
MS83723/75 & /76
MATRIX No. MB36



Plug Shell, RFI Grounding, Bayonet Coupling

Military No.
MS83723/77 & /78
MATRIX No. MB38



SOURCE: Catalog 82647

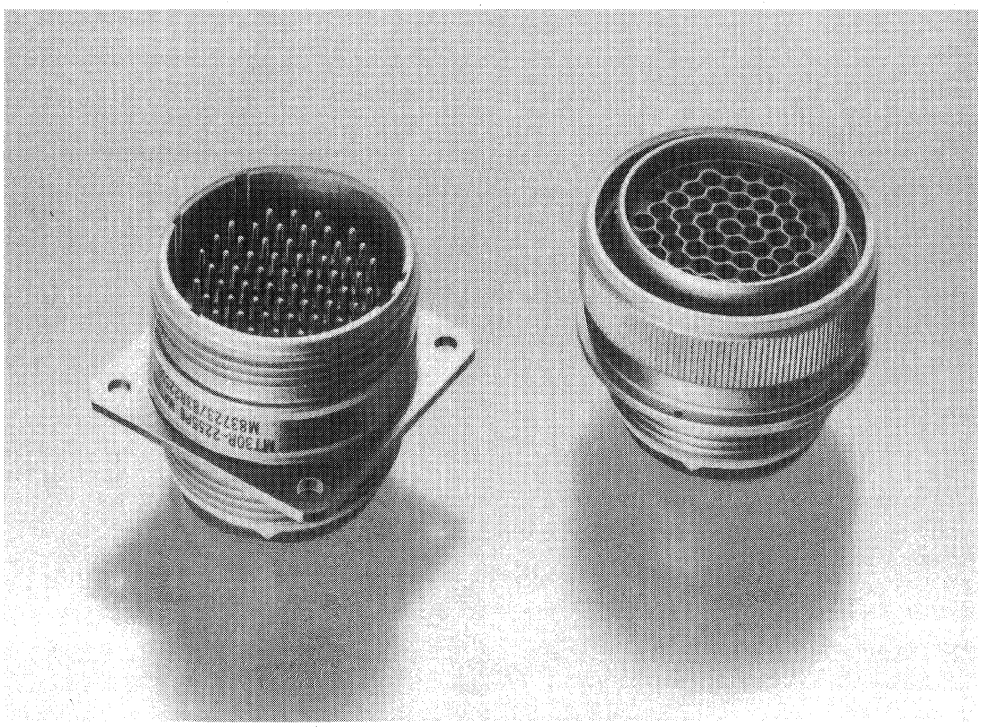
Specifications subject to change.

1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

MIL-C-83723 Series III (Continued)

Threaded and Quick-Disconnect Couplings



Designed and qualified to Series III of MIL-C-83723, these connectors combine the best features of miniature connector specifications MIL-C-26500 and NAS1599. They are intermateable with most of the MIL-C-26500 threaded-coupling connectors and have the added advantages provided by the rear-release contact retention system.

This contact retention system permits insertion, release and removal of contacts from the rear of the connector utilizing the same plastic insertion/extraction tool specified for use with most qualified rear-release type connectors. Servicing the connector from the rear helps prevent damage to the front that might affect the sealing characteristics. This system also eliminates the need to remove and replace the safety wire.

Pin and socket contacts conform to MIL-C-39029 using the standard crimp tool per MIL-C-22520.

Both square flange and jam nut mounting type receptacles and their mating plugs are available in a full range of shell sizes and insert arrangements. The threaded coupling plugs are available with a choice of safety wire provisions or self-locking feature.

Grommets of tear-resistant silicone do not show any degradation when exposed to a broad range of fluids. Sealing over a wide range of wire diameters is provided by a triple wire seal.

The hard face closed entry socket insert is designed with a lead-in chamfer that accepts pin contacts bent to a pre-established limit. The silicone interfacial seal on the pin side insert has raised barriers around each pin. This barrier displaces into the chamfer when mated, providing a positive moisture seal.

The connectors are available with aluminum shells having anodized, cadmium or nickel finish; and passivated stainless steel finish.

SOURCE: Catalog 82647

MIL-C-83723 Series III (Continued)

Military Part Number System

M83723/ 84 R 08 03 N

- **Insert Clocking or Keying Positions**
  Use N for Normal
  Use 1,2,3,4,5 for Alternate clocking positions
  Use 6,7,8,9,Y for Alternate keying positions
- **Insert Arrangement**
- **Shell Size** (8 thru 24 even numbers)
- **Class**
  A = Aluminum shell, black anodize finish, fluid resistant insert
  R = Aluminum shell, electroless nickel finish, fluid resistant insert
  G = Stainless steel shell, passivated, fluid resistant insert
  K = Stainless steel shell, passivated, firewall, non-flammable hard dielectric and fluid resistant insert
  W = Aluminum shell, cadmium olive drab finish, fluid resistant insert
  H = Steel, hermetic seal
  Y = Stainless steel, hermetic seal
  S = Stainless steel shell, passivated, firewall, non-flammable hard dielectric and fluid resistant insert with full accessory teeth (360°)
  N = Stainless steel shell, electro-deposited nickel, firewall, non-flammable hard dielectric and fluid resistant insert with full accessory teeth (360°)
- **Specification Slash sheet Number**
- **MS Number**

MATRIX Part Number System

M T 3 4 R 08 03 P - *

- **Modification Number** (Consult Matrix Science Corporation)
- **Insert Clocking or Keying Positions**
  Leave blank for Normal
  Use 1,2,3,4,5 for Alternate clocking positions
  Use 6,7,8,9,Y for Alternate keying positions
- **Contace Style** P = Pin S = Socket
- **Insert Arrangement**
- **Shell Size** (8 thru 24 even numbers)
- **Class**
  A = Aluminum shell, black anodize finish, fluid resistant insert
  R = Aluminum shell, electroless nickel finish, fluid resistant insert
  G = Stainless steel shell, passivated, fluid resistant insert
  K = Stainless steel shell, passivated, firewall, non-flammable hard dielectric and fluid resistant insert
  W = Aluminum shell, cadmium olive drab finish, fluid resistant insert
  H = Steel, hermetic seal
  Y = Stainless steel, hermetic seal
  S = Stainless steel shell, passivated, firewall, non-fllammable hard dielectric and fluid resistant insert with full accessory teeth (360°)
  N = Stainless steel shell, electro-deposited nickel, firewall, non-flammable hard dielectric and fluid resistant insert with full accessory teeth (360°)
- **Configuration**
  0 = Receptacle, flange mount
  4 = Receptacle, single hole mounting
  6 = Plug, standard
  7 = Plug, self-lock
  8 = Plug, RFI, self-lock (Class R, G and W)
  (M Q Only)
  5 = Plug, with lanyard
  6 = Plug, without lanyard
- **Series III**
- **T=Threaded Coupling Q=Quick-Disconnect Coupling**
- **Matrix Series Number**

SOURCE: Catalog 82647

Specifications subject to change.
1-800-522-6752 Product Information Center/ AMP FAX Service
1-800-722-1111 Tooling/Technical Assistance Center

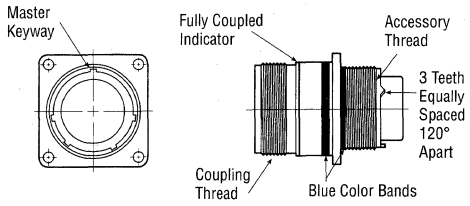
MIL-C-83723 Series III (Continued)

Shell Size:

8
10
12
14
16
18
20
22
24
28

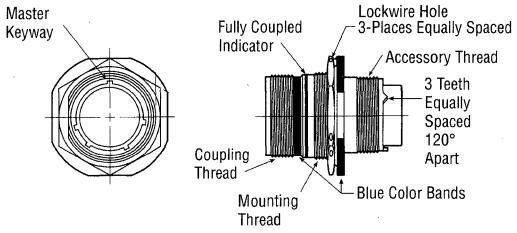
Receptacle Shell, Flange Mount, Threaded Coupling

Military No. M83723/82 & /83
MATRIX No. MT30



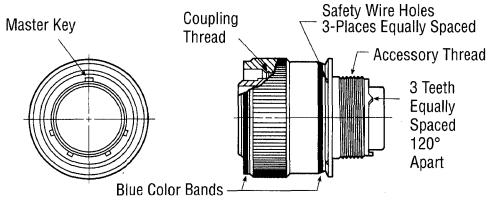
Receptacle Shell, Jam Nut Mount, Threaded Coupling

Military No. M83723/84 & /85
MATRIX No. MT34



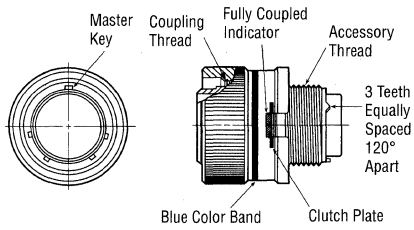
Plug Shell, Threaded Coupling

Military No. M83723/86 & /87
MATRIX No. MT36



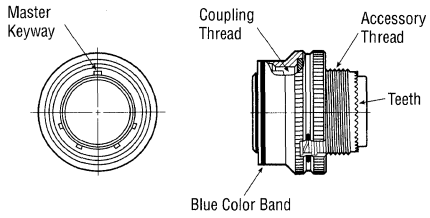
Plug Shell, Self-Locking, Threaded Coupling

Military No. M83723/95 & /96
MATRIX No. MT37



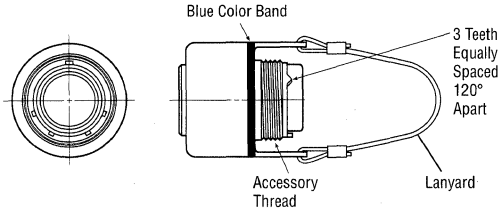
Plug Shell, RFI Grounding, Self-Locking, Threaded Coupling

Military No. M83723/97 & /98
MATRIX No. MT38



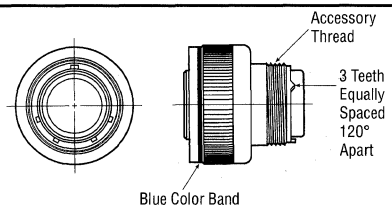
Plug Shell, Quick-Disconnect Coupling with Lanyard

Military No. M83723/68 & /69
MATRIX No. MQ35



Plug Shell, Quick-Disconnect Coupling

Military No. M83723/66 & /67
MATRIX No. MQ36



SOURCE: Catalog 82647

Specifications subject to change.
1-800-522-6752 Product Information Center/ AMP FAX Service
1-800-722-1111 Tooling/Technical Assistance Center

MIL-C-38999 Series I, II & III

Matrix Science Corporation was the first manufacturer to qualify all four series of MIL-C-38999 connectors. Series I uses a bayonet coupling, Series II also uses a bayonet coupling, but has a lower profile. Series III offers a triple acme threaded coupling for quick, one-turn release. All series, except Series II, offer a scoop proof design to prevent contact damage.

All series offer a wide range of shell sizes, contact arrangements, mounting configurations and polarizations, and other features such as shielding and keying.

Connectors other than the standard type are also available. There is a hermetic version that uses a glass seal to provide a level of environmental performance that far exceeds fluoroelastomer seals. The leakage rate is less than 1×10^{-6} cubic inch at a 1 atmosphere differential. And for environments offering severe vibrations, extreme temperatures, and hostile fluids, a firewall/engine version is available. They withstand a 2000°F [1093°C] flame test for 20 minutes.

For information about the hermetic and firewall/engine connectors consult Matrix Science Corporation.

The variety, capabilities, and performance of the MIL-C-38999 connectors allow them to meet the broadest range of applications. That explains their popularity. Now through the engineering and manufacturing expertise of Matrix Science Corporation the complete MIL-C-38999 package can be offered.

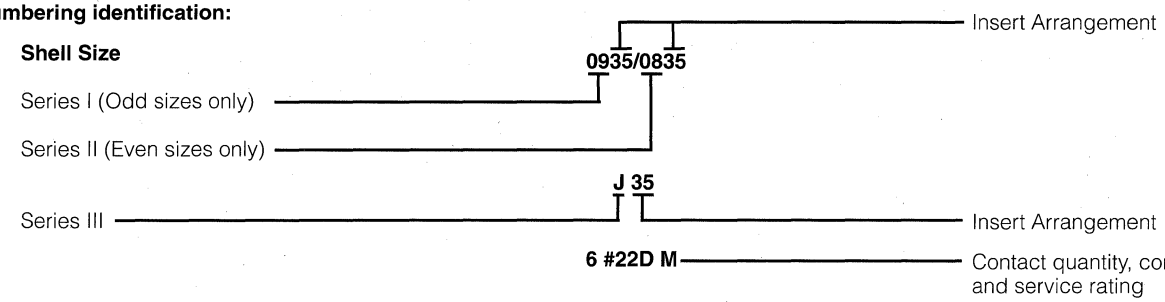
SOURCE: Catalog 82647

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

MIL-C-38999
Series I, II & III (Continued)

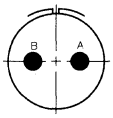
Insert Arrangements (Per MIL-STD-1560)

Numbering identification:

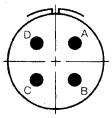


0935/0835
A35,
6 #22D M

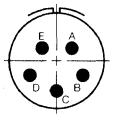
0998/0898
A98,
3 #20 I



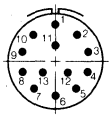
1102
B02,
2 #16 I



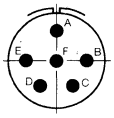
1104
B04,
4 #20 I



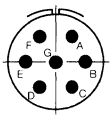
1105/1005
B05,
5 #20 I



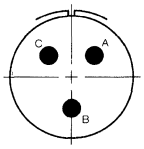
1135/1035
B35,
13 #22D M



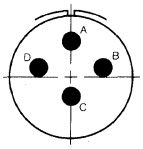
1198/1098
B98,
6 #20 I



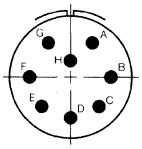
1199/1099
B99,
7 #20 I



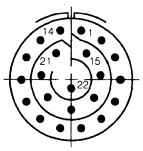
1203*
3 #16 II



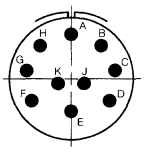
1304/1204
C04,
4 #16 I



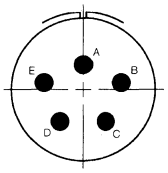
1308/1208
C08,
8 #20 I



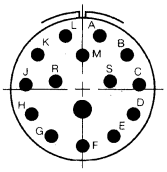
1335/1235
C35,
22 #22D M



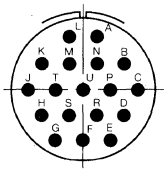
1398/1298
C98,
10 #20 I



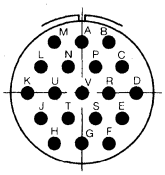
1505/1405
D05,
5 #16 II



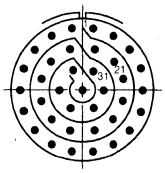
1515/1415
D15,
1 #16, 14 #20 I



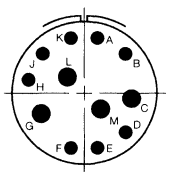
1518/1418
D18,
18 #20 I



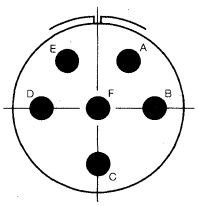
1519
D19,
19 #20 I



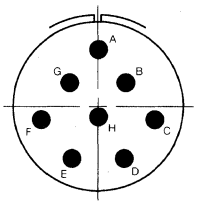
1535/1435
D35,
37 #22D M



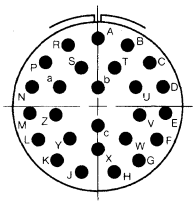
1597/1497
D97,
4 #16, 8 #20 I



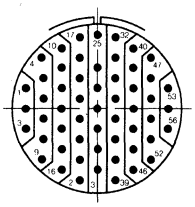
1706/1606
E06,
6 #12 I



1708/1608
E08,
8 #16 II



1726/1626
E26,
26 #20 I



1735/1635
E35,
55 #22D M

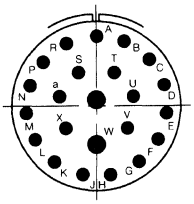
*Consult AMP for availability.
Note: Mating face of pin insert is shown. Socket insert is opposite.

SOURCE: Catalog 82647

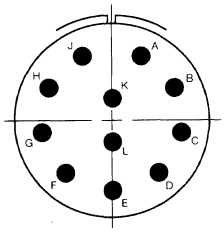
Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

MIL-C-38999
Series I, II & III (Continued)

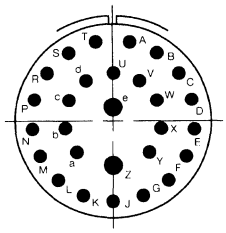
Insert Arrangements (Continued)



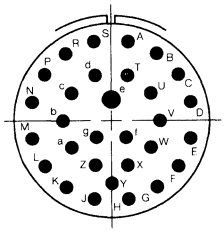
1799/1699
E99,
2 #16, 21 #20 I



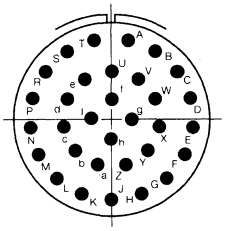
1911/1811
F11,
11 #16 II



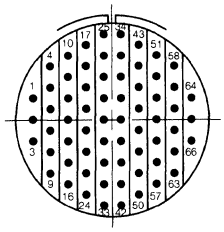
1928/1828*
F28,
2 #16, 26 #20 I



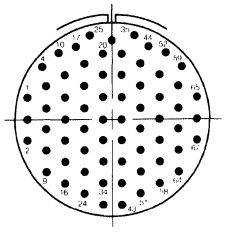
1930/1830
F 30,
1 #16, 29 #20 I



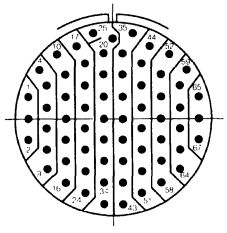
1932/1832
F32,
32 #20 I



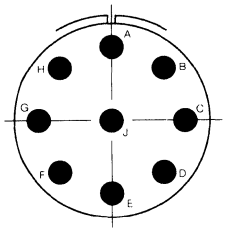
1935/1835
F35,
66 #22D M



1945*
F45,
67 #22D M



1845*
67 #22D M



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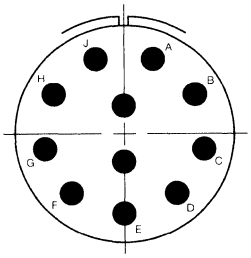
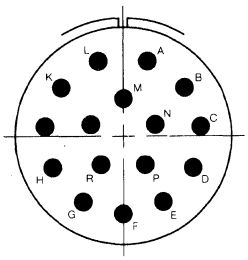
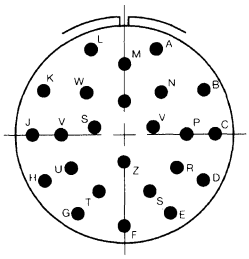
9 #12 I



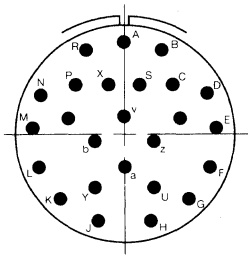
2111
G11,
11 #12 I



2116/2016
G16,
16 #16 II



2124/2024*
G24,
24 #20 I



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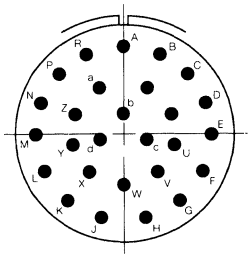
G25,
25 #20 I



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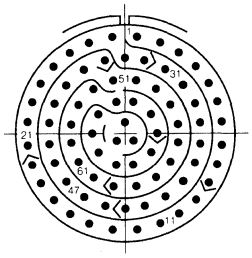
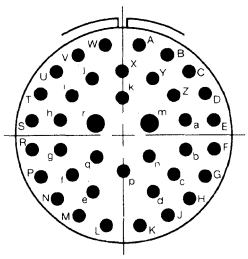
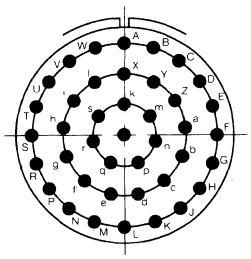
G27,
27 #20 I



2135/2035
G35,
79 #22D M



2139/2039
G39,
2 #16, 37 #20 I



2141/2041
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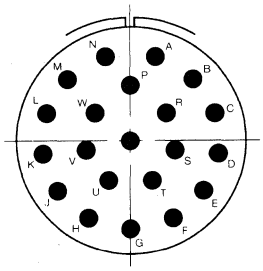
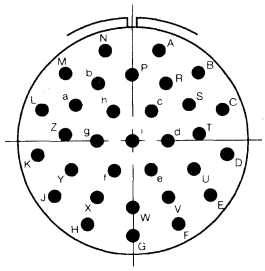
41 #20 I



2321/2221
H21,
21 #16 II



2332/2232
H32,
32 #20

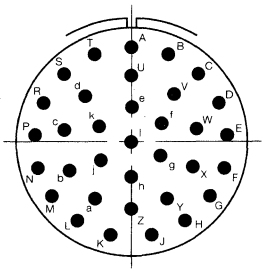
* Consult AMP for availability.
Note: Mating face of pin insert is shown. Socket insert is opposite.

SOURCE: Catalog 82647

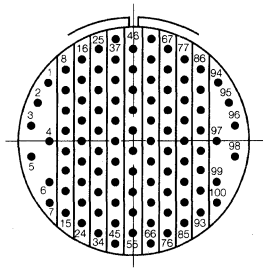
Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

MIL-C-38999
Series I, II & III (Continued)

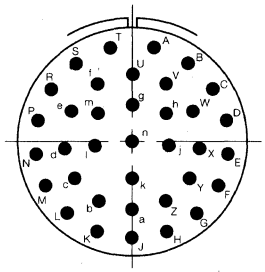
Insert Arrangements (Continued)



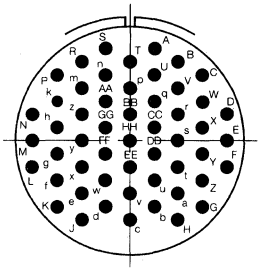
2334/2234*
H34,
34 #20 I



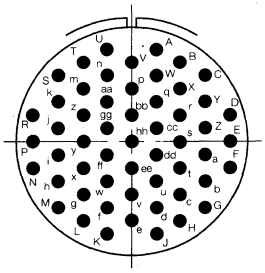
2335/2235
H35,
100 #22D M



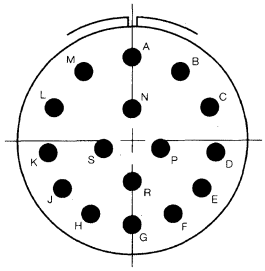
2336/2236*
H36,
36 #20 I



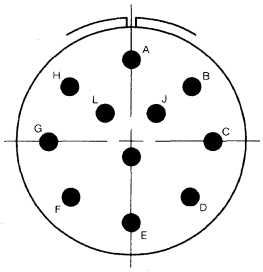
2353/2253
H53,
53 #20 I



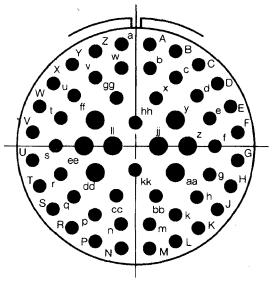
2355/2255
H55,
55 #20 I



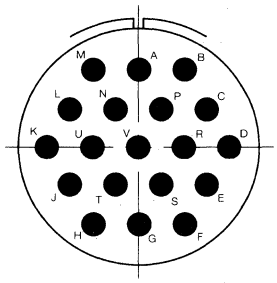
2397/2297*
H97,
16 #16 I



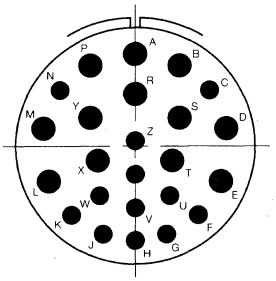
2399/2299*
H99,
11 #16 II



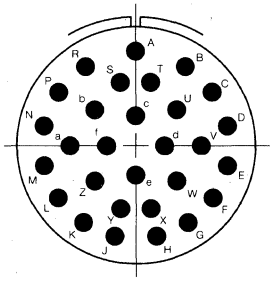
2504/2404
J04,
8 #16, 48 #20 I



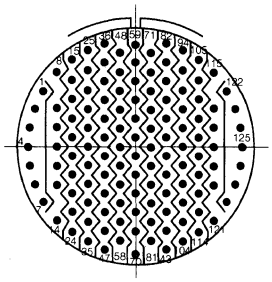
2519-2419
J19,
19 #12 I



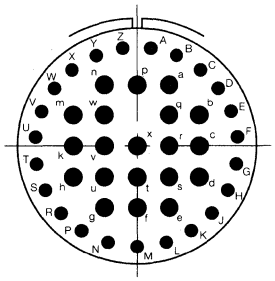
2524/2424
J24,
12 #12, 12 #16 I



2529/2429
J29,
29 #16 I



2535/2435
J35,
128 #22D M



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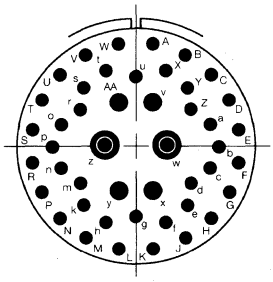
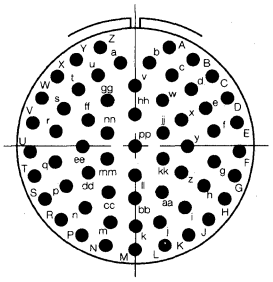
J43,
20 #16, 23 #20 I



2546
J46,
40 #20, 4 16, 2 #8 COAX

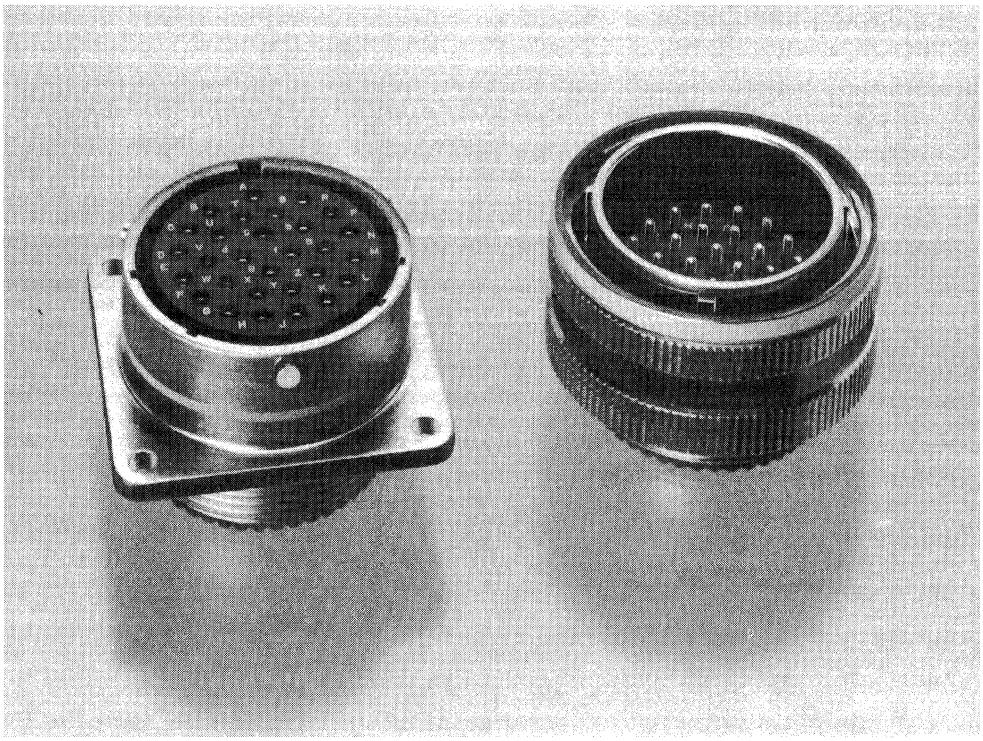


2561/2461
J61,
61 #20 I

* Consult AMP for availability.
Note: Mating face of pin insert is shown. Socket insert is opposite.

SOURCE: Catalog 82647

MIL-C-38999 Series I



Qualified to MIL-C-38999 Series I, these connectors are for general purpose, high density applications. They are available in shell sizes 9 through 25 with MIL-STD-1560 insert arrangements having up to 128 size 22D Contacts and a number of mixed contact arrangements.

This family of connectors is offered in a variety of receptacle mounting configurations. They include square flange receptacles, designed for front and rear wall mounting; square flange receptacles, designed for front and rear box mounting; and jam nut mounting receptacles which incorporate O-ring seals, designed for rear panel mounting in a "D" hole.

Plug connectors provide RFI protection for sensitive circuits by incorporating a continuous strip of positively attached grounding fingers attenuating interference up to 10 GHz.

These bayonet coupling connectors are inherently scoop-proof. Pins are recessed in elongated shells to prevent the possibility of bending contacts when a mating shell is scooped into the shell. Pin contact damage in non-scoop-proof connectors is commonly found in connectors installed in congested areas or in connector applications to semi-rigid harnesses.

Facilitating standardization, this connector family is offered with a range of contact sizes fully qualified to MIL-C-39029. Contact sizes 22D, 20, 16 and 12 permit the user to interconnect most circuits with wires ranging from 28 through 12 AWG [0.08 mm^2 through 3 mm^2]. These crimp contacts are inserted and extracted from the rear of the connector, requiring a minimum of tools which simplifies both initial fabrication and field maintenance.

Shell polarization to prevent cross-mating of adjacent connectors having identical insert arrangements is available by selecting shells having different master key/keyway locations.

Series I connectors are available in a broad range of shell materials and finishes. Aluminum shells have surface finishes of bright cadmium, olive drab cadmium, and electroless nickel. The olive drab cadmium finish is applied over a nickel underplate and meets the severe 500-hour salt spray exposure test of MIL-STD-1344. Also available are steel passivated shells suitable for exposure to severe corrosive atmospheres and for rough handling applications.

SOURCE: Catalog 82647

Specifications subject to change.
1-800-522-6752 Product Information Center/ AMP FAX Service
1-800-722-1111 Tooling/Technical Assistance Center

MIL-C-38999
Series I (Continued)

Performance Specifications

Voltage Rating

Altitude		Service Rating		
ft.	m	M	I	II
Sea Level	—	1300	1800	2300
50,000	15 240	800	1000	1000
70,000	21 336	800	1000	1000
100,000	30 480	800	1000	1000

Contact Current Rating and Retention

Contact Size*	Current Rating	Contact Retention	
	DC Test Amperage	Axial Load	
		lb	N
22D	5.0	10	44.5
20	7.5	15	66.7
16	13.0	25	111.2
12	23.0	25	111.2

*Organize individual circuits to maintain heat rise within operating temperature requirements.

Operating Temperature Range
-65°C to +200°C [-85°F to +392°F]

Durability
Minimum of 500 mating cycles.

Shock and Vibration Requirements
When tested as follows the connector shall sustain no physical damage or electrical discontinuity exceeding 1 microsecond.

MB91 Standard Shock
Pulse of an approximate half sine wave of 300 G magnitude with duration of 3 milliseconds applied in three axes.

MB91 High Impact Shock
When mounted as specified in MIL-S-901, Grade A, a drop of a 400 lb. hammer from 1 foot, 3 feet and 5 feet applied to connector in three axes, totaling nine impacts.

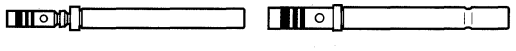
Vibration

Sine:
Frequency range of 10 to 2000 Hz, in 20 minute sweeps, in 3 axes, with the following variations:
- Duration: 12 hours total, 4-hour cycles.
- Level: Displacement of .06 [1.5] (10-100 Hz) and acceleration of 30 Gs peak (100-2000 Hz) at ambient room temperature.

Random
-(without simulated accessory load): 49.5 Gs RMS for 8 hours in two axes, totaling 16 hours at ambient temperature.

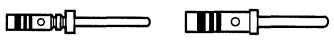
RFI & EMI
RFI & EMI attenuation at the specified frequency meet the requirements of MIL-C-38999.
RFI shielding effectiveness of mated connectors with RFI backshells is measured in a triaxial radio frequency leakage fixture.
EMI shielding effectiveness is measured at the interface of mated connectors and tested by the MODE STIR procedure specified in method 3008 of MIL-STD-1344.

Contacts, Sealing Plugs and Assembly Tools



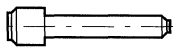
Size 22D & 20 — Size 16 & 12

Socket Contact



Size 22D & 20 — Size 16 & 12

Pin Contact



Sealing Plug

Contact Size	Wire Range		Socket Contacts		Pin Contacts		Sealing Plugs	
	AWG	mm²	Military Part No.	MATRIX Part No.	Military Part No.	MATRIX Part No.	Military Part No.	MATRIX Part No.
22D	28-22	0.08-0.4	M39029/56-348	5100-101-0122	M39029/58-360	5000-068-0022	MS27488-22	3400-043-0022
20	24-20	0.2-0.6	M39029/56-351	5100-101-0120	M39029/58-363	5000-068-0020	MS27488-20	3400-043-0020
16	20-16	0.5-1.4	M39029/56-352	5100-101-0116	M39029/58-364	5000-068-0016	MS27488-16	3400-043-0016
12	14-12	2-3	M39029/56-353	5100-101-0112	M39029/58-365	5000-068-0012	MS27488-12	3400-043-0012

Crimping Tools

Contact Size	Wire Range		Finished Wire Dia. Range		Contact Type	Military Part No.	
	AWG	mm²	inch	mm		Crimping Tool	Turret or Positioner
22D	28-22	0.08-0.4	.030-.054	0.76-1.37	P	M22520/2-01	M22520/2-09
					S	M22520/2-01	M22520/2-07
20	24-20	0.2-0.6	.040-.083	1.02-2.11	P&S	M22520/1-01	M22520/1-04
16	20-16	0.5-1.4	.065-.109	1.34-2.62	P&S	M22520/1-01	M22520/1-04
12	14-12	2-3	.097-.142	2.46-4.01	P&S	M22520/1-01	M22520/1-04

Insertion/Extraction Tools

Contact Size	Color Code	Military Part No.	MATRIX Part No.
22D	Gr./Wh.	M81969/14-01	6500-048-0022
20	Rd./Wh.	M81969/14-10	6500-055-0020
16	Bl./Wh.	M81969/14-03	6500-001-0016
12	Yel./Wh.	M81969/14-04	6500-001-0012

Note: Each connector is furnished with contacts. One spare for inserts requiring 1 to 26 of each contact and two spares for inserts with more than 26 contacts and a minimum of one sealing plug up to 10% of the number of contacts.

SOURCE: Catalog 82647

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

MIL-C-38999
Series I (Continued)

Military Part Number System

MS27466 T 25 F 35 P *

- **Shell Keying Position** (Not required for normal)
- **Contact Style** P = Pin S = Socket
- **Insert Arrangement**
- **Finish**
  - A = Aluminum, bright cadmium over nickel, -65 °C to +150°C
  - B = Aluminum, olive drab cadmium over nickel, -65°C to +175°C
  - D = Carbon steel, fused tin, -65°C to 200°C (hermetically sealed versions only, consult Matrix Science Corporation)
  - E = Stainless Steel, passivated, -65°C to +200°C
  - F = Aluminum, electroless nickel, -65°C to +200°C
  - N = Stainless steel, electro-deposited nickel, -65°C to +200°C (for environmental or hermetically sealed versions, consult Matrix Science Corporation)
- **Shell Size** (odd numbers only, 9 thru 25)
- **Class**
  - T = Environmental with accessory threads and teeth (not available in box mount versions)
  - E = Environmental
  - Y = Hermetically sealed (Consult Matrix Science Corporation)
- **MS Number**

MATRIX Part Number System

MB91 0 T 25 F 35 P * *

- **Modification Number** (Consult Matrix Science Corporation)
- **Shell Keying Position** (Not required for normal)
- **Contact Style** P = Pin S = Socket
- **Insert Arrangement**
- **Finishes**
  - A = Aluminum, bright cadmium over nickel, -65°C to +150°C
  - B = Aluminum, olive drab cadmium over nickel, -65°C to +175°C
  - D = Carbon steel, fused tin, -65°C to 200°C (hermetically sealed versions only, consult Matrix Science Corporation)
  - E = Stainless steel, passivated, -65°C to +200°C
  - F = Aluminum, electroless nickel, -65°C to +200°C
  - N = Stainless steel, electro-deposited nickel, -65°C to +200°C (for environmental or hermetically sealed versions, consult Matrix Science Corporation)
- **Shell Size** (odd numbers only, 9 thru 25)
- **Class**
  - T = Environmental with accessory threads and teeth (not available in box mount versions)
  - E = Environmental
  - Y = Hermetically sealed (Consult Matrix Science Corporation)
- **Configuration**
  - 0 = Receptacle, square flange
  - 1 = Receptacle, square flange, rear mount
  - 2 = Receptacle, box mount
  - 3 = Receptacle, box mount, rear mount
  - 4 = Receptacle, jam nut mounting
  - 8 = Plug, RFI (finish A, B, E, F, only)
- **Matrix Science Corporation, bayonet coupling, 38999 Series I**

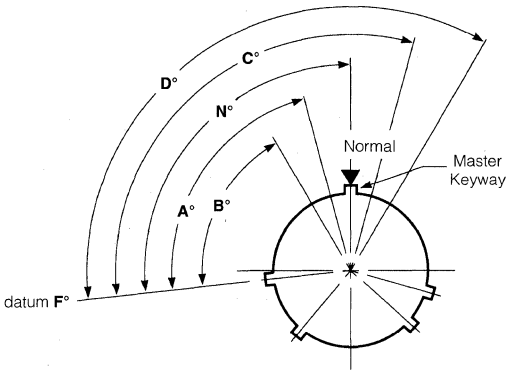
SOURCE: Catalog 82647

Specifications subject to change.
1-800-522-6752 Product Information Center/ AMP FAX Service
1-800-722-1111 Tooling/Technical Assistance Center

MIL-C-38999
Series I (Continued)

Polarization

Keying Positions



Notes:

1. For shell polarization the master key has various positions relative to datum F; the minor keys remain fixed as shown. In the Normal position, the master key is 95° from F.

2. Mating face of receptacle is shown. Plug is opposite.

Shell Size	Keying Positions					Service Rating
	N°	A°	B°	C°	D°	
9	95	77	–	–	113	Refer to Insert Arrangement captions Pages 2134-2136
11	95	81	67	123	109	
13	95	75	63	127	115	
15	95	74	61	129	116	
17	95	77	65	125	113	
19	95	77	65	125	113	
21	95	77	65	125	113	
23	95	80	69	121	110	
25	95	80	69	121	110	

Specifications subject to change.
1-800-522-6752 Product Information Center/ AMP FAX Service
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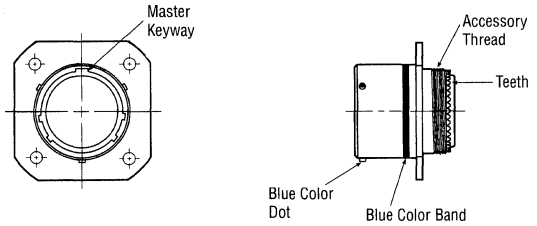
MIL-C-38999
Series I (continued)

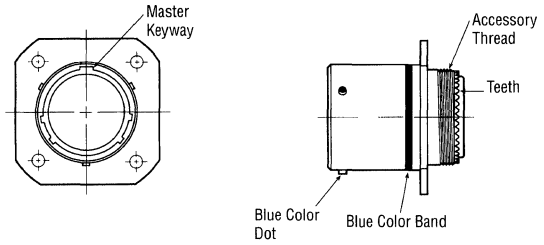
Shell Size:

9
11
13
15
17
19
21
23
25

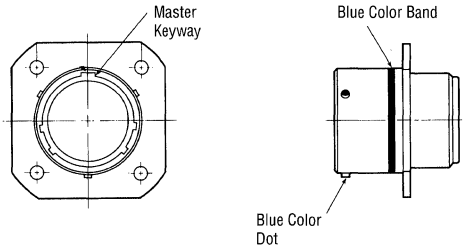
Receptacle Shell, Flange Wall Mount, Bayonet Coupling
Military No. MS27466
MATRIX No. MB910



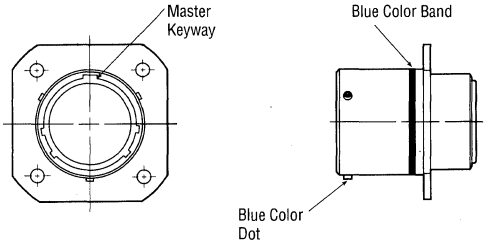
Receptacle Shell, Flange Rear Wall Mount, Bayonet Coupling
Military No. MS27656
MATRIX No. MB911



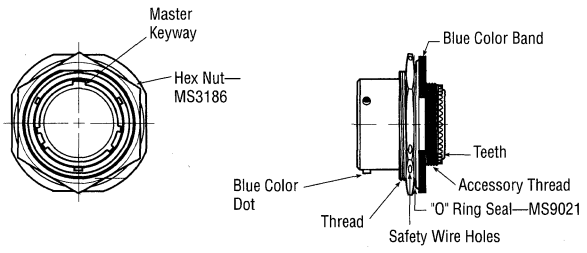
Receptacle Shell, Flange Box Mount, Bayonet Coupling
Military No. MS27496
MATRIX No. MB912



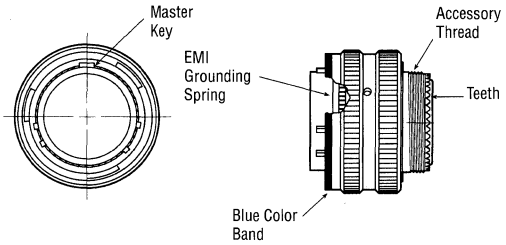
Receptacle Shell, Flange Rear Box Mount, Bayonet Coupling
Military No. MS27505
MATRIX No. MB913



Receptacle Shell, Jam Nut Mount, Bayonet Coupling
Military No MS27468
MATRIX No. MB914



Plug Shell, EMI Grounding, Bayonet Coupling
Military No. MS27467
MATRIX No. MB918



SOURCE: Catalog 82647

Specifications subject to change.

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1-800-722-1111
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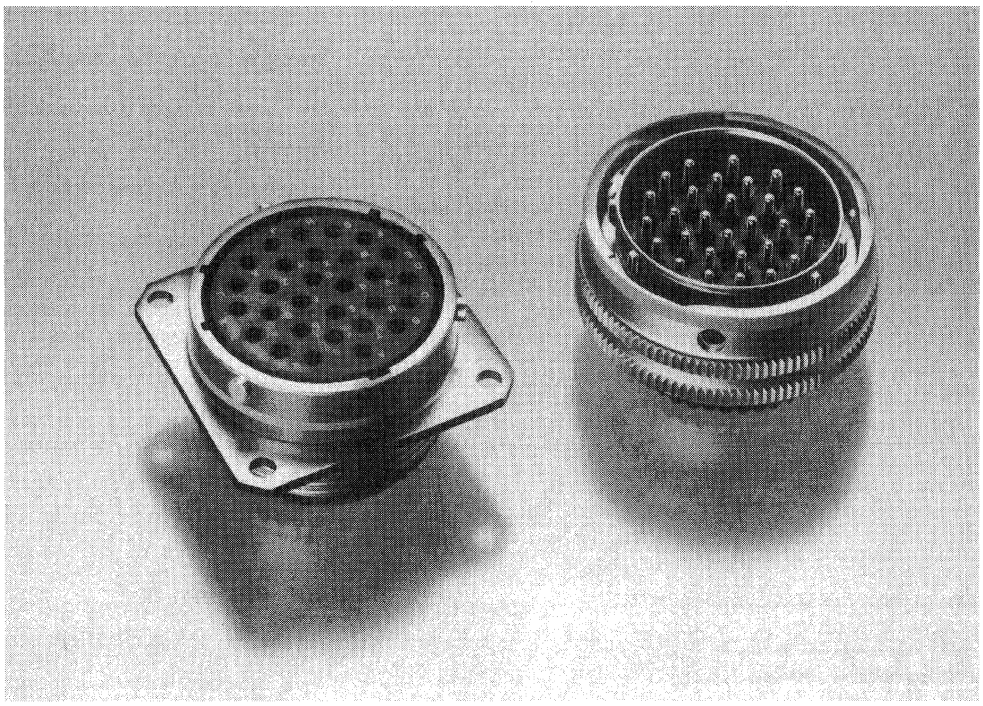
MIL-C-38999 Series II



MIL-C-38999 Series II connectors find considerable use in major military applications where the prime requirements are low profile and light weight. Compared to Series I, the bayonet coupling Series II connectors achieve up to 20% reduction in mated pair length and the outside diameter is 39% smaller. In weight, the 128 contact mated pair is approximately 40% lighter.

The reduction in both size and weight were achieved through the use of thinner shell walls and length restrictions. These design parameters reduced the RFI attenuation characteristics and the "scoop" protection, but yielded an excellent general purpose, lightweight connector.

These connectors are offered with a range of contact sizes fully qualified to MIL-C-39029.

Size 22D, 20, 16 and 12 contacts permit the user to interconnect circuits with wires ranging from 28 through 12 AWG [0.08 mm^2 through 3 mm^2]. These rear insertion and extraction type contacts offer tool commonality with all other MIL-C-38999 series connector contacts.

Series II connectors are available in shell sizes 8 through 24 with MIL-STD-1560 insert arrangements. They offer a variety of receptacle mounting configurations which include a square flange, designed for front and rear wall mounting; a box mount, designed for front and rear mounting that requires a minimum of box intrusion; and a jam nut mount, which incorporates an O-ring seal designed for rear panel mounting in a "D" hole.

Shell polarization is available by selecting shells having different master key/keyway locations.

Plug connectors are available in two designs, with and without RFI grounding. The RFI plugs provide a minimum of 500 dB shielding attenuation from 100 MHz to 1 GHz.

A broad range of shell materials and finishes are available. Aluminum shells have surface finishes of bright cadmium, olive drab cadmium and electroless nickel. The olive drab cadmium finish is applied over nickel underplate and meets the severe 500-hour salt spray exposure test of MIL-STD-1344. Also available are stainless steel passivated shells particularly suitable for exposure to severe corrosive atmospheres and for rough handling applications.

Specifications subject to change.
1-800-522-6752 Product Information Center/ AMP FAX Service
1-800-722-1111 Tooling/Technical Assistance Center

MIL-C-38999
Series II (Continued)

Performance Specifications

Voltage Rating

Altitude		Service Rating		
ft.	m	M	I	II
Sea Level	-	1300	1800	2300
50,000	15 240	800	1000	1000
70,000	21 336	800	1000	1000
100,000	30 480	800	1000	1000

Contact Current Rating and Retention

Contact Size*	Current Rating	Contact Retention	
	DC Test Amperage	Axial Load	
		lb	N
22D	5.0	10	44.5
20	7.5	15	66.7
16	13.0	25	111.2
12	23.0	25	111.2

*Organize individual circuits to maintain heat rise within operating temperature requirements.

Operating Temperature Range
-65°C to +200°C [-85°F to +392°F]

Durability
Minimum of 500 mating cycles.

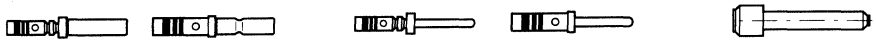
Shock and Vibration Requirements
When tested as follows the connector shall sustain no physical damage or electrical discontinuity exceeding 1 microsecond.

Standard Shock
Pulse of an approximate half sine wave of 300 g magnitude with duration of 3 milliseconds applied in three axes.

Random Vibration
MB92 - (without simulated accessory load): 41.7 G RMS for 8 hours in two axes, totaling 16 hours at ambient temperature.

RFI & EMI (Except finish C)
RFI & EMI attenuation at the specified frequency meet the requirements of MIL-C-38999.
RFI shielding effectiveness of mated connectors with RFI backshells is measured in a triaxial radio frequency leakage fixture.

Contacts, Sealing Plugs and Assembly Tools



Size 22D & 20 | Size 16 & 12 — Socket Contact

Size 22D & 20 | Size 16 & 12 — Pin Contact

Sealing Plug

Contact Size	Wire Range		Socket Contacts		Pin Contacts		Sealing Plugs	
	AWG	mm²	Military Part No.	MATRIX Part No.	Military Part No.	MATRIX Part No.	Military Part No.	MATRIX Part No.
22D	28-22	0.08-0.4	M39029/57-354	5100-101-0022	M39029/58-360	5000-068-0022	MS27488-22	3400-043-0022
20	24-20	0.2-0.6	M39029/57-357	5100-101-0020	M39029/58-363	5000-068-0020	MS27488-20	3400-043-0020
16	20-16	0.5-1.4	M39029/57-358	5100-101-0016	M39029/58-364	5000-068-0016	MS27488-16	3400-043-0016
12	14-12	2-3	M39029/57-359	5100-101-0012	M39029/58-365	5000-068-0012	MS27488-12	3400-043-0012

Crimping Tools

Contact Size	Wire Range		Finished Wire Dia. Range		Contact Type	Military Part No.	
	AWG	mm²	inch	mm		Crimping Tool	Turret or Positioner
22D	28-22	0.08-0.4	.030-.054	0.76-1.37	P	M22520/2-01	M22520/2-09
					S	M22520/2-01	M22520/2-07
20	24-20	0.2-0.6	.040-.083	1.02-2.11	P&S	M22520/1-01	M22520/1-04
16	20-16	0.5-1.4	.065-.109	1.34-2.62	P&S	M22520/1-01	M22520/1-04
12	14-12	2-3	.097-.142	2.46-4.01	P&S	M22520/1-01	M22520/1-04

Note: Each connector is furnished with contacts. One spare for inserts requiring 1 to 26 of each contact and two spares for inserts with more than 26 contacts and a minimum of one sealing plug up to 10% of the number of contacts.

Insertion/Extraction Tools

Contact Size	Color Code	Military Part No.	MATRIX Part No.
22D	Gr./Wh.	M81969/14-01	6500-048-0022
20	Rd./Wh.	M81969/14-10	6500-055-0020
16	Bl./Wh.	M81969/14-03	6500-001-0016
12	Yel./Wh.	M81969/14-04	6500-001-0012

SOURCE: Catalog 82647

Specifications subject to change.

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1-800-722-1111
Tooling/Technical Assistance Center

MIL-C-38999
Series II (Continued)

Military Part Number System

MS27472 T 24 F 35 P *

- **Shell Keying Position** (Not required for normal)
- **Contact Style** P = Pin S = Socket
- **Insert Arrangement**
- **Finish**
  - A = Aluminum, bright cadmium over nickel, -65°C to +150°C
  - B = Aluminum, olive drab cadmium over nickel. -65°C to +175°C
  - D = Carbon steel, fused tin, -65°C to 200°C (hermetically sealed versions only, consult AMP)
  - E = Stainless steel, passivated, -65°C to +200°C
  - F = Aluminum, electroless nickel, -65°C to +200°C
  - N = Stainless steel, electro-deposited nickel, -65°C to +200°C (for environmental or hermetically sealed versions, consult Matrix Science Corporation)
- **Shell Size** (even numbers only, 8 thru 24)
- **Class**
  - T = Environmental with accessory threads and teeth
  - E = Environmental with backshell (box mount version) have no accessory threads and are provided less backshell)
  - Y = Hermetically sealed (Consult Matrix Science Corporation)
- **MS Number**

MATRIX Part Number System

MB92 0 T 24 F 35 P * *

- **Modification Number** (Consult Matrix Science Corporation)
- **Shell Keying Position** (Not required for normal)
- **Contact Style** P = Pin S = Socket
- **Insert Arrangement**
- **Finishes**
  - A = Aluminum, bright cadmium over nickel, -65°C to +150°C
  - B = Aluminum, olive drab cadmium over nickel. -65°C to +175°C
  - C = Aluminum, anodized (non-conductive), -65°C to +200°C
  - D = Carbon steel, fused tin, -65°C to 200°C (hermetically sealed versions only, consult Matrix Science Corporation)
  - E = Stainless steel, passivated, -65°C to +200°C
  - F = Aluminum, electroless nickel, -65°C to +200°C
  - N = Stainless steel, electro-deposited nickel, -65°C to +200°C (for environmental or hermetically sealed versions, consult Matrix Science Corporation)
- **Shell Size** (even numbers only, 8 thru 24)
- **Class**
  - T = Environmental with accessory threads and teeth (except box mount versions, since box mount and extended grommet versions have no accessory threads and are provided less backshell)
  - E = SEE NOTATION BELOW
  - Y = Hermetically sealed (Consult Matrix Science Corporation)

  Note: Military Class E (except box mount versions) are provided by MATRIX Class T with Modification Number 189
- **Configuration**
  - 0 = Receptacle, square flange
  - 1 = Receptacle, square flange, rear mount
  - 2 = Receptacle, box mount
  - 3 = Receptacle, box mount, rear mount
  - 4 = Receptacle, jam nut mounting
  - 5 = Receptacle, box mount, rear mount (extended grommet)
  - 6 = Plug, standard
  - 8 = Plug, RFI (finish A, B, E, F, only)
- **Matrix Science Corporation, bayonet coupling, 38999 Series II**

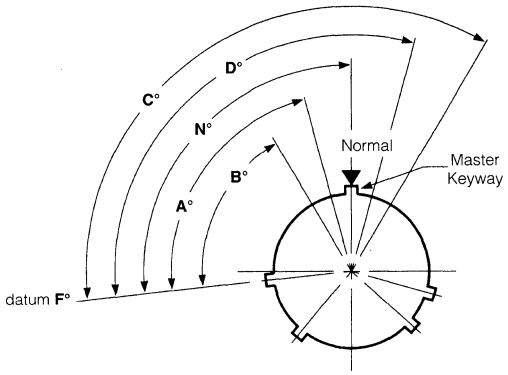
SOURCE: Catalog 82647

Specifications subject to change.
1-800-522-6752 Product Information Center/ AMP FAX Service
1-800-722-1111 Tooling/Technical Assistance Center

MIL-C-38999
Series II (Continued)

Polarization

Keying Positions



Notes:

1. For shell polarization the master key has various positions relative to datum F; the minor keys remain fixed as shown. In the Normal position, the master key is 100° from F.

2. Mating face of receptacle shown. Plug is opposite.

Shell Size	Keying Positions					Service Rating
	N°	A°	B°	C°	D°	
8	100	82	–	–	118	Refer to Insert Arrangement captions Pages 2134-2136
10	100	86	72	128	114	
12	100	80	68	132	120	
14	100	79	66	134	121	
16	100	82	70	130	118	
18	100	82	70	130	118	
20	100	82	70	130	118	
22	100	85	74	126	115	
24	100	85	74	126	115	

SOURCE: Catalog 82647

Specifications subject to change.

1-800-522-6752
Product Information Center/ AMP FAX Service

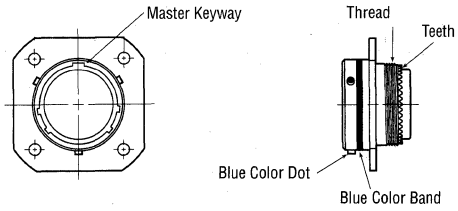
1-800-722-1111
Tooling/Technical Assistance Center

MIL-C-38999
Series II (Continued)

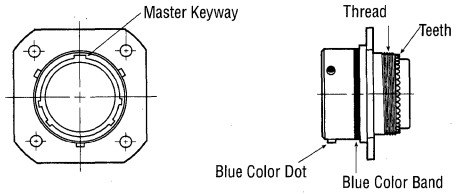
Shell Size:

8
10
12
14
16
18
20
22
24

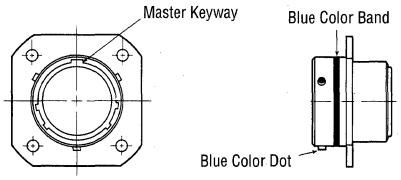
Receptacle Shell, Flange Wall Mount, Bayonet Coupling
Military No. MS27472
MATRIX No. MB920



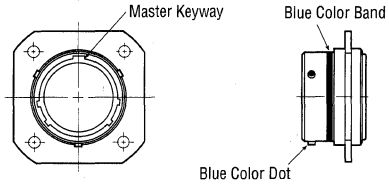
Receptacle Shell, Flange Rear Wall Mount, Bayonet Coupling
Military No. MS27497
MATRIX No. MB921



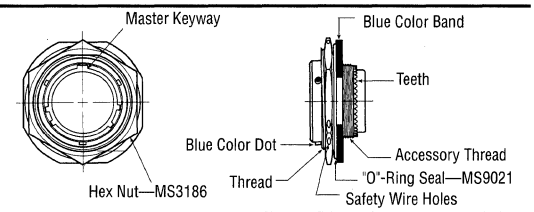
Receptacle Shell, Flange Box Mount, Bayonet Coupling
Military No. MS27499
MATRIX No. MB922



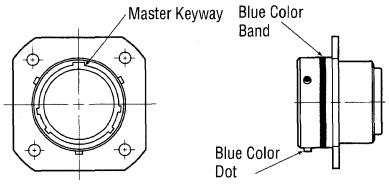
Receptacle Shell, Flange Rear Box Mount, Bayonet Coupling
Military No. MS27508
MATRIX No. MB923



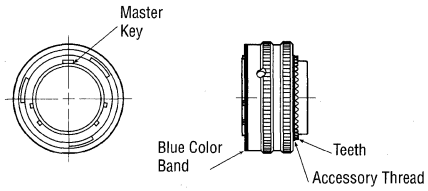
Receptacle Shell, Jam Nut Mount, Bayonet Coupling
Military No. MS27474
MATRIX No. MB924



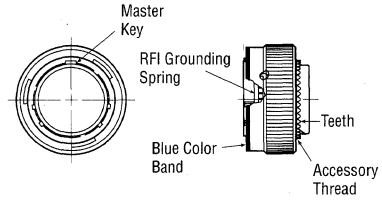
Receptacle Shell, Flange Rear Mount, Bayonet Coupling, Extended Grommet
Military No. MS27513
MATRIX No. MB925



Plug Shell, Bayonet Coupling
Military No. MS27473
MATRIX No. MB926



Plug Shell, RFI Grounding, Bayonet Coupling
Military No. MS27484
MATRIX No. MB928

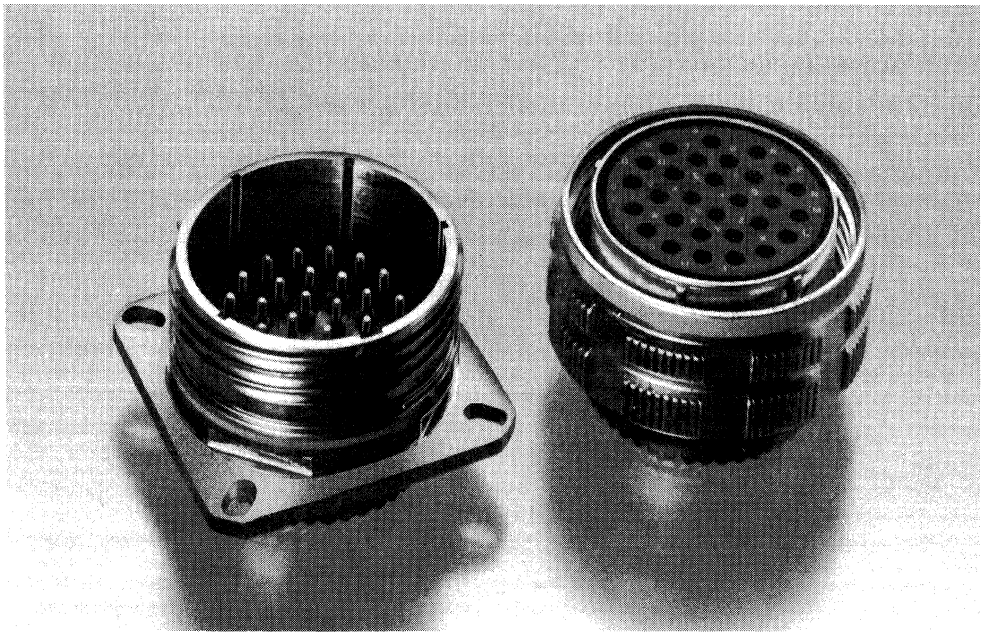


SOURCE: Catalog 82647

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

MIL-C-38999 Series III

METRIC



Severe environments encountered in modern commercial and military aircraft require connectors whose performance is improved over that provided by general purpose bayonet coupling connectors. Threaded coupling connectors have been available but lack the quick disconnect feature of the bayonet connector. An improved threaded connector has been developed by Matrix Science Corporation and qualified to MIL-C-38999 Series III. It provides "one turn" coupling and disconnect through the use of a self-locking acme thread, while still meeting the new environmental stress requirements.

The acronym SWAMP is defined by SAE as Severe Wind and Moisture Problems. Increasingly, modern aircraft are encountering these conditions in wheel wells, engine nacelles and wing tips. SWAMP includes exposure to extreme vibration, shock, fluids, sand dust, and both atmospheric and runway salts. The Series III connector was designed to perform under these conditions.

These connectors feature positive metal-to-metal bottoming, precluding relative shell-to-shell motion which may result in ordinary connector wear or moisture entrapment.

Matrix Science has pioneered the development of self-locking connectors in both MIL-C-5015 and MIL-C-83723 which do away with the need for safety wiring. The unique, patented, ratcheting device is the next generation of self-lockers. Being a simple, integral design, it is inherently superior to ball-and-spring, and tang-lock designs.

These connectors are offered in square flange (front and rear mount) and jam nut mount receptacles. All plugs provide EMI/RFI shielding up to 10 GHz through use of positive shell-to-shell annular spring fingers.

MIL-C-38999 Series III connectors have insert pattens and contacts common to MIL-C-38999 Series I, making for an easy transition from bayonet to the triple-lead, acme-thread, self-locking coupling.

The rear accessory threads are **metric,** as specified in MIL-C-38999. This results in additional wall thickness, giving greater strength and shock resistance. This is particularly important when heavier or shielded backshells are required for particular applications.

SOURCE: Catalog 82647

Specifications subject to change.
1-800-522-6752 Product Information Center/ AMP FAX Service
1-800-722-1111 Tooling/Technical Assistance Center

MIL-C-38999
Series III (Continued)

METRIC

Performance Specifications

Voltage Rating

Altitude		Service Rating		
ft.	m	M	I	II
Sea Level	-	1300	1800	2300
50,000	15 240	800	1000	1000
70,000	21 336	800	1000	1000
100,000	30 480	800	1000	1000

Contact Current Rating and Retention

Contact Size*	Current Rating	Contact Retention	
	DC Test Amperage	Axial Load	
		lb	N
22D	5.0	10	44.5
20	7.5	15	66.7
16	13.0	25	111.2
12	23.0	25	111.2

*Organize individual circuits to maintain heat rise within operating temperature requirements.

Operating Temperature Range
-65°C to +200°C [-85°F to +392°F]

Durability
Minimum of 500 mating cycles.

Shock and Vibration Requirements
When tested as follows the connector shall sustain no physical damage or electrical discontinuity exceeding 1 microsecond.

MT93 Standard Shock
Pulse of an approximate half sine wave of 300 G magnitude with duration of 3 milliseconds applied in three axes.

MT93 High Impact Shock
When mounted as specified in MIL-S-901, Grade A, a drop of a 400 lb. hammer from 1 foot, 3 feet and 5 feet applied to connector in three axes, totaling nine impacts.

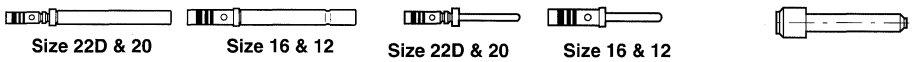
Vibration

Sine
Frequency range of 10 to 2000 Hz, in 20 minute sweeps, in 3 axes, with the following variations: (with simulated accessory load)
- Duration: 36 hours total, 12-hour cycles.
- Levels: Velocity of 10 in. per second (10-50 Hz); displacement of 0.06 [1.5] (50-140 Hz) and acceleration of 60 Gs peak (140-2000 Hz) 4 hours of each axis at room ambient -55°C and +200°C

Random
-(without simulated accessory load): 41.7 Gs RMS for 8 hours in two axes, totaling 16 hours at ambient temperature.
-(with simulated accessory load): 49.5 Gs RMS for 8 hours in two axes, totaling 16 hours at 200°C.

RFI & EMI
RFI & EMI attenuation at the specified frequency meet the requirements of MIL-C-38999.
RFI shielding effectiveness of mated connectors with RFI backshells is measured in a triaxial radio frequency leakage fixture.
EMI shielding effectiveness is measured at the interface of mated connectors and tested by the MODE STIR procedure specified in method 3008 of MIL-STD-1344.

Contacts, Sealing Plugs and Assembly Tools



Socket Contact | Pin Contact | Sealing Plug

Contact Size	Wire Range		Socket Contacts		Pin Contacts		Sealing Plugs	
	AWG	mm²	Military Part No.	MATRIX Part No.	Military Part No.	MATRIX Part No.	Military Part No.	MATRIX Part No.
22D	28-22	0.08-0.4	M39029/56-348	5100-101-0122	M39029/58-360	5000-068-0022	MS27488-22	3400-043-0022
20	24-20	0.2-0.6	M39029/56-351	5100-101-0120	M39029/58-363	5000-068-0020	MS27488-20	3400-043-0020
16	20-16	0.5-1.4	M39029/56-352	5100-101-0116	M39029/58-364	5000-068-0016	MS27488-16	3400-043-0016
12	14-12	2-3	M39029/56-353	5100-101-0112	M39029/58-365	5000-068-0012	MS27488-12	3400-043-0012

Crimping Tools

Contact Size	Wire Range		Finished Wire Dia. Range		Contact Type	Military Part No.	
	AWG	mm²	inch	mm		Crimping Tool	Turret or Positioner
22D	28-22	0.08-0.4	.030-.054	0.76-1.37	P	M22520/2-01	M22520/2-09
					S	M22520/2-01	M22520/2-07
20	24-20	0.2-0.6	.040-.083	1.02-2.11	P&S	M22520/1-01	M22520/1-04
16	20-16	0.5-1.4	.065-.109	1.34-2.62	P&S	M22520/1-01	M22520/1-04
12	14-12	2-3	.097-.142	2.46-4.01	P&S	M22520/1-01	M22520/1-04

Note: Each connector is furnished with contacts. One spare for inserts requiring 1 to 26 of each contact and two spares for inserts with more than 26 contacts and a minimum of one sealing plug up to 10% of the number of contacts.

Insertion/Extraction Tools

Contact Size	Color Code	Military Part No.	MATRIX Part No.
22D	Gr./Wh.	M81969/14-01	6500-048-0022
20	Rd./Wh.	M81969/14-10	6500-055-0020
16	Bl./Wh.	M81969/14-03	6500-001-0016
12	Yel./Wh.	M81969/14-04	6500-001-0012

SOURCE: Catalog 82647

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

MIL-C-38999
Series III (Continued)

METRIC

Military Part Number System

D38999/ 20 F B 35 P *

- **Shell Keying Position** (Use N for normal)
- **Contact Style** P = Pin S = Socket
- **Insert Arrangement**
- **Shell Size Code**
  A = 9 C = 13 E = 17 G = 21 J = 25
  B = 11 D = 15 F = 19 H = 23
- **Class**
  F = Aluminum, electroless nickel plating, -65°C to +200°C
  *J = Composite, olive drab cadmium plate -65°C to +175°C
  K = Stainless steel, passivated
  *M = Composite, electroless nickel plating, -65°C to +200°C
  S = Stainless steel, electro-deposited nickel, -65°C to +200°C
  W = Aluminum, olive drab cadmium plate, -65°C to +175°C (Extended salt spray)
  Y = Hermetically sealed, stainless steel, passivated, -65°C to +200°C (Consult Matrix Science Corporation)
- **Shell Style**
  20 = Wall mount receptacle
  21 = Box Mount receptacle, hermetic
  23 = Jam nut receptacle, hermetic
  24 = Jam nut receptacle
  25 = Solder mount receptacle, hermetic
  26 = Plug, RFI
  27 = Weld mount receptacle, hermetic
- **MS Number**

MATRIX Part Number System

MT93 0 T 11 F 35 P * *

- **Modification Number** (Consult Matrix Science Corporation)
- **Shell Keying Position** (Not required for normal)
- **Contact Style** P = Pin S = Socket
- **Insert Arrangement**
- **Finishes**
  B = Aluminum, olive drab cadmium plating, -65°C to +175°C
  F = Aluminum electroless nickel, -65°C to +200°C
  *J = Composite, olive drab cadmium plate -65°C to +175°C
  K = Stainless steel, passivated
  *M = Composite, electroless nickel plating, -65°C to +200°C
  S = Stainless steel electro-deposited nickel, -65°C to +200°C
- **Shell Sizes** (odd numbers only, 9 thru 25)
- **Class**
  T = Environmental
  Y = Hermetically sealed (Consult Matrix Science Corporation)
- **Configurations**
  0 = Receptacle, wall mount
  4 = Receptacle, jam nut
  8 = Plug, RFI
- **Matrix Science Corporation, thread coupling, 38999 Series III**

*Consult AMP for availability and dimensional data.

SOURCE: Catalog 82647

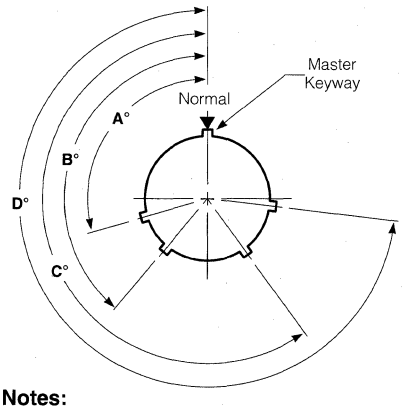
Specifications subject to change.
1-800-522-6752 Product Information Center/ AMP FAX Service
1-800-722-1111 Tooling/Technical Assistance Center

MIL-C-38999
Series III (Continued)

METRIC

Polarization

Keying Positions



Notes:

1. All minor keys are rotated to provide shell polarization: the master key remains fixed as shown.
2. Mating face of receptacle is shown. Plug is opposite.

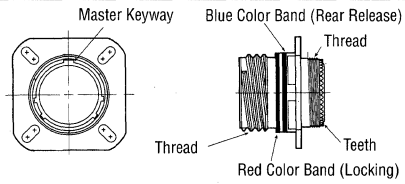
Shell Size	Polarizing Positions	Key Locations A°	B°	C°	D°	Service Rating
9	N	105	140	215	265	Refer to Insert Arrangement Captions Pages 2134-2136
	A	102	132	248	320	
	B	80	118	230	312	
	C	35	140	205	275	
	D	64	155	234	304	
	E	91	131	197	240	
11 thru 15	N	95	141	208	236	
	A	113	156	182	292	
	B	90	145	195	252	
	C	53	156	220	255	
	D	119	146	176	298	
	E	51	141	184	242	
17 thru 25	N	80	142	196	293	
	A	135	170	200	310	
	B	49	169	200	244	
	C	66	140	200	257	
	D	62	145	180	280	
	E	79	153	197	272	

Shell Size:

9
11
13
15
17
19
21
23
25

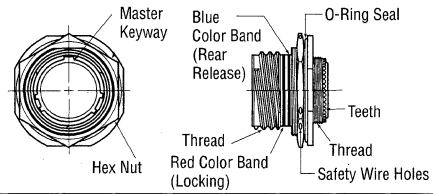
Receptacle Shell, Flange Wall Mount, Acme Thread Coupling

Military No. D38999/20
MATRIX No. MT930



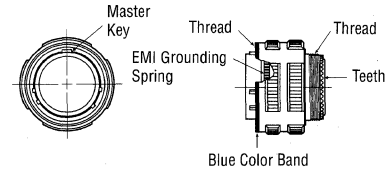
Receptacle Shell, Jam Nut Mount, Acme Thread Coupling

Military No. D38999/24
MATRIX No. MT934



Plug Shell, EMI Grounding, Acme Thread Coupling

Military No. D38999/26
MATRIX No. MT938



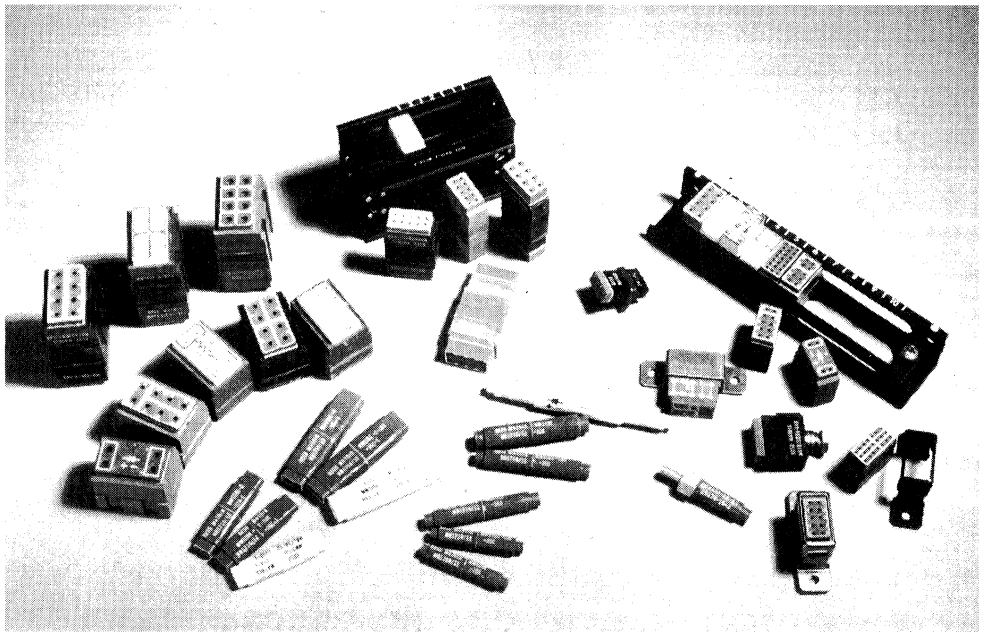
SOURCE: Catalog 82647

Specifications subject to change.
1-800-522-6752 Product Information Center/ AMP FAX Service
1-800-722-1111 Tooling/Technical Assistance Center

Terminal Junction System (MIL-T-81714 and Commercial)

The Terminal Junction System (TJS) provides design engineers with a compact family of modules and splices for interconnecting wires. Both the modules and splices facilitate interconnecting with pre-bussed configurations to which the user's 22 thru 12 AWG wires are terminated with crimped removable pin contacts. Servicing tools required are the commonly available MIL-C-81969/14, plastic tool and MIL-C-22520 crimping tool used for rear release connector contacts.

The TJS eliminates many shortcomings of the conventional lug and threaded termination. The TJS has no loose attaching hardware, such as nuts, screws and lock-washers to complete the termination. The TJS saves space and weight over threaded terminations while reducing installation cost. There is complete electrical isolation and optional environmental sealing grommet in the TJS without user installed busses, barriers, insulating strips, potting and enclosures. The TJS module pre-bussed integral sockets are permanently connected in a variety of bussing arrangements to suit the most exacting circuit requirements. These modules can be user assembled into any required bussing arrangement and contact size permutation.

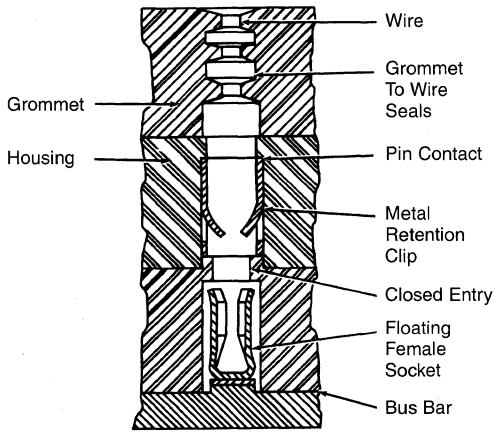


The TJS connections are inherently more reliable than conventional threaded and solder terminations. The user wiring is crimped to gold plated pin contacts, conforming the MIL-C-39029/1, which are individually mated to probe-proof gold plated pre-bussed sockets contained within the module and splice.

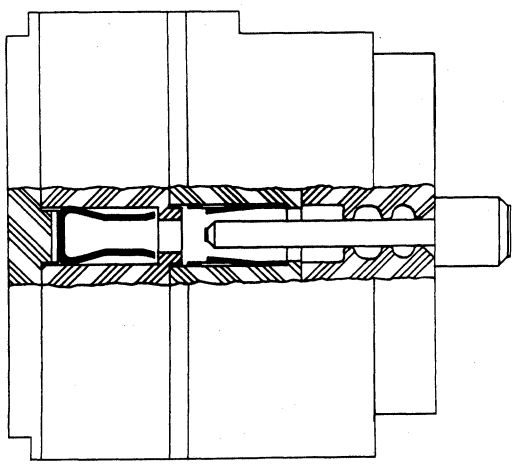
There are two families of TJS components. One family, consisting of modules and splices, is environment proof conforming to the requirements of MIL-T-81714. These modules can be assembled into MIL-T-81714 rails and are individually removable. Brackets are also available to mount individual or triads of modules. The splices are designed to terminate from two to four wires.

The other family (commercial TJS) consists of module blocks (either environmental or non-environmental) designed for custom assembled installations. These can be furnished in pre-assembled arrays in rails or individually with rail kits to accommodate various rows and lengths of modules.

Typical Module Construction (Cross-Section)



Module With Sealing Plug Installed (Cross-Section)



SOURCE: Catalog 82781

MIL-T-81714 Performance Specifications

Voltage Rating

Sizes 22, 20, 16, 12

Altitude	DMV*	Working Voltage
Sea level	1,500 V	600 V
70,000 Feet	600 V	300 V

Size 21 (22HD)

Altitude	DMV*	Working Voltage
Sea Level	1,000 V	600 V
70,000 Feet	325 V	300 V

* DMV = Dielectric Withstanding Voltage

Contact Voltage Drop (Max.)

Contact Size	Test Current	Initial	After Conditioning
21 (22HD)	5.0 A	55 V	65 V
22	5.0 A	45 V	50 V
20	7.5 A	45 V	50 V
16	13.0 A	50 V	55 V
12	23.0 A	40 V	45 V

The MV drop is measured across an adjacent bussed pair of wire contacts.

Operating Temperature Range

Class	Minimum	Maximum
A	-65°C (-85°F)	+150°C (+302°F)
B	-65°C (-85°F)	+175°C (+347°F)
C	-65°C (-85°F)	+200°C (+392°F)
D	-65°C (-85°F)	+200°C (+392°F)

Altitude Immersion

Insulation resistance shall not fall below 5,000 megohms after being subjected to three, 70,000-foot altitude immersion cycles in salt water.

Fluid Immersion

Class A & C—Limited fluid types
Class B & D—Extended fluid type

Fluid		Class			
MIL-H-5606	Hydraulic fluid	A	B	C	D
MIL-L-23699	Lubricating oil	A	B	C	D
MIL-T-5624	Aviation fuel		B		D
MIL-L-7808	Lubrication oil		B		D
MIL-A-8243	Anti-ice fluid		B		D
MIL-C-25769	Cleaning fluid		B		D
Skydrol	500A & 500B		B		D
Aerosafe	2300 & 2300W		B		D
Flyjet	III		B		D
Esso Oil	Turbo 25		B		D

Moisture Resistance

High Humidity (95% RH) 100 megohms min.
After Drying—24 hours 1,000 megohms min.

Durability

No performance degradation after 10 cycles of contact insertion/removal.

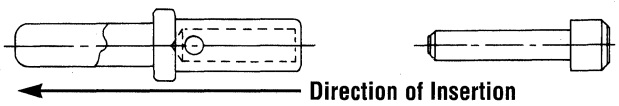
Vibration

Class A, B and C.
No interruption of electrical continuity, longer than one microsecond when subjected to MIL-STD-202, method 204, test condition D (20 G peak 10 to 2,000 Hz).
Class D
Sine, MIL-STD-202, method 204 condition G
Random, MIL-STD-1344, method 2005.

Shock

Class A, B and C
No interruption of electrical continuity longer than one microsecond when subjected to MIL-STD-202, method 213, test condition A
(50 G, 11 milliseconds duration, half-sine).
Class D
MIL-STD-1344, Method 2004
(300 G, 3 milliseconds duration, half-sine).

Contacts, Sealing Plugs and Assembly Tools (MIL-T-81714 and Commercial)



Size	Part Numbers			
	Pin Contacts		Sealing Plugs	
	Commercial	Military	Commercial	Military
21(22HD)	5000-107-2022	M39029/1-507	3400-043-0022	MS27488-22
22	5000-027-0022	M39029/1-100	3400-043-0020	MS27488-20
20	5000-027-0020	M39029/1-101	3400-043-0020	MS27488-20
16	5000-027-0016	M39029/1-102	3400-043-0016	MS27488-16
12	5000-027-0012	M39029/1-103	3400-043-0012	MS27488-12

Insertion/Removal Tools

Size	Part Numbers		Color*	Contact Wire Gage	Finished Wire Dia. Min./Max.	Crimp Tool	Turret or Positioner
	Commercial	Military					
21(22HD)	6500-048-0022	M81969/14-01	Grn/Wh	28-22	**.030-.054** [.76-1.37]	M22520/2-01	M22520/2-32
22	6500-001-0020	M81969/14-11	Rd/Wh	26-22	**.034-.066** [.86-1.68]	M22520/2-01	M22520/2-11
20	6500-001-0020	M81969/14-11	Rd/Wh	24-20	**.038-.083** [.97-2.11]	M22520/1-01 or /2-01	M22520/1-02 or /2-02
16	6500-001-0016	M81969/14-03	Blue/Wh	20-16	**.060-.101** [1.52-2.57]	M22520/1-01	M22520/1-02
12	6500-001-0012	M81969/14-04	Yel/Wh	14-12	**.087-.147** [2.21-3.73]	M22520/1-01	M22520/1-02

* Colored end for contact insertion; white end for release/removal.

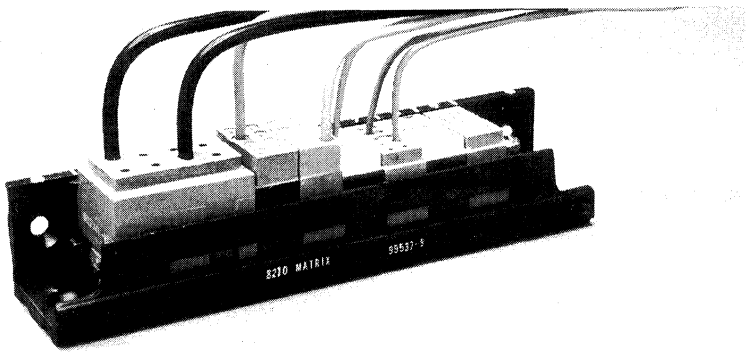
SOURCE: Catalog 82781

Feedback and Feedthru Terminal Junction Modules

MIL-T-81714 Terminal Junction module blocks are available in sizes 12, 16, 20, 22 and 22HD. The size 12 and 16 feedback blocks have eight cavities each. The size 20 and 22 feedback blocks have 10 cavities each (size 22HD has 21 cavities). The feedthru blocks have the same number of cavities situated on both sides of the block.

Military bussing arrangements are available with each size block.

These module blocks and mounting rail assemblies are qualified to MIL-T-81714. The pin contacts are qualified to MIL-C-39029/1.



Military Part Numbering (Example)

M81714 /* - * **

Basic Military Prefix

Bussing Arrangement Per MIL-T-81714/* (See pages 2154, 2155)

Class A, B, C or D

Feedback Module	Size 22HD	**17**
	Size 22	**1**
	Size 20	**2**
	Size 16	**3**
	Size 12	**4**
Feedthru Module	Size 22	**6**
	Size 20	**7**
	Size 16	**8**
	Size 12	**9**

Notes:
When ordered to military part number, contacts and sealing plugs are included. Mounting hardware is not included; order separately. (See pages 2156, 2157.)

Commercial Part Numbering (Example)

M R T B ** E ** - ***

Commercial

Removable

Type
TB = Feedback
FB = Feedthru

Module Size
21, 22, 20, 16, 12
Note: Commercial size 21 module is Military Size 22HD (high density) module with 21 contacts.

Modification Number
Blank = Class A
111 = Class B
089 = Class C
724 = Class D
Consult AMP for other modifications

Commercial Bussing Arrangement No. (See pages 2154, 2155)

Environment Resisting

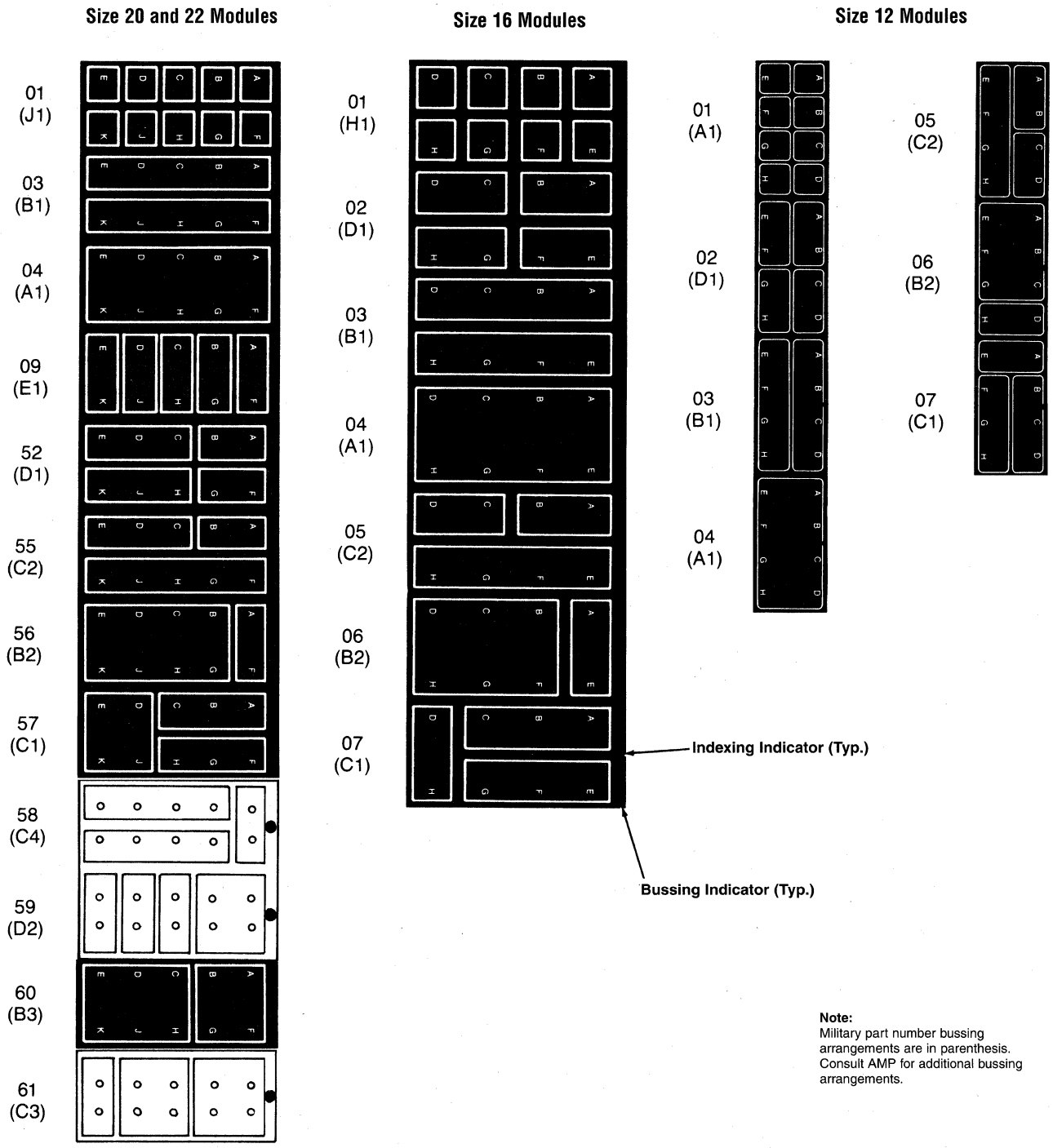
Notes:
When ordered to Commercial part number, contacts and sealing plugs are not included; order separately. (See page 2152.) Mounting hardware is not included; order separately. (See pages 2156, 2157.)

Note: Size 16 Module Dim. (Typ.)—
(Feedback) .850 [21.59] L x .390 [9.91] W x 1.000 [25.40] H
(Feedthru) .850 [21.59] L x .390 [9.91] W x 1.830 [46.48] H

SOURCE: Catalog 82781

Feedback and Feedthru Terminal Junction Modules
(Continued)

Typical Bussing Arrangements

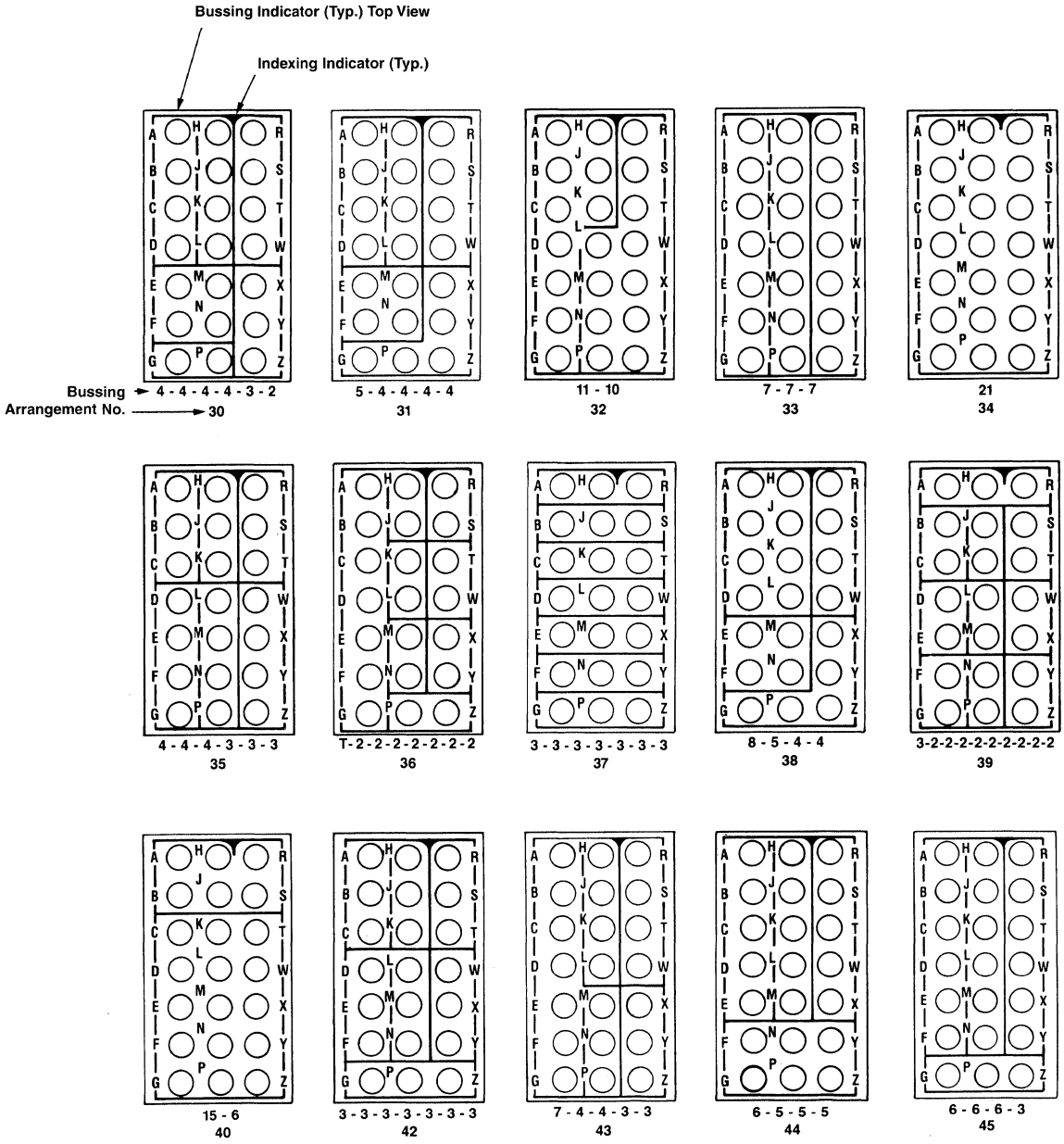


Note:
Military part number bussing arrangements are in parenthesis. Consult AMP for additional bussing arrangements.

Feedback Terminal Junction Modules

Typical Bussing Arrangements

Size 22HD Military, Size 21 Commercial Modules

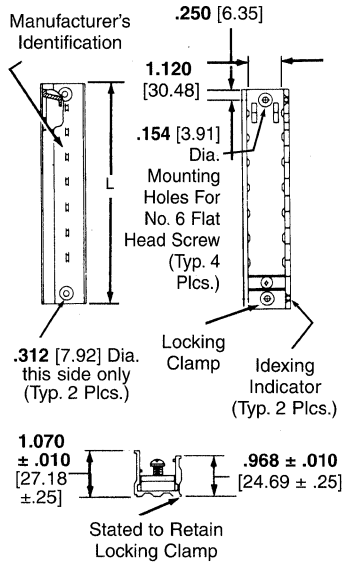


SOURCE: Catalog 82781

Feedback Terminal Junction Modules
(Continued)

Mounting Hardware

Standard Weight Rail Assembly MRTB

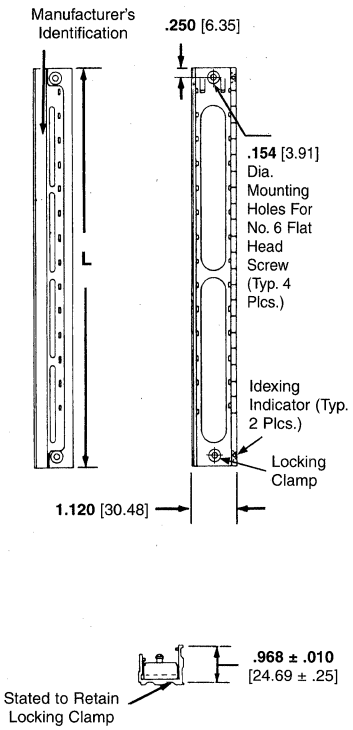


Rail Assembly Dimensions

Length L	MRTB and MRTBL Part Numbers			
	Standard Weight		Lightweight	
	Commercial MRTB	Military M81714/5	Commercial MRTBL	Military M81714/16
1.781 [45.24]	-1	-	-1	-
2.171 [55.14]	-2	-	-2	-
2.561 [65.05]	-3	-2	-3	-2
2.951 [74.96]	-4	-3	-4	-3
3.341 [84.86]	-5	-4	-5	-4
3.371 [85.62]	-6	-5	-6	-5
4.121 [104.67]	-7	-6	-7	-6
4.511 [114.58]	-8	-7	-8	-7
4.901 [124.49]	-9	-8	-9	-8
5.291 [134.39]	-10	-1	-10	-1
5.681 [144.30]	-11	-9	-11	-9
6.071 [154.20]	-12	-10	-12	-10
6.461 [164.11]	-13	-11	-13	-11
6.851 [174.02]	-14	-12	-14	-12
7.241 [183.92]	-15	-13	-15	-13
7.631 [193.83]	-16	-	-16	-
8.021 [203.73]	-17	-	-17	-
8.411 [213.64]	-18	-	-18	-
8.801 [223.54]	-19	-	-19	-
9.191 [233.45]	-20	-	-20	-

Rail Assemblies are made of black anodized aluminum alloy. Locking clamp screw is corrosion resistant steel (passivated). Rails will accommodate all sizes and various quantities of MRTB modules in any combination.

Lightweight Rail Assembly MRTBL (weight savings of up to 40%)



Rail Part Numbering

Military

M81714 / * - *
- **Non-Significant Length Number**
  - **5** = Standard Weight
  - **16** = Lightweight
- **Military Prefix**

Commercial

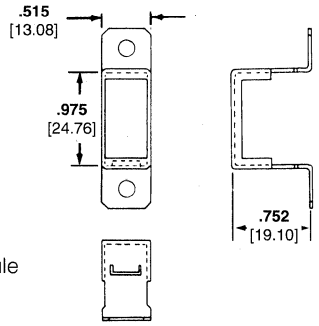
MRTB * - **
- **Maximum Quantity of Modules That Rail Will Accommodate†**
- **Blank** = Standard Weight
  L = Lightweight
- **Commercial MRTB Series**

Note:
Rail Assemblies do not contain module blocks. Order separately. (See page 2153.)
†(based on Size 22, 20, and 16 dimensions)

Individual Module Mounting Brackets

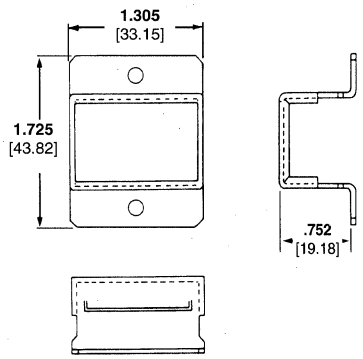
Part Number 8400-041-020
(Military M81714/29-1)

Accommodates one Size 21, 22, 20 or 16 module.



Part Number 8400-052-000
(Military M81714/29-2)

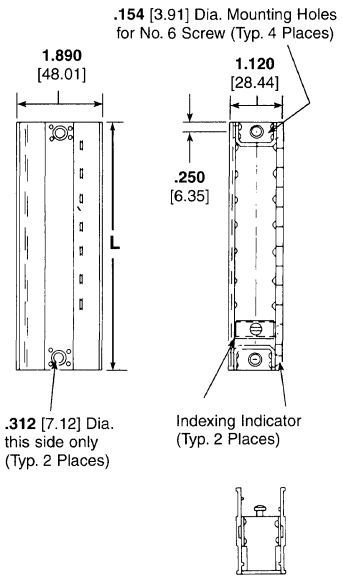
Accommodates one Size 12 module or three Size 21, 22, 20 or 16 modules in any combination.



SOURCE: Catalog 82781

Feedthru Terminal Junction Modules
Mounting Hardware

Standard Weight Rail Assembly MRFB - **

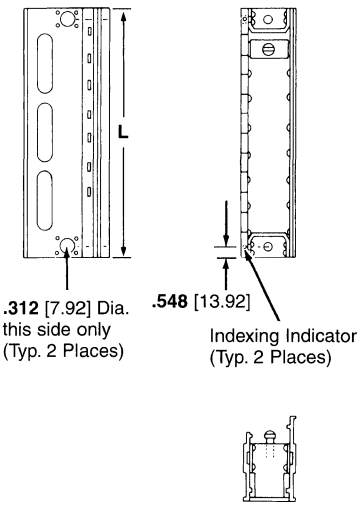


Rail Assembly Dimensions

Length L	MRFB and MRFBL Part Numbers			
	Standard Weight		Lightweight	
	Commercial MRFB	Military M81714/10	Commercial MRFBL	Military M81714/14
2.041 [51.84]	-1	-	-1	-
2.431 [61.75]	-2	-	-2	-
2.821 [71.65]	-3	-2	-3	-2
3.211 [81.56]	-4	-3	-4	-3
3.601 [91.46]	-5	-4	-5	-4
3.991 [101.37]	-6	-5	-6	-5
4.381 [111.28]	-7	-6	-7	-6
4.771 [121.18]	-8	-7	-8	-7
5.161 [131.09]	-9	-8	-9	-8
5.551 [141.00]	-10	-1	-10	-1
5.941 [150.90]	-11	-9	-11	-9
6.331 [160.81]	-12	-10	-12	-10
6.721 [170.71]	-13	-11	-13	-11
7.111 [180.62]	-14	-12	-14	-12
7.501 [190.52]	-15	-13	-15	-13
7.891 [200.43]	-16	-	-16	-
8.281 [210.34]	-17	-	-17	-
8.671 [220.24]	-18	-	-18	-
9.061 [230.15]	-19	-	-19	-
9.451 [240.06]	-20	-	-20	-

Rail Assemblies are made of black anodized aluminum alloy. Locking clamp screw is corrosion resistant steel (passivated). Rails will accommodate all sizes and various quantities of MRFB modules in any combination.

Lighweight Rail Assembly MRFBL



Rail Part Numbering

Military

M81714/ * - *

- **Non-Significant Length Number**
  - **10** = Standard Weight
  - **14** = Lightweight
- **Military Prefix**

Note: Rail Assemblies do not contain module blocks. Order separately. (See page 2153, 2154.)

Commercial

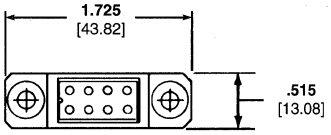
MRFB * - **

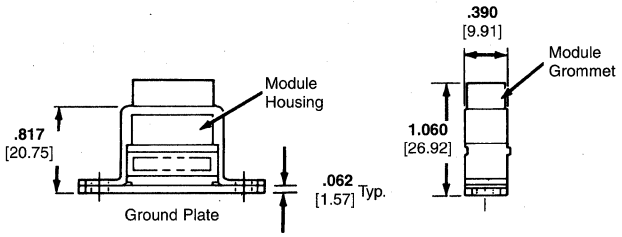
- **Maximum Quantity of Modules That Rail Will Accommodate** (based on Size 22, 20 and 16 dimensions)
- **Blank** = Standard Weight
  L = Lightweight
- **Commercial MRFB Series**

SOURCE: Catalog 82781

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

Feedback Grounding Flange Modules





Grounding Flange Blocks are military quality modules available in Sizes 22HD, 22, 20, 16 and 12. All contacts are bussed together (Arrangement 04, military A1) and connected to a ground plate made of nickel plated aluminum (Ground plate is not shown on side views in outline drawings).

Part Numbering

Military

M81714/28 - * **

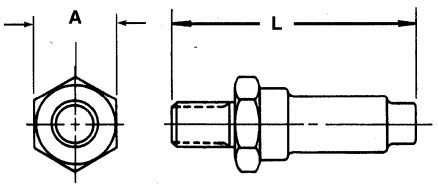
- **Contact Size**
- **Class**
- **Military Prefix**

Commercial

MRTB - ** * - 04 - 699

- **Class A Grounding Flange Block (For Class B, C or D consult AMP)**
- **Bussing Arrangement**
- **E = Environmental**
- **Contact Size 12, 16, 20, 21 or 22**
- **Feedback Style Module Block**

Grounding Terminals



Contact Size	Dimensions A	Dimensions L
22	.312	1.338
20	7.92	33.98
16	.375	1.523
12	9.52	38.68

Grounding Terminals provide a reliable method of terminating wires to ground. These grounding terminals mate with the standard M39029/1 crimp pin contact and the junction body has the same design as the module blocks and wire splices. This rear insertion/rear removal device provides a more convenient, environment proof and maintainable termination than the screw and lug devices, providing easy disconnection for system testing or reliable grounding to non-metallic surfaces.

Part Numbering

Military

M81714/15 - ** *

- **Class A, B, C or D**
- **Contact Size 12, 16, 20 or 22**
- **Basic Military Prefix**

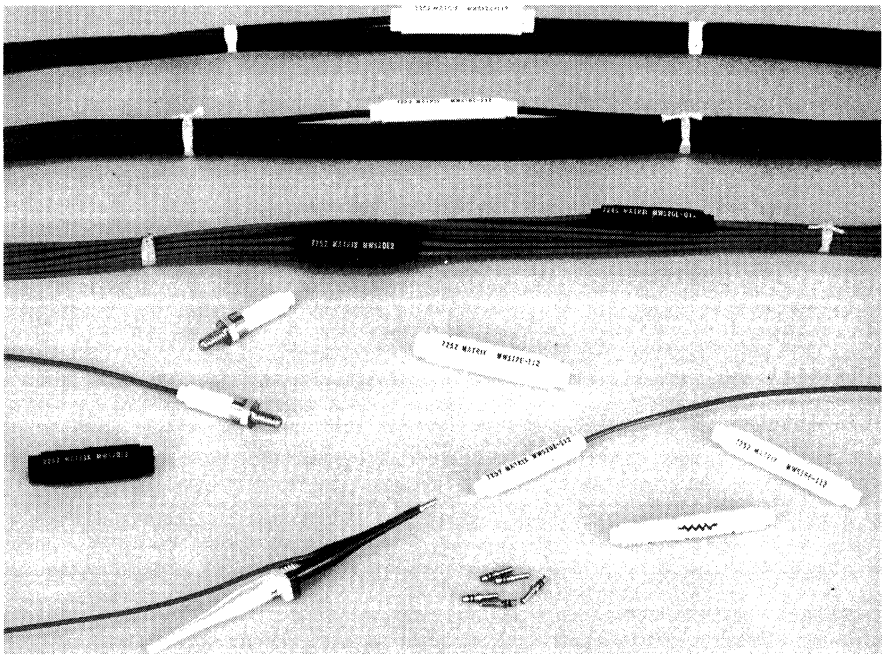
Commercial

MTGE ** - ** - *

- **Class**
  - **Blank** = A
  - **111** = B
  - **089** = C
  - **724** = D
- **Stud Size**
  - **01** = 8-32
  - **02** = 6-32
- **Contact Size 12, 16, 20 or 22**
- **Commercial Grounding Junction**

SOURCE: Catalog 82781

Wire Splices



Single Splice
Built and qualified to MIL-T-81714, the Commercial Single Wire Splice provides an environmentally reliable, positive and maintainable in-line disconnect between single wires. Their small diameter permits placement within a wire bundle or electrical harness. The standard M39029/1 pin contact is utilized. Single wire splices are available in Class A, B, C, or D per MIL-T-81714.

Double Splice
Provides an environmental in-line disconnect for joining up to four wires. Bussed or unbussed contacts are available permitting the versatility of joining wires in double, triple or quadruple combinations.

Part Numbering

Military

M81714/ ** - ** * - *

- **Bussing**
  - **Blank** = Single Wire Splice
- **Class A, B, C or D**
- **Contact Size**
  - **11** = Single Wire Splice
  - **12** = Double Wire Splice
- **Basic Military Prefix**

Commercial

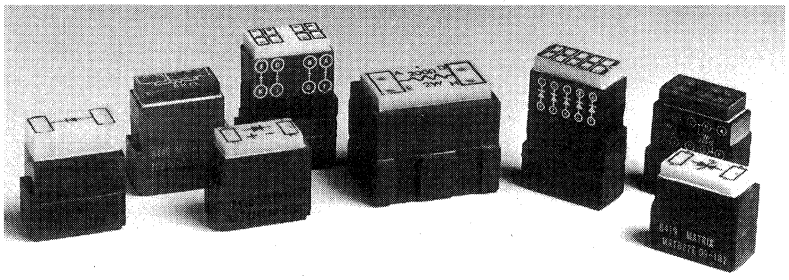
MWS- ** E - * - 089

- **Class**
  - **Blank** = Class A
  - **111** = Class B
  - **089** = Class C
  - **724** = Class D
- **Bussing**
  - **Blank** = Single Wire Splice
  - **1** = Double Wire Splice, Unbussed Circuits
  - **2** = Double Wire Splice, Bussed Circuits
- **Environmental Seal**
- **Contact Size 12, 16, 20 or 22**
- **Commercial Wire Splice**

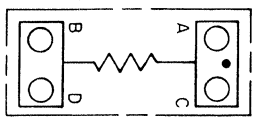
SOURCE: Catalog 82781

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

Electronic Module Blocks and Splices



Electronic Modules, Splices and Mounting Hardware are custom engineered to suit the user's application. During design, specific part numbers will be assigned. (see page 2163.)



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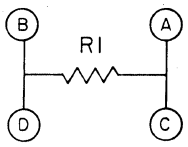
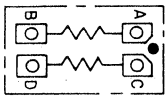


SCHEMATIC DIAGRAM

Fig. 1A



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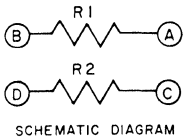
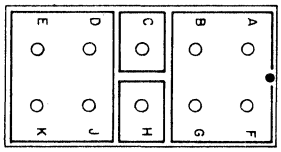


SCHEMATIC DIAGRAM

Fig. 2A



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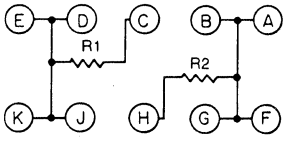
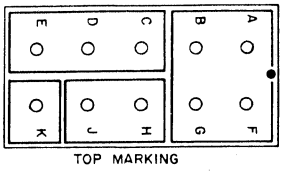


SCHEMATIC DIAGRAM

Fig. 3A



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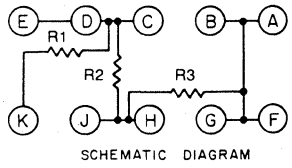
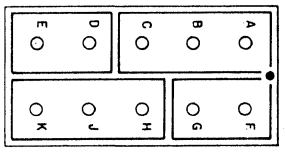


SCHEMATIC DIAGRAM

Fig. 5A



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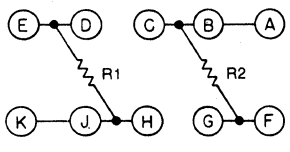


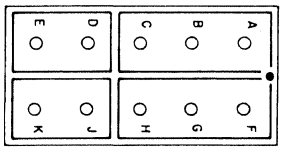
SCHEMATIC DIAGRAM

Fig. 6A

TOP MARKING

SCHEMATIC DIAGRAM

Fig. 3A



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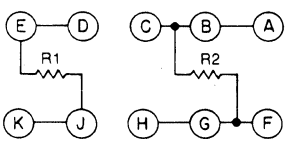
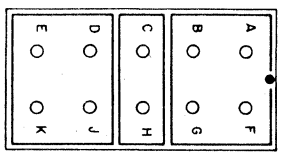


SCHEMATIC DIAGRAM

Fig. 7A



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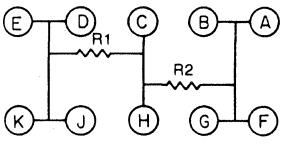
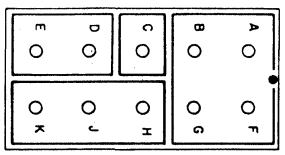


SCHEMATIC DIAGRAM

Fig. 4A



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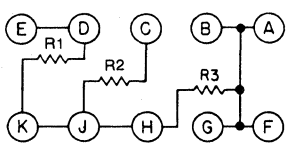


SCHEMATIC DIAGRAM

Fig. 8A

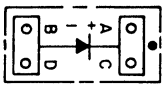
Consult AMP for additional circuit arrangements.

SOURCE: Catalog 82781

Electronic Module Blocks

Typical Diode Circuit Arrangements

(See page 2163 for Part Numbers.)



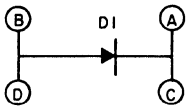
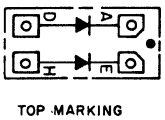


Fig. 1B



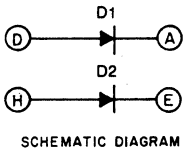
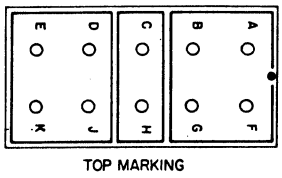


Fig. 2B



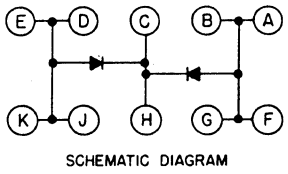
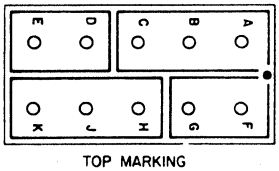


Fig. 3B



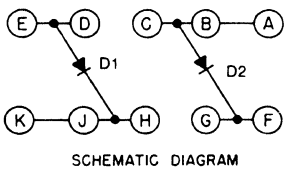
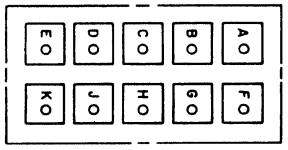


Fig. 4B



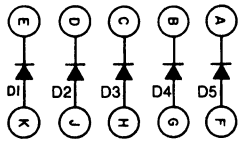
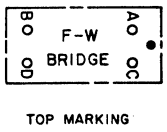


Fig. 5B



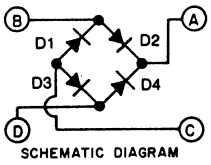
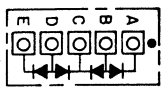


Fig. 6B



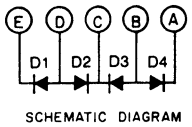
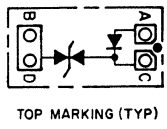


Fig. 7B



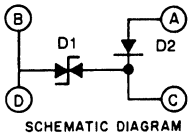


Fig. 8B

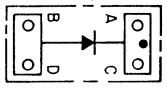
Consult AMP for additional circuit arrangements.

SOURCE: Catalog 82781

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

Electronic Module Blocks
(Continued)

Typical Combination Circuit Arrangements



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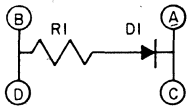
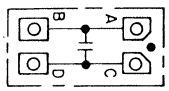


SCHEMATIC DIAGRAM

Fig. 1C



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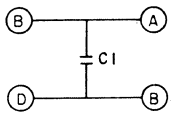
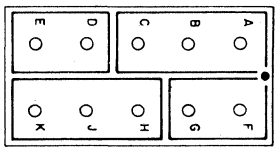


SCHEMATIC DIAGRAM

Fig. 2C



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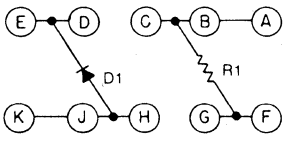
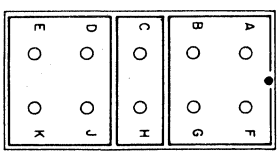


SCHEMATIC DIAGRAM

Fig. 3C



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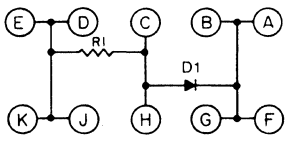
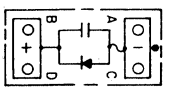
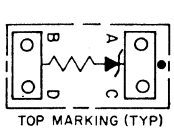


SCHEMATIC DIAGRAM

Fig. 4C

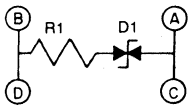


TOP MARKING

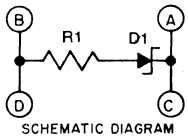


TOP MARKING (TYP)

Fig. 5C

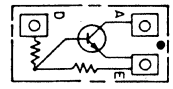


SCHEMATIC DIAGRAM

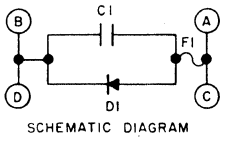


SCHEMATIC DIAGRAM

Fig. 6C



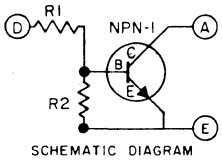
TOP MARKING



SCHEMATIC DIAGRAM

Fig. 7C

TOP MARKING



SCHEMATIC DIAGRAM

Fig. 8C

Consult AMP for additional circuit arrangements.

SOURCE: Catalog 82781

MIL-T-81714 Electronic Splices

Various Component Types

Fig. 1D

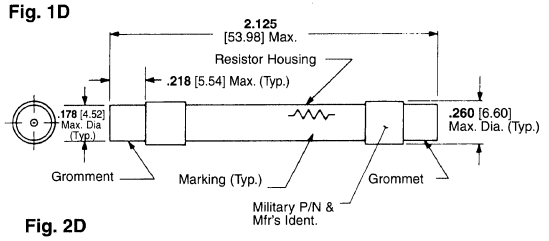


Fig. 2D

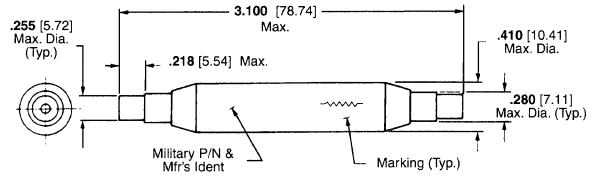


Fig. 3D

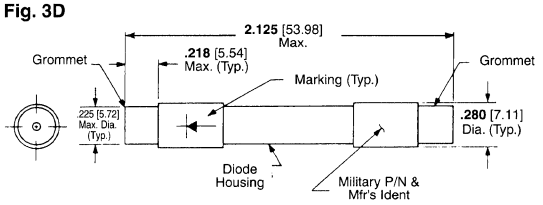


Fig. 4D

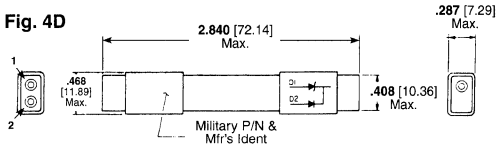


Fig. 5D

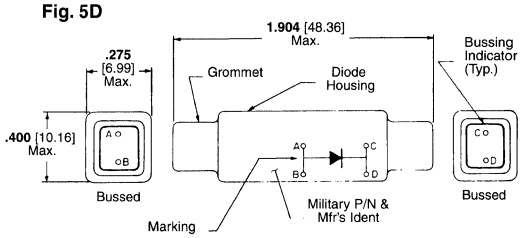


Fig. 6D

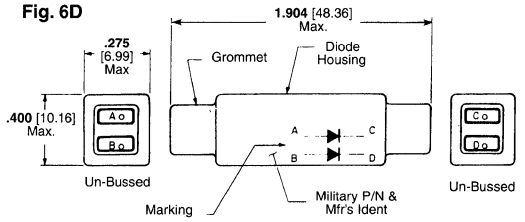


Fig. 7D

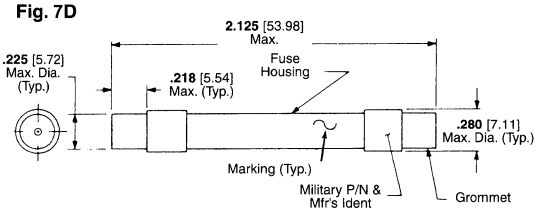
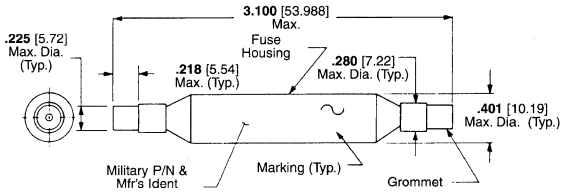


Fig. 8D



Electronic Module Blocks and Splices
Part Numbering Information

Description	Figure	Part Number	Electrical Information
Module Blocks	Fig. 1A	591872-1	R1=1500 Ω RCR07G152J˝S
		591873-1	R1=9100 Ω RLR07C9101GS
		591877-2	R1=150 Ω
	Fig. 2A	591892-1	R1=R2=127 Ω RNC55H1270FS
		591898-1	R1=R2=10 Ω RLR20C10R0GS
		591876-1	R1=180 Ω RLR07C1800GS R2=487 Ω RLR07C4870FS
		591871-1	R1=R2=2200 Ω RCR07G222JS
		591875-1	R1=180 Ω RLR07C1800GS R2=348 Ω RLR07C3480FS
	Fig. 4A	591911-1	R1=34.8 kΩ R2=21.5 kΩ
Module Blocks (Diode Circuits)	Fig. 1B	591893-2	D1=JANTXIN5624
		591894-2	D1=JANTXIN751A
		591896-2	D1=JANTXIN5552
		591893-2	D1=JANTXIN5624
		591894-2	D1=JANTXIN751A
		591895-2	D1=JANTXIN5618
		591864-1	D1=JANIN5618
	Fig. 5B	591866-1	D1=D2=D3=D4=D5=JANTXIN5554
		591863-1	D1=D2=D3=D4=D5=JANTXIN5552
		591863-4	D1=D2=D3=D4=D5=IN4007
		591865-1	D1=D2=D3=D4=D5=JANTXIN5618 Class A
		591855-1	D1=D2=D3=D4=D5=JANTXIN5618
Splices	Fig. 4D	591992-1	D1=JANTXIN4972 D2=JANTXIN5618
	Fig. 5D	591841-1	D1=JANIN5618
	Fig. 6D	591842-1	D1=D2=JANIN5618

SOURCE: Catalog 82781

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

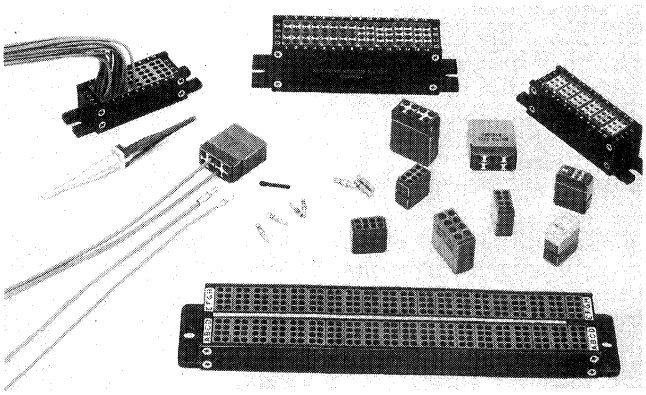
Commercial Terminal Junction Modules

Each module block assembly in this series is designed for a fixed number of blocks (blocks may be removed for replacement). Rails are designed to accommodate only one size module block. Black anodized aluminum rails and end brackets retain module blocks and form multi-block assemblies. Alphanumeric coding designates each cavity and is clearly marked on each rail and end bracket.

Commercial Series Module Blocks are available in two sizes: Size 16, which uses a size 16 male contact for 16-20 AWG wire size or a second size 16 male contact with a smaller crimp barrel I.D. for 20-24 AWG wires; and Size 20 which uses a size 20 contact for 20-24 AWG wire sizes or a second size 20 male contact with a smaller crimp barrel I.D. for 22-26 AWG wire.

Optional, three-gland, silicone elastomer seals are integrated with the wire entry ends and are intended for environmental applications. Side rails and end brackets wth alphanumeric coding for all connection points are available for one, two or three rows of up to 20 modules each.

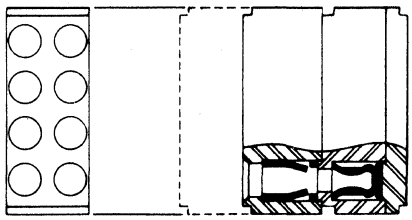
The Commercial module block resists shock and vibration over 50 Gs. Test voltage is 1,500 VAC at sea level and 276 VAC at 100,000 feet for environmental models. Rated current is 20 amperes per buss for size 16 contacts and 10 amperes per buss for size 20 contacts.



Feedback Blocks (MTB Series)

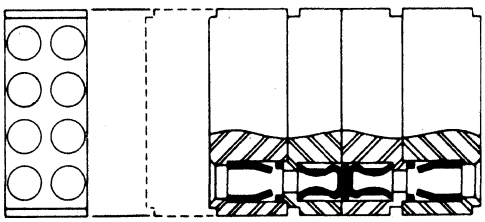
Feedback Blocks are used for interconnection and bussing. Ideal applications are distribution, test points and wire connecting stations.

Multiple-gland silicone elastomer seals for environmental applications are optional on both models.



Feedthru Blocks (MFB Series)

Feedthru Blocks are for interconnection and bussing in applications where circuit wiring must be connected to two sides of a panel, bulkhead or patchboard.

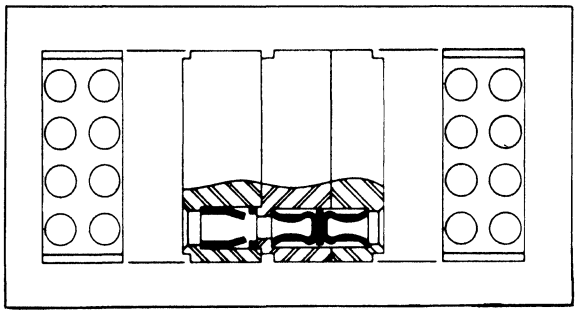


SOURCE: Catalog 82781

Commercial Terminal Junction Modules
(Continued)

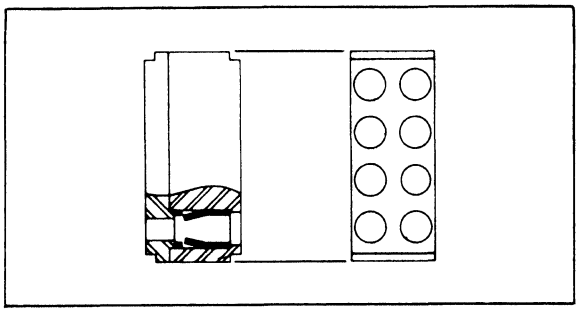
Programming Blocks (MPB Series)

Programming Blocks are feedthru blocks whose connection points on one end do not include the self-locking retainers used in the other blocks. Pin contacts may be plugged in and removed from these points without tools, while connections at opposing points on the blocks remain locked in place. These blocks are used in patchboarding and similar applications.



Adapter Plugs (MAP Series)

For connecting and disconnecting ganged groups of contacts for multiple circuit patching and reprogramming. Aluminum rails and end brackets with alphanumeric coding for each connection point are used for mounting and forming multi-block assemblies.



Part Numbering

Individual Module Blocks

MTB 20 E **

- **Bussing Arrangement 01-07**
- **A** = For Non-Environmental
  E = For Environmental
- **Size 20 or 16**
- **MTB Feedback Block**
  MFB Feedthru Block
  MPB Programming Block
  MAP Adapter Plugs

Notes: Mounting hardware is not included—order separately. (See page 2166.)
Contacts and tools are not included—order separately. (See page 2152.)

Multi-Block Assembly

MTB 20 E * ** - *** —**First Row Sequence** (Need not be repeated if all bussing arrangements are identical.)
***
***

- **Subsequent Row Sequence** (If Applicable).
- **Number of Blocks per Row**
- **Number of Rows of Blocks**
- **A** = For Non-Environmental
  E = Environmental
- **Size 20 or 16**
- **MTB Feedback Blocks**
  MFB Feedthru Blocks
  MPB Programming Blocks
  MAP Adapter Plugs

Notes:
Mounting hardware included.
Contacts and tools are not included—order separately. (See page 2152.)

This numerical sequence can be as long as 30 characters to designate the order in which 20 blocks of various bussing arrangements should be assembled in a given row. Regardless of the number of rows and characters, a specific part number will be assigned to mixed buss assemblies to provide a reorder part number if desired.

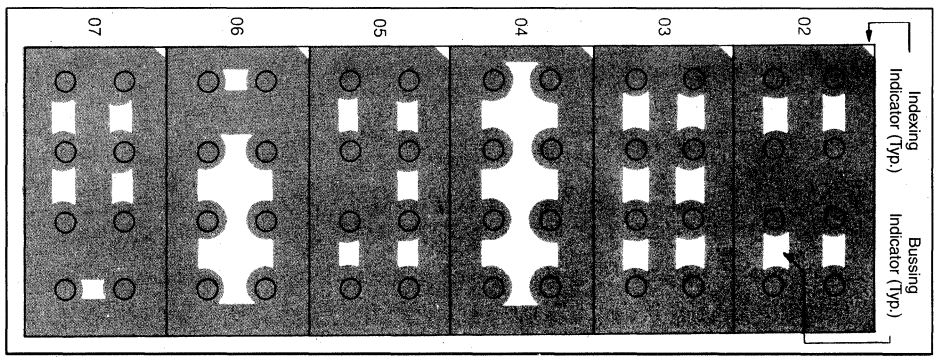
Note: MTB 20 E 1 10 Multi-Block Assembly Dim. (Typ.)—
4.240 [107.70] L x .820 [20.83] W x .740 [18.80] H

SOURCE: Catalog 82781

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

Commercial Terminal Junction Modules
(Continued)

Bussing Arrangements



Mounting Hardware

Frame Assembly Kit

Kit does not contain module blocks. Order separately. (See page 2165.)

MTB 20 E * **

- **Number of Module Blocks per Row**
- **Number of Module Block Rows Wide**
- **A** = Non-Environmental
  B = Environmental
- **Size 20 or 16**
- **MTB** Feedback Style (Use with MTB or MAP Modules)
  MFB Feedthru Style (Use with MFB or MPB Modules)

Individual Frame Components

Center Rail

MCR 6 E 10 - 16

- **16 or 20 Size Module Block**
- **Number of Module Blocks in Row**
- **A** = Non-Environmental Module Blocks
  E = Environmental Module Blocks
- **Type of Module Block Assembly**
  2 = MPB Programming Blocks
  6 = MTB Feedback Blocks
  7 = MFB Feedthru Blocks

Commercial Center Rail

Side Rails (Pair)

MSR 6 E 10 - 16

- **16 or 20 Size Module Block**
- **Number of Module Blocks in Row**
- **A** = Non-Environmental Module Blocks
  E = Environmental Module Blocks
- **Type of Module Block Assembly**
  2 = MPB Programming Blocks
  6 = MTB Feedback Blocks
  7 = MFB Feedthru Blocks

Commercial Side Rail

End Brackets (Pair)

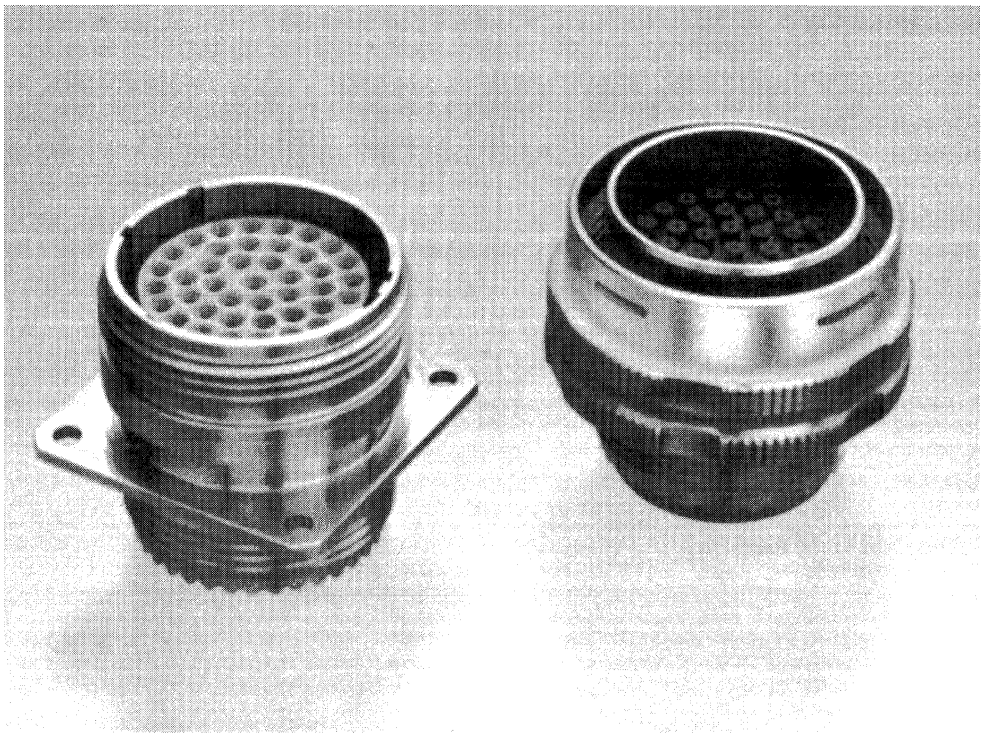
MEB 6 E 1 - 16

- **16 or 20 Size Module Block**
- **Number of Module Blocks in Row**
- **A** = Non-Environmental Module Blocks
  E = Environmental Module Blocks
- **Type of Module Block Assembly**
  2 = MPB Programming Blocks
  6 = MTB Feedback Blocks
  7 = MFB Feedthru Blocks

Commercial End Brackets

SOURCE: Catalog 82781

MTE Series



Product Facts

- **Qualified to European Standard AECMA Specification EN2997**
- **Qualified to Society of British Aerospace Companies/Rolls Royce Specification ESC10**
- **High temperature insert material for continuous operation at 500°F [260°C]**
- **Specially formulated elastomer grommets and interfacial seals to withstand elevated temperatures and hostile fluids**
- **Improved interfacial seal maximizes sealing around each contact**
- **High temperature contacts**
- **Guaranteed metal-to-metal bottoming for improved shell conductivity and stability for higher levels of vibration**
- **Gold plated RFI ground spring (optional) for improved shell-to-shell conductivity**
- **One-piece swaged fail-safe coupling nut**
- **Self-locking plugs with 2:1 differential uncoupling/coupling torque for high vibration environments**
- **Patented "frustum" insert retention mechanism to withstand high G-loads during shock and vibration**
- **360° accessory teeth for improved vibration performance and greater EMI protection**
- **Thermocouple pin and socket contacts are available, consult AMP for specifications**
- **Intermateable with MIL-C-83723 Series III threaded connectors**

The MTE Series Class K and KE connectors are specifically designed for the severe environments found in today's high-performance turbine engines. These connectors meet the stringent requirements of the Society of British Aerospace Companies Specification ESC 10 and the requirements of AECMA Standard EN2997.

The stainless steel shells of the connectors are designed to provide protection against constant high temperatures and damaging fluids. Self-locking coupling mechanisms withstand high vibration and G-loads.

Specially formulated elastomers and hard dielectric insert materials with excellent thermal stability keep performing in extreme temperatures, high vibration and hostile fluids.

Standard military specification insert arrangements and contacts provide compatability with standard assembly tooling and procedures. This aptness provides a cost effective application.

SOURCE: Catalog 82785

Specifications subject to change.

1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

MTE Series (Continued)

Performance Specifications

Operating Temperature Range

-85°F [-65°C] to 392°F [200°C] - Class K; with cyclical performance to 500°F [260°C] - Class KE

Shock and Vibration

Wired, mated connectors shall not be damaged, nor shall there be a current interruption longer than 1 microsecond when subjected to the following:

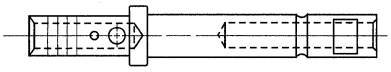
Shock: One shock in each of the three major axes, having a 100 g peak for a duration of 6 milliseconds

Vibration: Twelve hours of random vibration having a range of 10 to 2000 Hz with a .06 [1.52] double amplitude (10-55 Hz) and a 20 g peak level (55-2000 Hz)

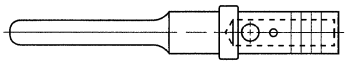
Fluid Resistance

Connectors shall perform satisfactorily after having been subjected to the fluids and tests specified in ESC 10 and EN2997

Contacts, Sealing Plugs and Assembly Tools



Socket Contact



Pin Contact

Contact Size	Wire Range AWG	Wire Range mm²	Color Band	MATRIX Part Numbers Socket Contacts	Pin Contacts	Sealing Plugs
20	24-20	0.2-0.6	Rd./Rd.	5100-427-2020	5000-270-2020	3400-152-0020
16	20-16	0.5-1.4	Bl/Bl.	5100-427-1616	5000-270-1616	3400-152-0016
12	14-12	2-3	Yel./Yel.	5100-427-1212	5000-270-1212	3400-152-0012
20	20-18	0.5-1	Rd./Vlt.	5100-427-2018*	5000-270-2018*	3400-152-0020

*Use when additional MATRIX modification code (IE-31500) requires special contact size 20 with #18 AWG [0.75-1 mm²] crimp barrel.

Crimping Tools

Contact Size	Wire Range AWG	Wire Range mm²	Finished Wire Dia. Range inch	Finished Wire Dia. Range mm	Color Code	Military Part No. Crimping Tool	Military Part No. Positioner
20	24-20	0.2-0.6	**.033-.083**	0.84-2.11	Rd.	M22520/1-01	M22520/1-02
16	20-16	0.5-1.4	**.047-.106**	1.19-2.69	Bl.	M22520/1-01	M22520/1-02
12	14-12	2-3	**.075-.157**	1.91-3.99	Yel	M22520/1-01	M22520/1-02
20	20-18	0.5-1	**.040-.083**	1.02-2.11	Rd.	M22520/1-01	M22520/1-02

Insertion/Extraction Tools

Contact Size	Color Code	Military Part No.	MATRIX Part No.
20	Rd./Wh.	M81969/14-02	6500-001-0020
16	Bl./Wh.	M81969/14-03	6500-001-0016
12	Yel./Wh.	M81969/14-04	6500-001-0012
20	Rd./Wh.	M81969/14-02	6500-001-0020

MATRIX Part Number System

MTE 30 KE 10 05 P N

Polarization
N = Normal (6, 7, 8, 9 or Y for Alternate)

Contact Style
P = Pin S = Socket

Insert Arrangement

Shell Size

Class
K = Stainless steel shell, passivated, fire resistant insert (200°C)
KE = Stainless steel shell, passivated, fire resistant insert (260°C)

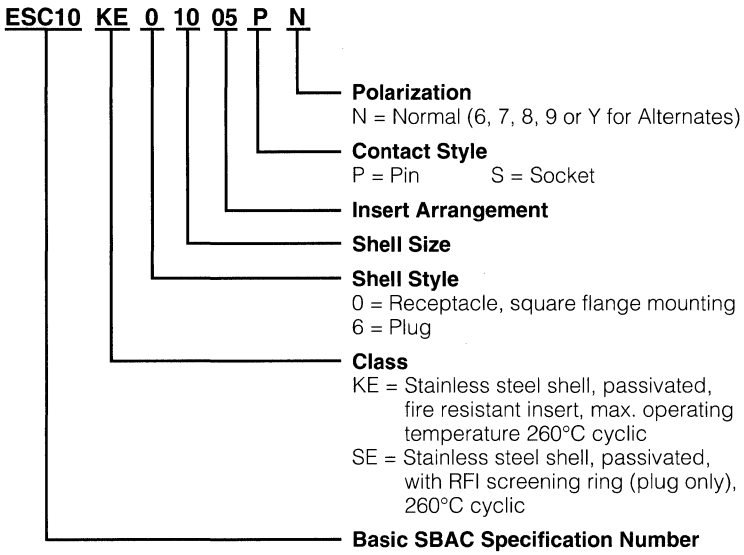
Shell Style
0 = Receptacle, square flange mount
7 = Plug, self-locking, swaged coupling nut
9 = Plug, self-locking, swaged coupling nut with RFI screening ring

MATRIX Series Number
Threaded coupling, rear release crimp contacts

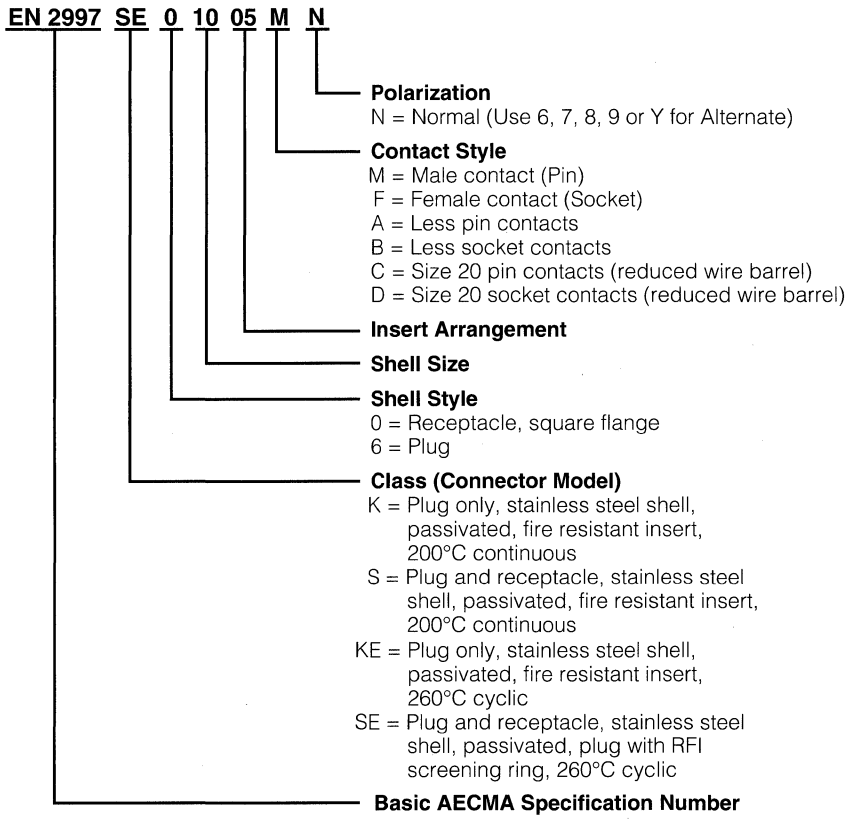
Specifications subject to change.
1-800-522-6752 Product Information Center/ AMP FAX Service
1-800-722-1111 Tooling/Technical Assistance Center

MTE Series (Continued)

SBAC Specification Part Number System



AECMA Specification Part Number System



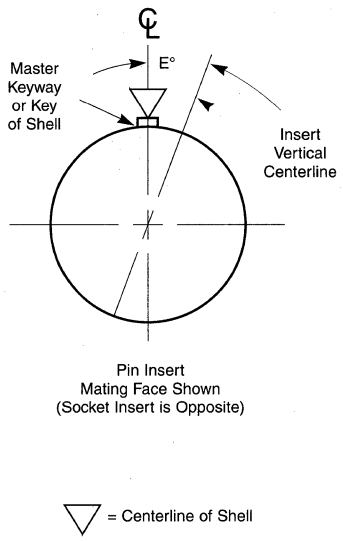
SOURCE: Catalog 82785

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

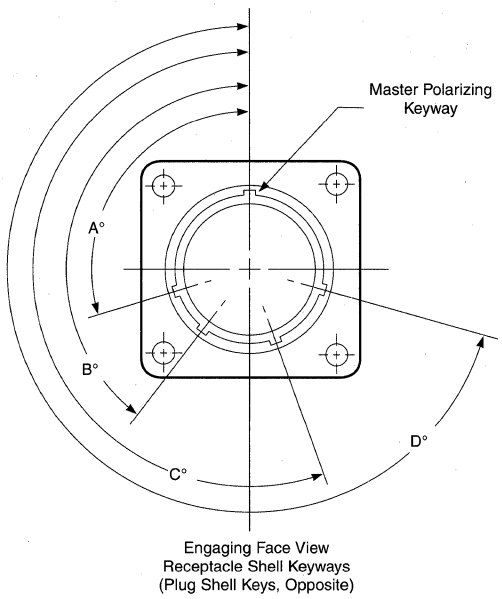
MTE Series (Continued)

Polarization

Insert Clocking



Keying Positions



Insert Clocking (Per MIL-STD-1554)

Shell Size	Polarizing Position	Key/Keyway Positions A°	B°	C°	D°	Insert Position E°	Service Rating
8,10	N	105	140	215	265	0	Refer to Insert Arrangement Captions on Next Page
	1*	105	140	215	265	10	
	2*	105	140	215	265	20	
	3*	105	140	215	265	30	
	4*	105	140	215	265	40	
	5*	105	140	215	265	50	
12,14 16,18 20,22 24 & 28**	N	105	140	215	265	0	
	1*	105	140	215	265	10	
	2*	105	140	215	265	20	
	3*	105	140	215	265	30	
	4*	105	140	215	265	40	
	5*	105	140	215	265	50	

*Position 1 thru 5 inactive for new design, (Ref. MIL-STD-1554)

Keying Positions (Per MIL-STD-1554)

Shell Size	Polarizing Position	Key/Keyway Positions A°	B°	C°	D°	Insert Position E°	Service Rating
8 thru 24	N	105	140	215	265	0	Refer to Insert Arrangement Captions on Next Page
8 & 10	6	102	132	248	320	0	
	7	80	118	230	312	0	
	8	35	140	205	275	0	
	9	64	155	234	304	0	
	Y*	25	115	220	270	0	
10 only	6	18	149	192	259	0	
12, 14 16, 18 20, 22 24 & 28**	7	92	152	222	342	0	
	8	84	152	204	334	0	
	9	24	135	199	240	0	
	Y*	98	152	268	338	0	

*Positions 10 and Z designators are inactive, superseded by Y (Ref. MIL-STD-1554) EN 2997 only.
**Shell size 28 not military standard connector

Notes:
1. In the "Normal insert position" (position N), the insert centerline coincides with the centerline of the master key/keyway of the shell.

2. In the "Alternate insert position" (positions 1, 2, 3, 4 and 5), the socket insert is rotated clockwise relative to the centerline of the master key/keyway of the shell as indicated in the Figure and Table. The pin insert is rotated counter-clockwise.

3. Alternate polarizing positions 1, 2, 3, 4 and 5 are for interchangeability use only. Not recommended for new design, per MIL-C-83723.

4. In the "Alternate keying position" (positions 6, 7, 8, 9 and Y), the minor keys/keyways are positioned with reference to master key/keyway as indicated in the keying position table.

5. All plugs have keys. All receptacles have keyways.

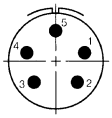
MTE Series (Continued)

Insert Arrangements (Per MIL-STD-1554)

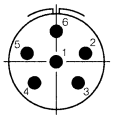
Numbering identification example: **0803** (Shell Size and Insert Number)
3 #20 (Contact quantity and size)
I (Service rating)

0803
3 #20
I

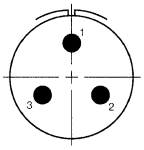
0898
3 #20
I



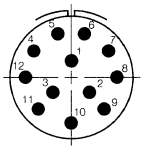
1005
5 #20
I



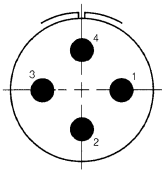
1006*
6 #20
I



1203
3 #16
I



1212
12 #20
I



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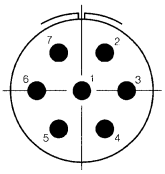
4 #12
I



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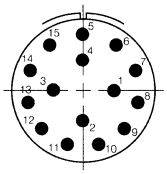
7 #16
I



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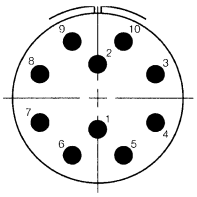
15 #20
I



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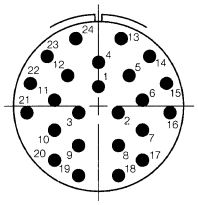
10 #16
I



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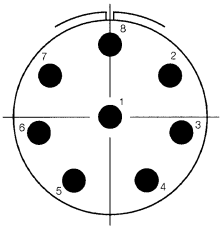
24 #20
I



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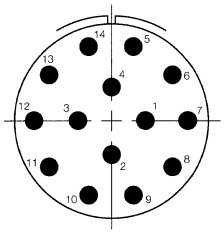
8 #12
I



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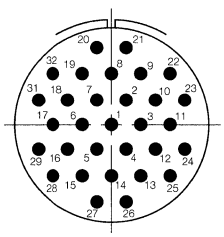
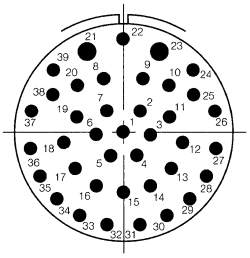
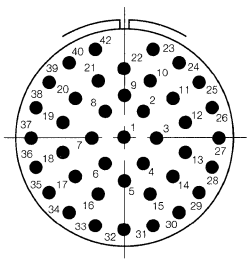
14 #16
I



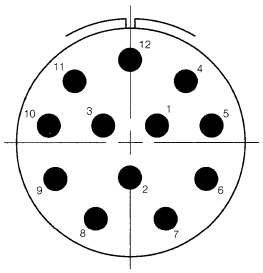
1831
31 #20
I



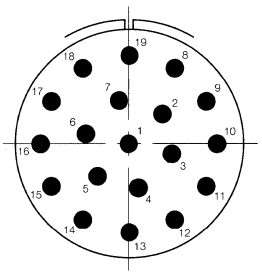
2039
37 #20, 2 #16
I



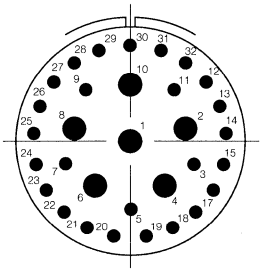
2041
41 #20
I



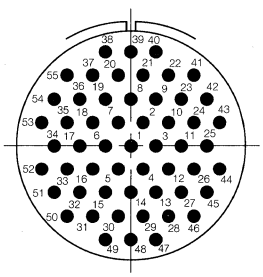
2212
12 #12
I



2219
19 #16
I



2232*
26 #20, 6 #12
I



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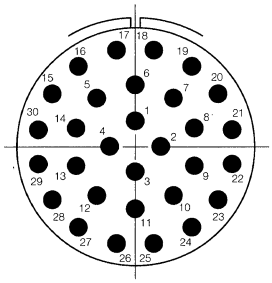
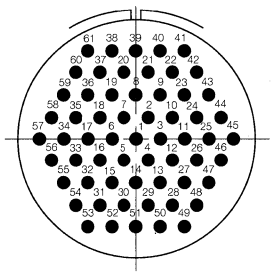
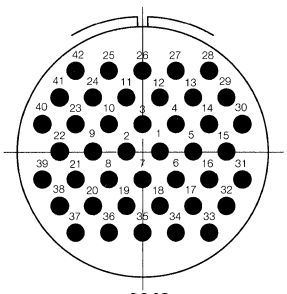
55 #20
I



2430
30 #16
I



2461
61 #20
I



2842
42 #16
I

* EN 2997 only.
Note: Mating face of pin insert is shown. Socket insert is opposite.

SOURCE: Catalog 82785

Specifications subject to change.
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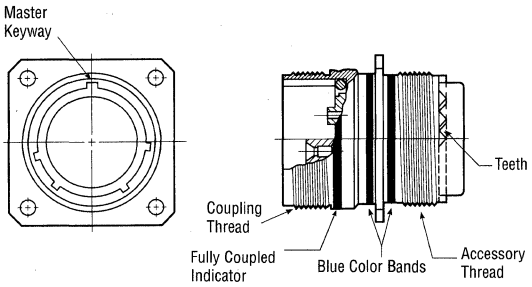
MTE Series (Continued)

Shell Size:

8
10
12
14
16
18
20
22
24
28

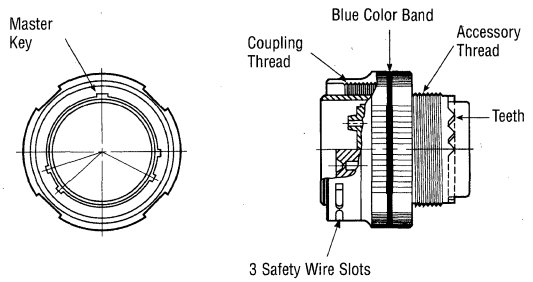
Receptacle Shell, Square Flange Mount

MATRIX No. MTE 30K & MTE 30KE
ESC 10 No. ESC10KE0
AECMA No. EN2997S0 & EN2997 SE0



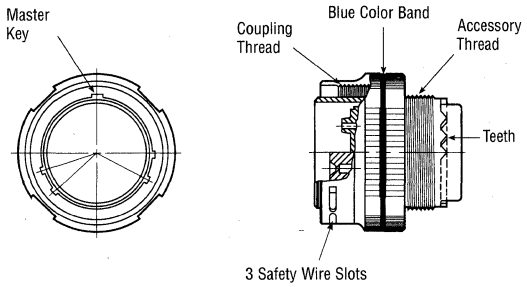
Plug Shell, Self-Locking

MATRIX No. MTE 37K
ESC 10 No. ESC10KE6
AECMA No. EN2997K6



Plug Shell, Self-Locking, RFI Grounding

MATRIX No. MTE 39K & MTE 39KE
ESC 10 No. ESC10SE6
AECMA No. EN2997S6 & EN2997SE6

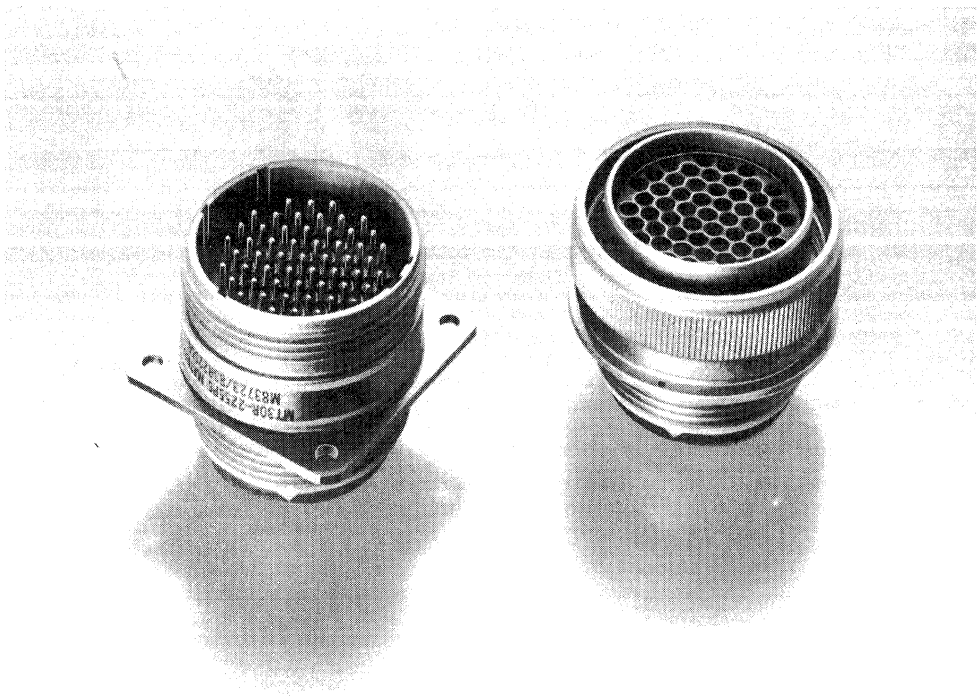


Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

MIL-C-83723 Series III

Product Facts

- **Self-locking plugs for high vibration environments**
- **Patented "frustum" insert retention mechanism to withstand high G-loads during shock and vibration**
- **Closed entry socket contacts to prevent probe damage**
- **"Cork and bottle" interfacial seals around each contact**
- **Sealing grommets accept a wide range of wire diameters**
- **Largest number of shell sizes, styles, classes and insert arrangements qualified to MIL-C-83723**
- **Thermocouple pin and socket contacts are available, consult AMP for specifications**



For applications requiring extended service at temperatures to 200°C, this line of circular connectors qualified to MIL-C-83723 Series III is ideal. They also have the added advantages of a rear-release contact retention system.

This contact retention system permits insertion, release and removal of contacts from the rear of the connector utilizing the same plastic insertion/extraction tool specified for use with most qualified rear-release type connectors. Servicing the connector from the rear helps prevent damage to the front that might affect the sealing characteristics. This system also eliminates the need to remove and replace the safety wire.

Pin and socket contacts, used in this connector, conform to MIL-C-39029 using the standard crimp tool per MIL-C-22520.

Both square flange and jam nut mounting type receptacles and their mating plugs are available in a full range of shell sizes and insert arrangements. The threaded coupling plugs are available with a choice of safety wire provisions or self-locking feature.

Complete environmental sealing includes individual contact seal, an interfacial seal, a shell-to-shell seal, redundant rear wire seals, and an insert-to-shell seal.

The hard face closed entry socket insert is designed with a lead-in chamfer that accepts pin contacts bent to a pre-established limit. The interfacial seal on the pin side insert has raised barriers around each pin. This barrier displaces into the chamfer when mated, providing a positive moisture seal.

These connectors have also been designed to meet the requirements of Boeing specifications BACC63BR and BACC63BT; and McDonnell Douglas specification BAN 7025 (DC50 Series).

SOURCE: Catalog 82785

Specifications subject to change.
1-800-522-6752 Product Information Center/ AMP FAX Service
1-800-722-1111 Tooling/Technical Assistance Center

MIL-C-83723
Series III (Continued)

Performance Specifications

Voltage Rating

Altitude		Mated Service Rating	
ft.	m	I	II
Sea Level	-	1500	2300
50,000	15 240	500	750
70,000	21 336	375	500
110,000	33 528	200	200

Note: When the voltage as indicated above is applied between shell and closest contact to the shell or between the two closest contacts for a period of 5 seconds, there shall be no evidence of flashover or breakdown.

Contact Current Rating and Retention

Contact Size*	Current Rating		Contact Retention	
	Amperes Max.	Voltage Drop Millivolts	Axial Load lb	Axial Load N
20	7.5	35	20	89.0
16	13.0	25	25	111.2
12	23.0	25	30	133.4

*Organize individual circuits to maintain heat rise within operating temperature requirements.

Operating Temperature Range
-65°C to +200°C [-85°F to +392°F]

Environmental Seal
Wired, mated connectors with the specified accessory attached will meet the altitude immersion test specified in MIL-C-83723.

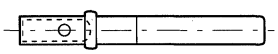
Durability
Minimum of 500 mating cycles.

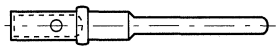
Shock and Vibration Requirements
Wired, mated connectors shall not be damaged, nor shall there be a current interruption longer than 1 microsecond when subjected to the following:

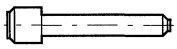
Shock
One shock in each of the three major axes, having a 100 g peak for a 6 millisecond duration (half-sine pulse).

Vibration
Twelve hours of random vibration having a range of 10 to 2,000 Hz with a .06 [1.5] double amplitude (10-55 Hz) and a 20 g peak level (55-2,000 Hz).

Contacts, Sealing Plugs and Assembly Tools


Socket Contact


Pin Contact


Sealing Plug

Contact Size	Wire Range		Socket Contacts		Pin Contacts		Sealing Plugs	
	AWG	mm²	Military Part No.	MATRIX Part No.	Military Part No.	MATRIX Part No.	Military Part No.	MATRIX Part No.
20	24-20	0.2-0.6	M39029/5-115	5100-001-0020	M39029/4-110	5000-054-0020	MS27488-20	3400-043-0020
16	20-16	0.5-1.4	M39029/5-116	5100-001-0016	M39029/4-111	5000-054-0016	MS27488-16	3400-043-0016
12	14-12	2-3	M39029/5-118	5100-001-0012	M39029/4-113	5000-054-0012	MS27488-12	3400-043-0012

Crimping Tools

Contact Size	Wire Range		Finished Wire Dia. Range		Military Part No.	
	AWG	mm²	inch	mm	Crimping Tool	Turret or Positioner
20	24-20	0.2-0.6	**.040-.083**	1.02-2.11	M22520/1-01 or /2-01	M22520/1-02 or /2-02
16	20-16	0.5-1.4	**.053-.103**	1.34-2.62	M22520/1-01	M22520/1-02
12	14-12	2-3	**.097-.158**	2.46-4.01	M22520/1-01	M22520/1-02

Insertion/Extraction Tools

Contact Size	Color Code	Military Part	MATRIX Part No.
20	Rd./Wh.	M81969/14-02	6500-001-0020
16	Bl./Wh.	M81969/14-03	6500-001-0016
12	Yel./Wh..	M81969/14-04	6500-001-0012

Note: Each connector is furnished with contacts. One spare for inserts requiring 1 to 26 of each contact and two spares for inserts with more than 26 contacts and a minimum of one sealing plug up to 10% of the number of contacts.

Specifications subject to change.
1-800-522-6752
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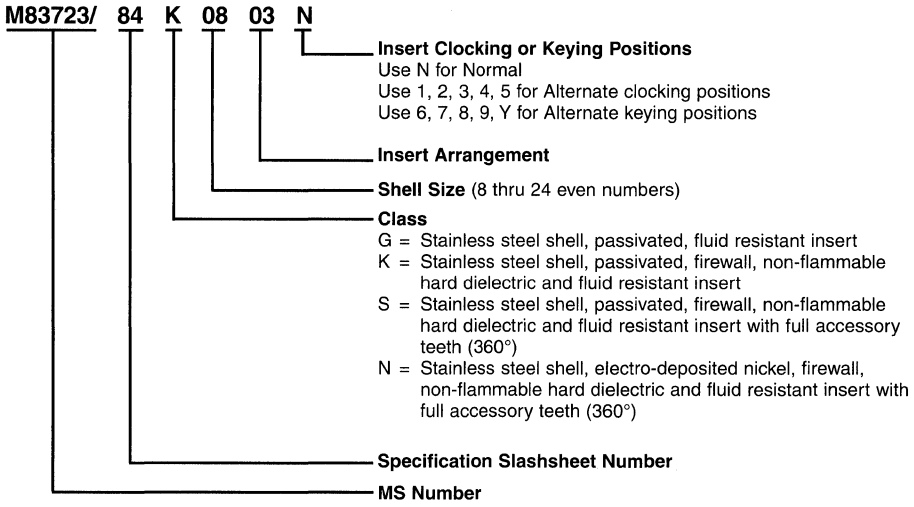
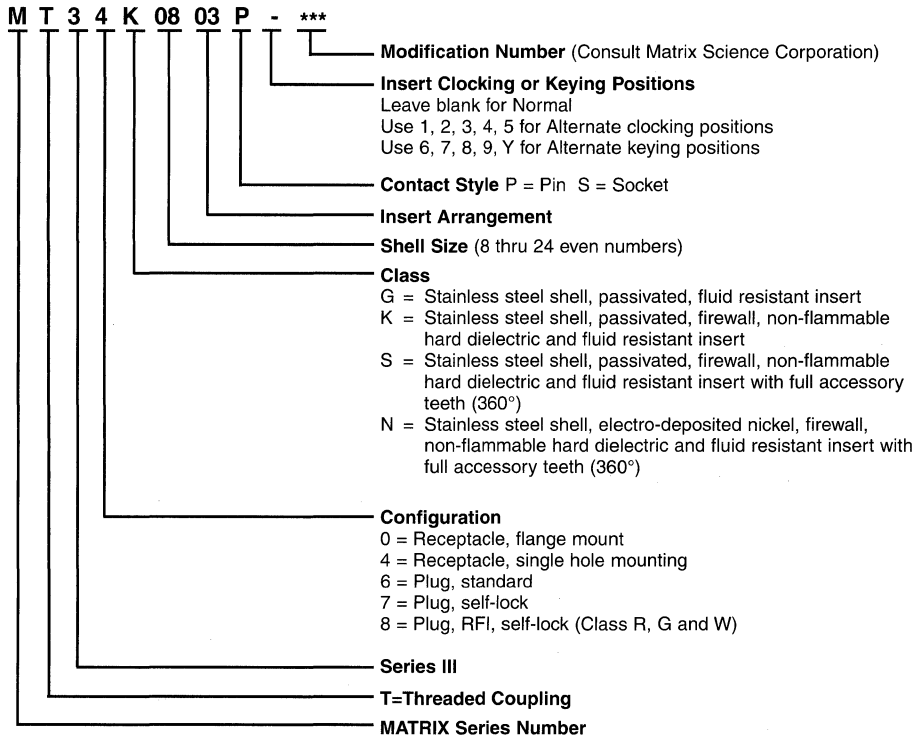
MIL-C-83723
Series III (Continued)

Military Part Number System



MATRIX Part Number System



SOURCE: Catalog 82785

Specifications subject to change.
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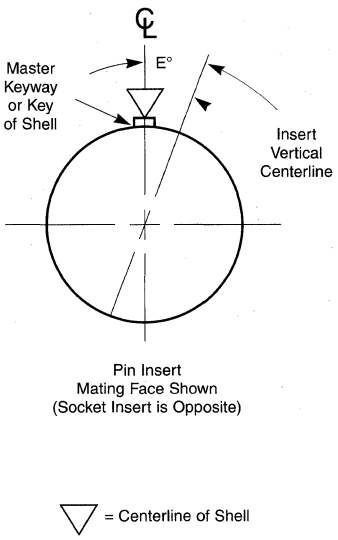
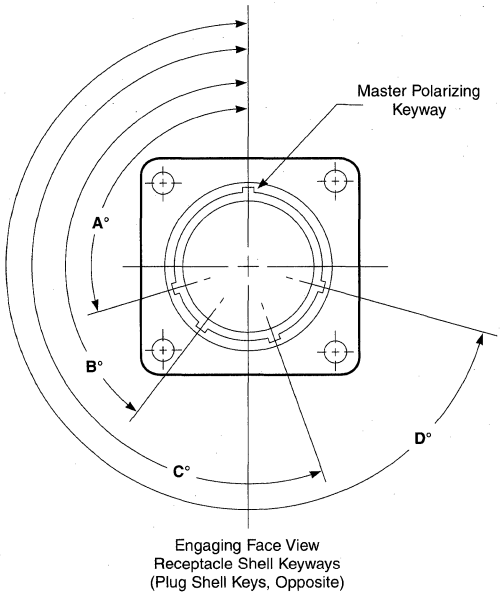
MIL-C-83723 Series III (Continued)

Polarization

Insert Clocking



Keying Positions



Insert Clocking (Per MIL-STD-1554)

Shell Size	Polarizing Position	Key/Keyway Positions A°	B°	C°	D°	Insert Position E°	Service Rating
8,10	N	105	140	215	265	0	Refer to Insert Arrangement Captions on next two pages
	1*	105	140	215	265	10	
	2*	105	140	215	265	20	
	3*	105	140	215	265	30	
	4*	105	140	215	265	40	
	5*	105	140	215	265	50	
12,14 16,18 20,22 24 & 28**	N	105	140	215	265	0	
	1*	105	140	215	265	10	
	2*	105	140	215	265	20	
	3*	105	140	215	265	30	
	4*	105	140	215	265	40	
	5*	105	140	215	265	50	

*Position 1 thru 5 inactive for new design, (Ref. MIL-STD-1554)

Keying Positions (Per MIL-STD-1554)

Shell Size	Polarizing Position	Key/Keyway Positions A°	B°	C°	D°	Insert Position E°	Service Rating
8 thru 24	N	105	140	215	265	0	Refer to Insert Arrangement Captions on next two pages
8 & 10	6	102	132	248	320	0	
	7	80	118	230	312	0	
	8	35	140	205	275	0	
	9	64	155	234	304	0	
	Y*	25	115	220	270	0	
10 only	6	18	149	192	259	0	
12, 14 16, 18 20, 22 * 24 & 28*	7	92	152	222	342	0	
	8	84	152	204	334	0	
	9	24	135	199	240	0	
	Y*	98	152	268	338	0	

*Positions 10 and Z designators are inactive, superseded by Y. (Ref. MIL-STD-1554)
**Shell size 28 not military standard connector

Notes:
1. In the "Normal insert position" (position N), the insert centerline coincides with the centerline of the master key/keyway of the shell.

2. In the "Alternate insert position" (positions 1, 2, 3, 4 and 5), the socket insert is rotated clockwise relative to the centerline of the master key/keyway of the shell as indicated in the Figure and Table. The pin insert is rotated counter-clockwise.

3. Alternate polarizing positions 1, 2, 3, 4 and 5 are for interchangeability use only. Not recommended for new design, per MIL-C-83723.

4. In the "Alternate keying position" (positions 6, 7, 8, 9 and Y), the minor keys/keyways are positioned with reference to master key/keyway as indicated in the keying position table.

5. All plugs have keys. All receptacles have keyways.

SOURCE: Catalog 82785

Specifications subject to change.
1-800-522-6752
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1-800-722-1111
Tooling/Technical Assistance Center

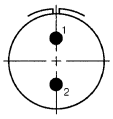
MIL-C-83723
Series III (Continued)

Insert Arrangements (Per MIL-STD-1554)

Numbering identification example: **0803** (Shell Size and Insert Number)
3 #20 (Contact quantity and size)
I (Service rating)

0803
3 #20
I

0898
3 #20
I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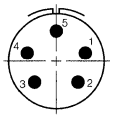
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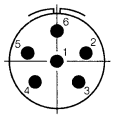
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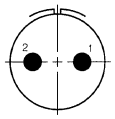
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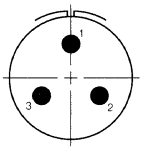
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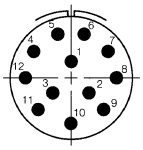
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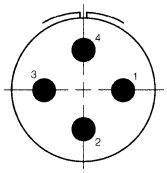
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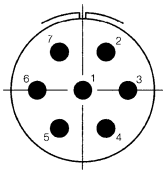
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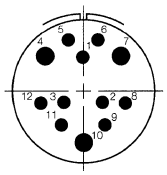
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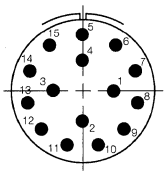
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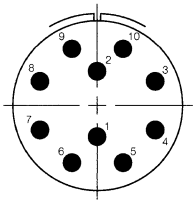
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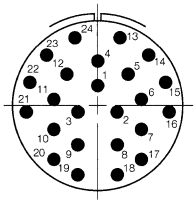
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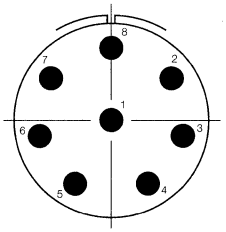
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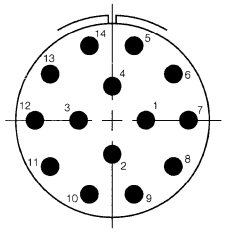
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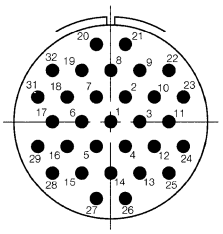
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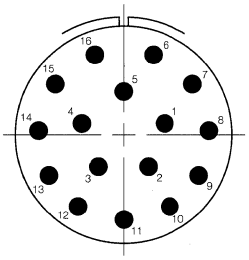
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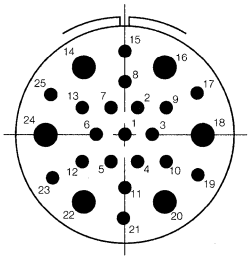
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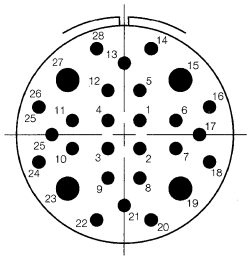
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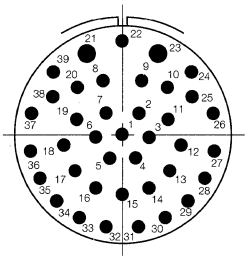
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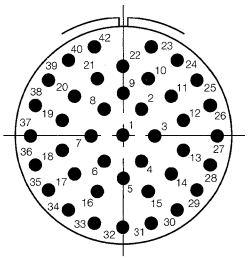
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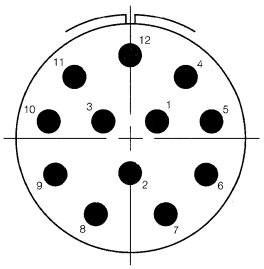
2212
12 #12
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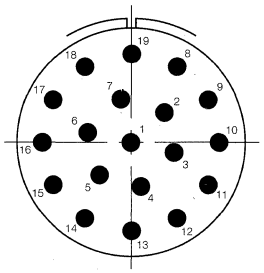
Note: Mating face of pin insert is shown. Socket insert is opposite.

SOURCE: Catalog 82785

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

MIL-C-83723
Series III (Continued)

Insert Arrangements
(Continued)



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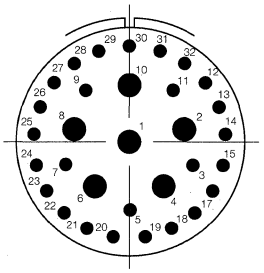

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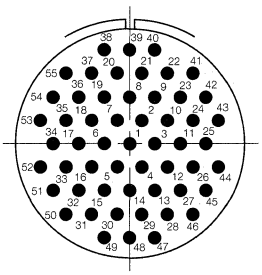

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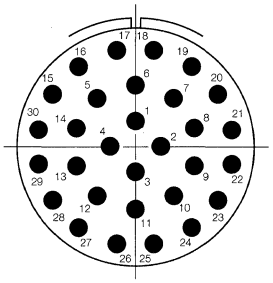

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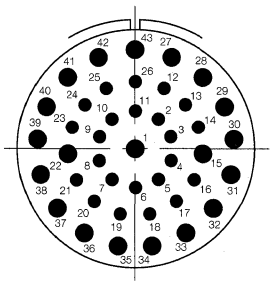

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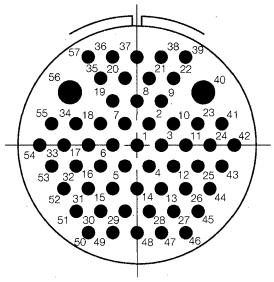

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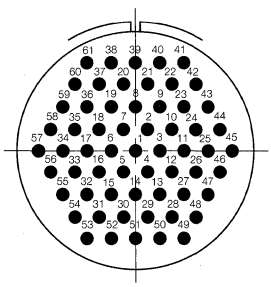

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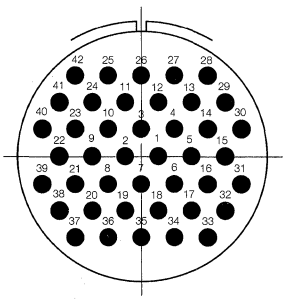

2842
42 #16
(Not an MS layout)

Note: Mating face of pin insert is shown. Socket insert is opposite.

Specifications subject to change.
1-800-522-6752
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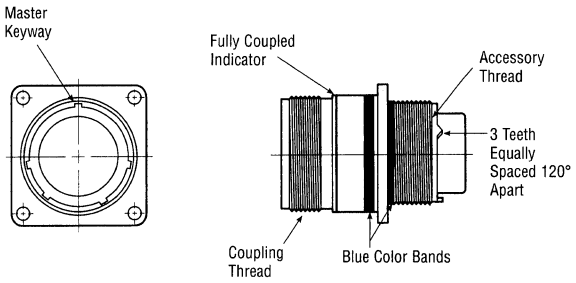
1-800-722-1111
Tooling/Technical Assistance Center

MIL-C-83723
Series III (Continued)

Shell Size
8
10
12
14
16
18
20
22
24
28

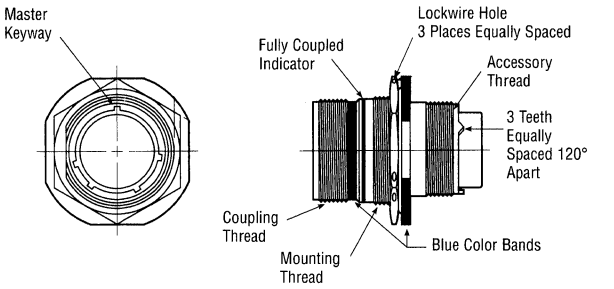
Receptacle Shell, Flange Mount, Threaded Coupling

Military No. M83723/82 & 83
MATRIX No. MT30 G, K, KS*, KN*
Boeing No. BACC63BT*
McDonnell Douglas BAN 7025 No. DC54, DC55



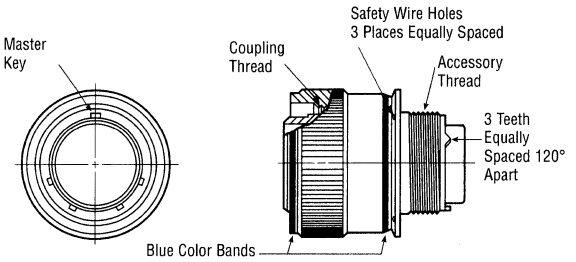
Receptacle Shell, Jam Nut Mount, Threaded Coupling

Military No. M83723/84 & 85
MATRIX No. MT34 G, K, KS*, KN*



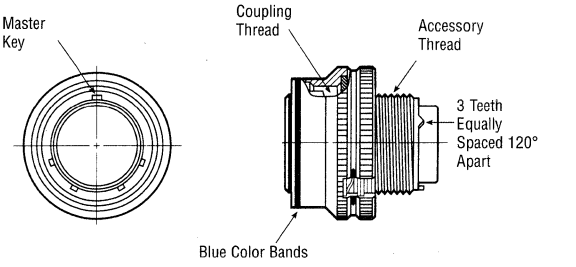
Plug Shell, Threaded Coupling

Military No. M83723/86, 87, 91*, & 92*
MATRIX No. MT36 G, K



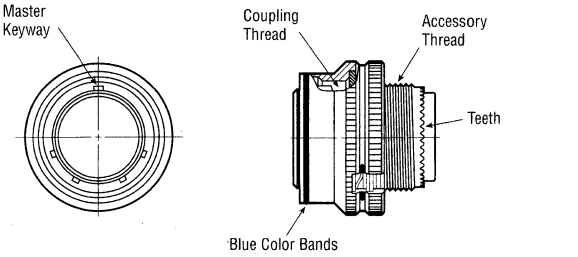
Plug Shell, Self-Locking, Threaded Coupling

Military No. M83723/95 & 96
MATRIX No. MT37 G, K
Boeing No. BACC63BR**
McDonnell Douglas BAN 7025 No. DC 56, DC 57



Plug Shell, RFI Grounding, Self-Locking Threaded Coupling

MATRIX No. M83723/97 & 98
MATRIX No. MT38 KS, KN



SOURCE: Catalog 82785

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

MIL-C-38999 Series III

Product Facts

- **Self-locking plugs with 2:1 differential uncoupling/coupling torque for high vibration environments**
- **Triple lead acme thread for quick disconnect**
- **Positive metal-to-metal bottoming for improved shell-to-shell conductivity**
- **Patented "frustum" insert retention system to withstand high G-loads during shock and vibration**
- **360° accessory teeth for improved vibration performance**
- **Sealing grommets accept a wide range of wire diameters**
- **"Cork and bottle" interfacial seals around each contact**
- **Closed entry socket contacts to prevent probe damage**
- **Thermocouple pin and socket contacts are available, consult AMP for specifications**

Severe environments encountered in modern commercial and military aircraft require connectors whose performance is improved over that provided by general purpose connectors. An improved threaded connector that will withstand a 2000°F [1093°C] flame test for 20 minutes has been developed by Matrix Science Corporation and qualified to MIL-C-38999 Series III. It provides "one turn" coupling and disconnect through the use of a self-locking acme thread, while still meeting the new environment stress requirements.

These connectors feature positive metal-to-metal bottoming, precluding relative shell-to-shell motion which may result in ordinary connector wear or moisture entrapment.

The development of these self-locking connectors does away with the need for safety wiring. The unique, patented, ratcheting device is the next generation of self-lockers. Being a simple, integral design, it is inherently superior to ball-and-spring, and tang-lock designs.

These connectors are offered in square flange (front and rear mount) and jam nut mount receptacles. All plugs provide EMI/RFI shielding up to 10 GHz through use of positive shell-to-shell annular spring fingers. A wide range of shell sizes, contact arrangements and polarization options are also available.

The rear accessory threads are metric, as specified in MIL-C-38999. This results in additional wall thickness, giving greater strength and shock resistance. This is particularly important when heavier or shielded backshells are required for particular applications.

SOURCE: Catalog 82785

MIL-C-38999
Series III (Continued)

Performance Specifications

Voltage Rating

Altitude		Service Rating		
ft.	m	M	I	II
Sea Level	—	1300	1800	2300
50,000	15 240	800	1000	1000
70,000	21 336	800	1000	1000
100,000	30 480	800	1000	1000

Contact Current Rating and Retention

Contact Size*	Current Rating	Contact Retention	
	DC Test Amperage	Axial Load	
		lb	N
22D	5.0	10	44.5
20	7.5	15	66.7
16	13.0	25	111.2
12	23.0	25	111.2

*Organize individual circuits to maintain heat rise within operating temperature requirements.

Operating Temperature Range
-65°C to +200°C [-85°F to +392°F]

Durability
Minimum of 500 mating cycles.

Shock and Vibration Requirements
When tested as follows the connector shall sustain no physical damage or electrical discontinuity exceeding 1 microsecond.

MT93 Standard Shock
Pulse of an approximate half sine wave of 300 G magnitude with duration of 3 milliseconds applied in three axes.

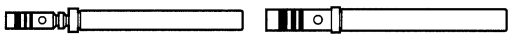
MT93 High Impact Shock
When mounted as specified in MIL-S-901, Grade A, a drop of a 400 lb. hammer from 1 foot, 3 feet and 5 feet applied to connector in three axes, totaling nine impacts.

Vibration
Sine
Frequency range of 10 to 2000 Hz, in 20 minute sweeps, in 3 axes, with the following variations: (with simulated accessory load)
- Duration: 36 hours total, 12-hour cycles.
- Levels: Velocity of 10 in. per second (10-50 Hz); displacement of 0.06 [1.5] (50-140 Hz) and acceleration of 60 Gs peak (140-2000 Hz)
4 hours of each axis at room ambient -55°C and +200°C

Random
-(without simulated accessory load): 41.7 G RMS for 8 hours in two axes, totaling 16 hours at ambient temperature.
-(with simulated accessory load): 49.5 G RMS for 8 hours in two axes, totaling 16 hours at 200°C.

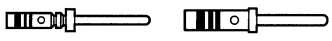
RFI & EMI
RFI & EMI attenuation at the specified frequency meet the requirements of MIL-C-38999.
RFI shielding effectiveness of mated connectors with RFI backshells is measured in a triaxial radio frequency leakage fixture.
EMI shielding effectiveness is measured at the interface of mated connectors and tested by the MODE STIR procedure specified in method 3008 of MIL-STD-1344.

Contacts, Sealing Plugs and Assembly Tools



Size 22D & 20 — Size 16 & 12

Socket Contact



Size 22D & 20 — Size 16 & 12

Pin Contact

Sealing Plug

Contact Size	Wire Range		Socket Contacts		Pin Contacts		Sealing Plugs	
	AWG	mm²	Military Part No.	MATRIX Part No.	Military Part No.	MATRIX Part No.	Military Part No.	MATRIX Part No.
22D	28-22	0.08-0.4	M39029/56-348	5100-101-0122	M39029/58-360	5000-068-0022	MS27488-22	3400-043-0022
20	24-20	0.2-0.6	M39029/56-351	5100-101-0120	M39029/58-363	5000-068-0020	MS27488-20	3400-043-0020
16	20-16	0.5-1.4	M39029/56-352	5100-101-0116	M39029/58-364	5000-068-0016	MS27488-16	3400-043-0016
12	14-12	2-3	M39029/56-353	5100-101-0112	M39029/58-365	5000-068-0012	MS27488-12	3400-043-0012

Crimping Tools

Contact Size	Wire Range		Finished Wire Dia. Range		Contact Type	Military Part No.	
	AWG	mm²	inch	mm		Crimping Tool	Turret or Positioner
22D			.030-.054	0.76-1.37	P	M22520/2-01	M22520/2-09
					S	M22520/2-01	M22520/2-07
20	24-20	0.2-0.6	.040-.083	1.02-2.11	P&S	M22520/1-01	M22520/1-04
16	20-16	0.5-1.4	.065-.109	1.34-2.62	P&S	M22520/1-01	M22520/1-04
12	14-12	2-3	.097-.142	2.46-4.01	P&S	M22520/1-01	M22520/1-04

Note: Each connector is furnished with contacts. One spare for inserts requiring 1 to 26 of each contact and two spares for inserts with more than 26 contacts and a minimum of one sealing plug up to 10% of the number of contacts.

Insertion/Extraction Tools

Contact Size	Color Code	Military Part No.	MATRIX Part No.
22D	Gr./Wh.	M81969/14-01	6500-048-0022
20	Rd./Wh.	M81969/14-10	6500-055-0020
16	Bl./Wh.	M81969/14-03	6500-001-0016
12	Yel./Wh.	M81969/14-04	6500-001-0012

SOURCE: Catalog 82785

Specifications subject to change.
1-800-522-6752 Product Information Center/ AMP FAX Service
1-800-722-1111 Tooling/Technical Assistance Center

MIL-C-38999
Series III (Continued)

Military Part Number System

D38999/ 20 K B 35 P *

- **Shell Keying Position** (Use N for normal)
- **Contact Style** P = Pin S = Socket
- **Insert Arrangement**
- **Shell Size Code**
  A = 9 C = 13 E = 17 G = 21 J = 25
  B = 11 D = 15 F = 19 H = 23
- **Class**
  K = Stainless steel, passivated
  S = Stainless steel, electro-deposited nickel, -65°C to +200°C
- **Shell Style**
  20 = Wall mount receptacle
  24 = Jam nut receptacle
  26 = Plug, RFI
- **MS Number**

MATRIX Part Number System

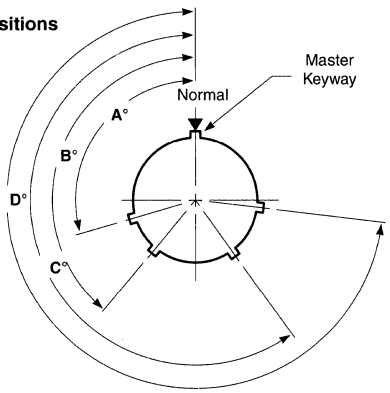
MT93 0 T 11 K 35 P * *

- **Modification Number** (Consult Matrix Science Corporation)
- **Shell Keying Position** (Not required for normal)
- **Contact Style** P=Pin S=Socket
- **Insert Arrangement**
- **Finishes**
  K = Stainless steel, passivated
  S = Stainless steel electro-deposited nickel, -65°C to +200°C
- **Shell Sizes** (odd numbers only, 9 thru 25)
- **Class**
  T = Environmental
- **Configurations**
  0 = Receptacle, wall mount
  4 = Receptacle, jam nut
  8 = Plug, RFI
- **Matrix Science Corporation, threaded coupling, 38999 Series III**

MIL-C-38999 Series III (Continued)

Polarization

Keying Positions

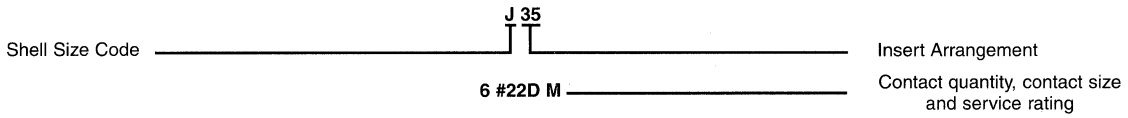


Notes:
1. All minor keys are rotated to provide shell polarization: the master key remains fixed as shown.
2. Mating face of receptacle is shown. Plug is opposite.

Shell Size	Polarizing Positions	Key Locations A°	B°	C°	D°	Service Rating
9	N	105	140	215	265	Refer to Insert Arrangement Captions on next three pages.
	A	102	132	248	320	
	B	80	118	230	312	
	C	35	140	205	275	
	D	64	155	234	304	
	E	91	131	197	240	
11 thru 15	N	95	141	208	236	
	A	113	156	182	292	
	B	90	145	195	252	
	C	53	156	220	255	
	D	119	146	176	298	
	E	51	141	184	242	
17 thru 25	N	80	142	196	293	
	A	135	170	200	310	
	B	49	169	200	244	
	C	66	140	200	257	
	D	62	145	180	280	
	E	79	153	197	272	

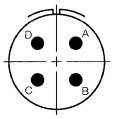
Insert Arrangements (Per MIL-STD-1560)

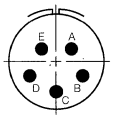
Numbering identification:

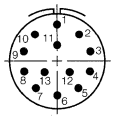


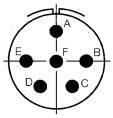
A35, 6 #22D M

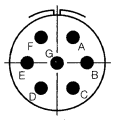
A98, 3 #20 I

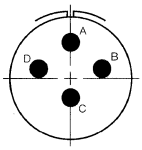

B04, 4 #20 I

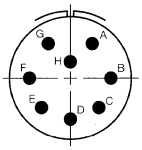

B05, 5 #20 I

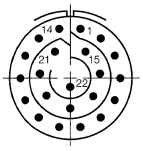

B35, 13 #22D M

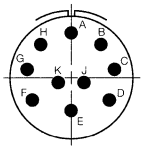

B98, 6 #20 I


B99, 7 #20 I


C04, 4 #16 I


C08, 8 #20 I


C35, 22 #22D M


C98, 10 #20 I

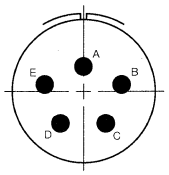
Note: Mating face of pin insert is shown, Socket insert is opposite.

SOURCE: Catalog 82785

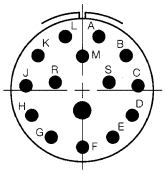
Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

MIL-C-38999
Series III (Continued)

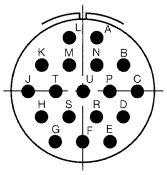
Insert Arrangements
(Continued)



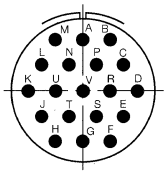
D05,
5 #16 II



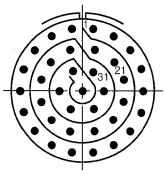
D15,
1 #16, 14 #201



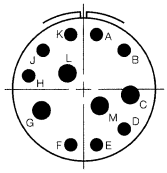
D18,
18 #20 I



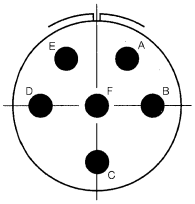
D19,
19 #20 I



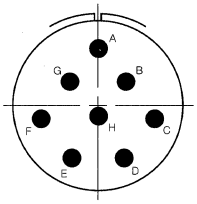
D35,
37 #22D M



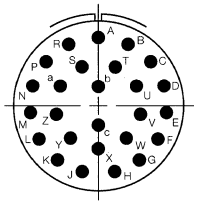
D97,
4 #16, 8 #20 I



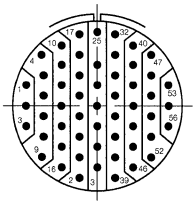
E06,
6 #12 I



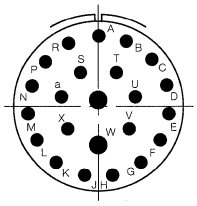
E08,
8 #16 II



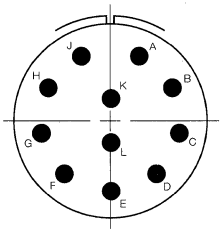
E26,
26 #20 I



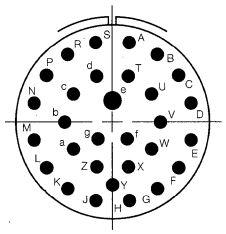
E35,
55 #22D M



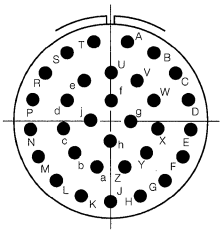
E99,
2 #16, 21 #20 I



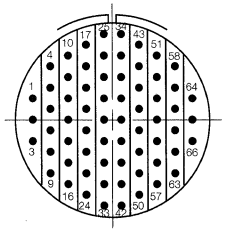
F11,
11 #16 II



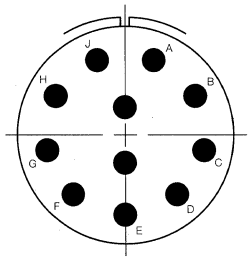
F 30,
1 #16, 29 #20 I



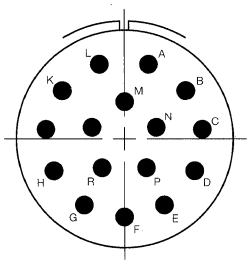
F32,
32 #20 I



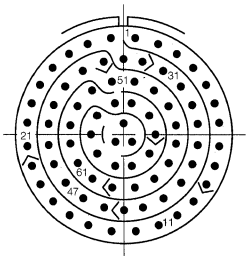
F35,
66 #22D M



G11,
11 #12 I



G16,
16 #16 II



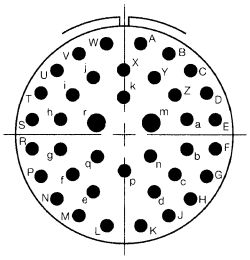
G35,
79 #22D M

Note: Mating face of pin insert is shown. Socket insert is opposite.

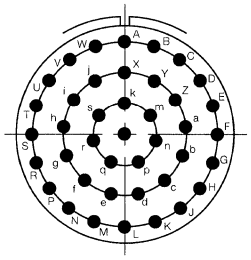
SOURCE: Catalog 82785

MIL-C-38999
Series III (Continued)

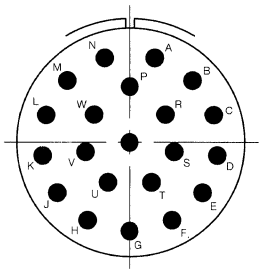
Insert Arrangements
(Continued)



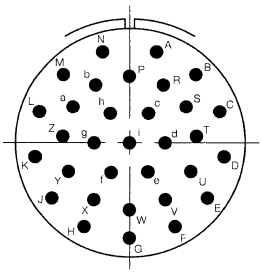
G39,
2 #16, 37 #20 I



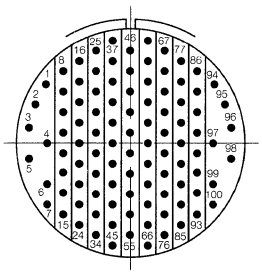
G41,
41 #20 I



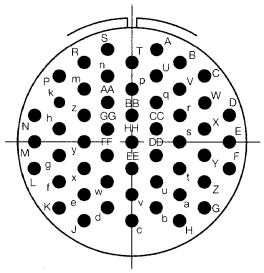
H21,
21 #16 II



H32,
32 #20



H35,
100 #22 D M



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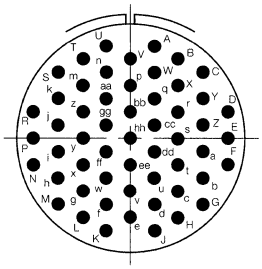
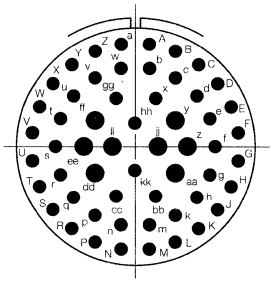
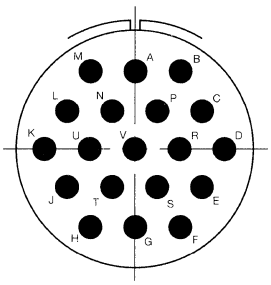
53 #20 I



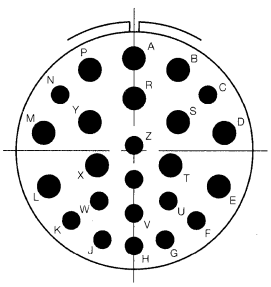
H55,
55 #20 I



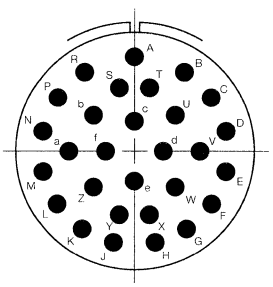
J04,
8 #16, 48 #20 I



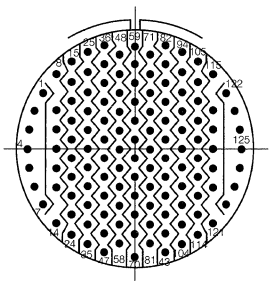
J19,
19 #12 I



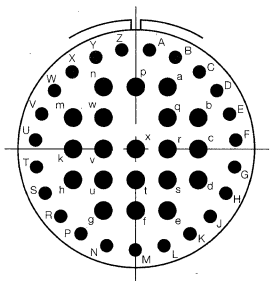
J24,
12 #12, 12 #16 I



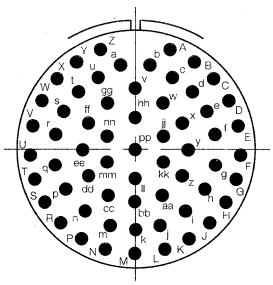
J29,
29 #16 I



J35,
128 #22D M



J43,
20 #16, 23 #20 I



J61,
61 #20 I

Note: Mating face of pin insert is shown. Socket insert is opposite.

SOURCE: Catalog 82785

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

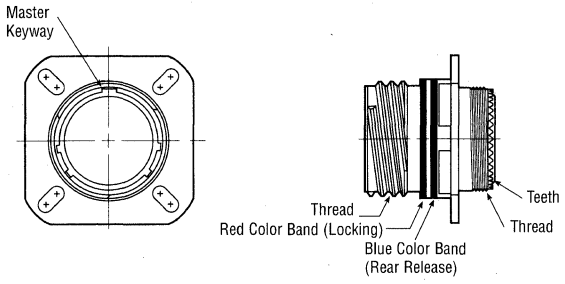
MIL-C-38999
Series III (Continued)

Shell Size:

9
11
13
15
17
19
21
23
25

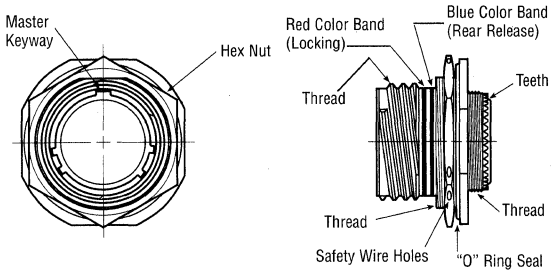
Receptacle Shell, Flange Wall Mount, Acme Threaded Coupling

Military No. D38999/20
MATRIX No. MT930



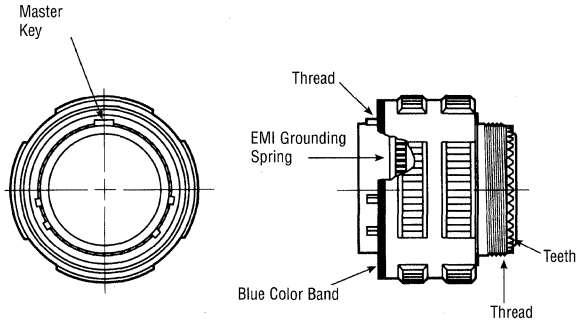
Receptacle Shell, Jam Nut Mount, Modified Acme Thread Coupling

Military No. D38999/24
MATRIX No. MT934



Plug Shell, EMI Grounding, Modified Acme Thread Coupling

Military No. D38999/26
MATRIX No. MT938

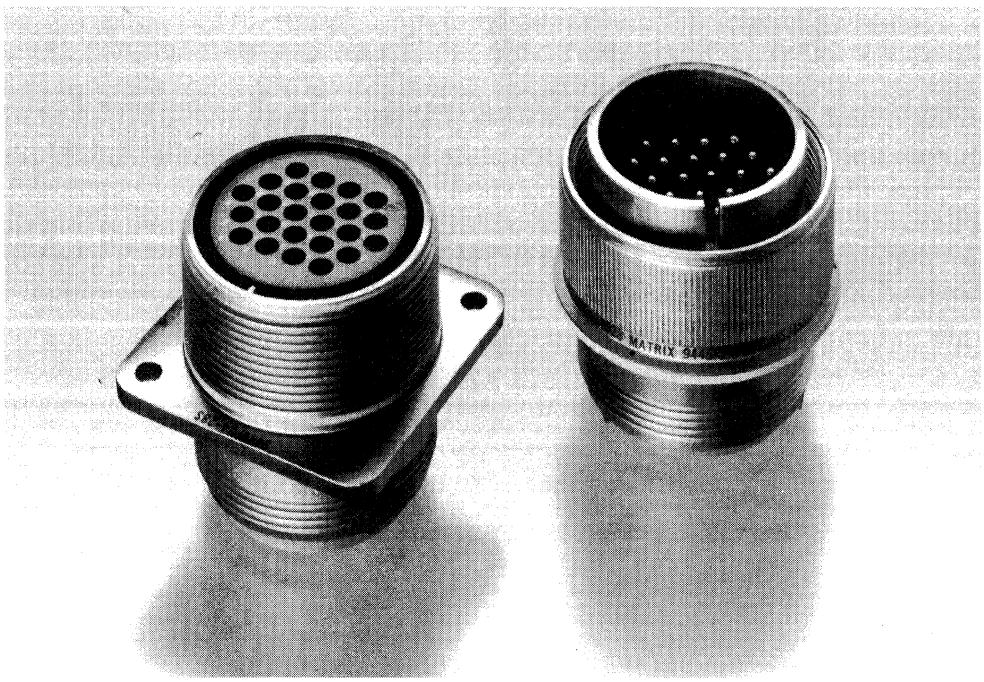


SOURCE: Catalog 82785

MIL-C-5015

Product Facts

- **Largest number of shell sizes, styles, classes, and insert arrangements qualified to MIL-C-5015**
- **Contact sizes 16 through 0**
- **MS345* Series intermateable with existing MIL-C-5015 solder or crimp versions on existing equipment**
- **Self-locking plugs to eliminate the need for safety wiring**
- **Thermocouple pin and socket contacts are available, consult AMP or Matrix Science Corporation for specifications**
- **Consult AMP for information on shell sizes 44 and 48.**



The environmentally sealed MIL-C-5015 connector with crimp contacts was developed to replace the MIL-C-5015 solder type connector. This redesigned connector is intermateable and intermountable.

These connectors accommodate contact sizes 0 to 16 and shell sizes 8 to 48*. Multiple interlock systems provide for permanent insert retention. Plugs with an internal ratcheting mechanism, which prevents unmating due to vibration or shock, are available as well as the standard plug with the captive coupling nut.

Complete environmental sealing includes individual contact seals, interfacial seals between contacts, a peripheral gasket shell-to-shell seal, redundant rear-wire seals, and insert-to-shell seals.

Other design features show how Matrix Science keeps an old connector standard abreast of current technology. The captive coupling nut, for example, uses retaining rings in combination with "L" washers to prevent inadvertent disassembly. Superior tolerancing of the damage-proof retention clip provides positive retention of contacts, while positive control of the dielectric offers easy contact insertion.

Some of these connectors are also supplied to McDonnell Douglas Specification BAN 7025, DC60 Series.

SOURCE: Catalog 82785

Specifications subject to change.
1-800-522-6752 Product Information Center/ AMP FAX Service
1-800-722-1111 Tooling/Technical Assistance Center

MIL-C-5015 (Continued)

Performance Specifications

Voltage Rating

Altitude		Service Rating					
ft.	m	Inst.	A	D	E	B	C
Sea Level	-	1000	2000	2800	3500	4500	7000
50,000	15 240	400	600	675	750	825	975
70,000	21 326	260	360	400	440	480	560
110,000	33 528	200	200	200	200	200	200

Contact Current Rating and Retention

Contact Size*	Current Rating		Contact Retention	
	Amperes Max.	Voltage Drop Millivolts	Axial Load lb	Axial Load N
16	13	50	25	111.2
12	23	50	30	133.4
8	46	25	50	222.4
4	80	14	60	266.9
0	150	12	75	333.6

* Organize individual circuits to maintain heat rise within operating temperature requirements.

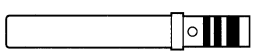
Operating Temperature Range
-55°C to +200°C [-75°F to +392°F]

Environmental Seal
Wired, mated connectors with the specified accessory attached will meet the altitude immersion test specified in MIL-C-5015.

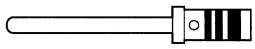
Durability
Minimum of 100 mating cycles

Shock
Wired, mated connectors are subjected to one shock in each of three mutually perpendicular axes with pulse of an approximate half sine wave of 50 g magnitude for a duration of 11 milliseconds. All contacts wired in series circuit with 100±10 milliamperes of current flow.

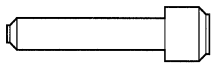
Contacts, Sealing Plugs and Assembly Tools



Socket Contact



Pin Contact



Sealing Plug

Contact Size	Wire Range		Socket Contacts		Pin Contacts		Sealing Plugs	
	AWG	mm²	Military Part No.	MATRIX Part No.	Military Part No.	MATRIX Part No.	Military Part No.	MATRIX Part No.
16S**	20-16	0.5-1.4	M39029/30-217	5100-033-1601	M39029/29-212	5000-029-0016	MS27488-16	3400-043-0016
16	20-16	0.5-1.4	M39029/30-218	5100-033-1602	M39029/29-212	5000-029-0016	MS27488-16	3400-043-0016
12	14-12	2-3	M39029/30-219	5100-033-0012	M39029/29-213	5000-029-0012	MS27488-12	3400-043-0012
8	10-8†	5-8.5	M39029/30-220	5100-033-0008	M39029/29-214	5000-029-0008	MS27488-8	3400-043-0008
4	6-4†	13-21	M39029/30-221	5100-033-0004	M39029/29-215	5000-029-0004	MS27488-4	3400-043-0004
0	2-0†	34-60	M39029/30-222	5100-033-0000	M39029/29-216	5000-029-0000	MS27488-0	3400-043-0000

** Shorter wire barrel
† Use MS3348 bushing to accommodate smaller wire.

Crimping Tools

Contact Size	Wire Range		Finished Wire Dia. Range		Color Code	Military Part No.			
	AWG	mm²	inch	mm		Crimping Tool	Turret or Positioner	Power Unit 400B Crimp Head	Power Unit 400B Locator
16S	20-16	0.5-1.4	**.053-.103**	1.34-2.62	Rd./Wh.	M22520/1-01	M22520/1-02	–	–
16	20-16	0.5-1.4	**.053-.103**	1.34-2.62	Bl./Wh.	M22520/1-01	M22520/1-02	–	–
12	14-12	2-3	**.085-.158**	2.15-4.01	Yel./Wh.	M22520/1-01	M22520/1-02	–	–
8	10-8	5-8.5	**.132-.255**	3.35-6.48	Wh./Red.	M22520/23-01	M22520/23-02	414DA-8	404A
4	6-4	13-21	**.237-.370**	6.01-9.40	Wh./Bl.	M22520/23-01	M22520/23-04	414DA-4	4112
0	2-0	34-60	**.360-.550**	9.14-13.97	Wh./Yel.	M22520/23-01	M22520/23-05	414DA-0	4066

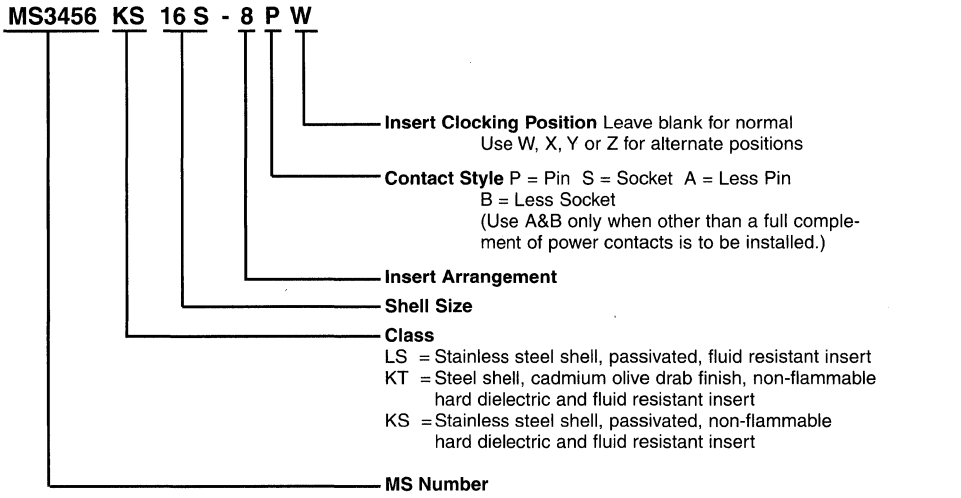
Insertion/Extraction Tools

Contact Size	Color Code	Military Part No.	MATRIX Part No.
16	Bl./Wh.	M81969/14-03	6500-001-0016
12	Yel./Wh.	M81969/14-04	6500-001-0012
8	Wh./Red.	M81969/14-06	6500-018-0008
4	Wh./Bl.	M81969/14-07	6500-018-0004
0	Wh./Yel.	M81969/14-08	6500-018-0000

SOURCE: Catalog 82785

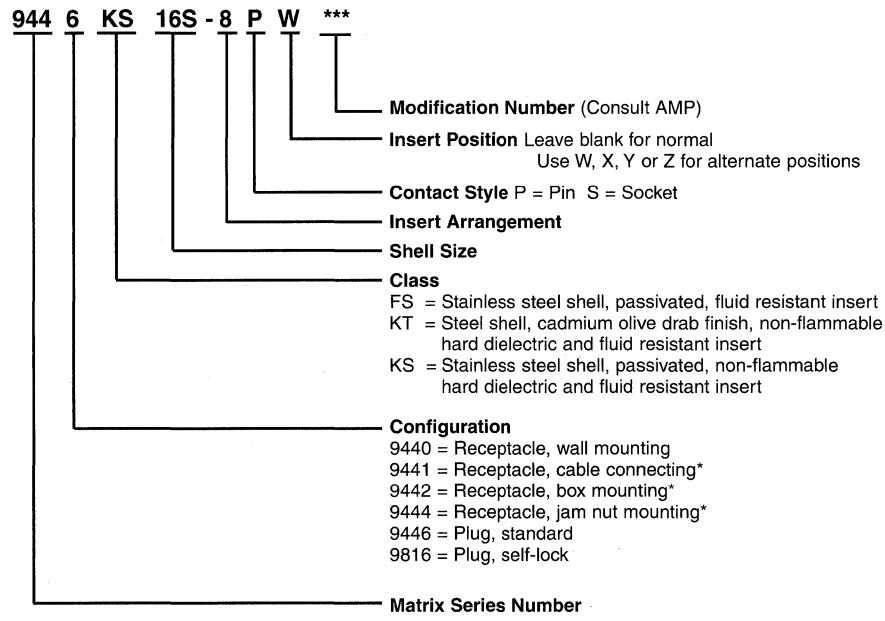
MIL-C-5015 (Continued)

Military Part Number System



Note: Class K is inactive and has been replaced by Class KT for all applications.

MATRIX Part Number System



* Class FS only

SOURCE: Catalog 82785

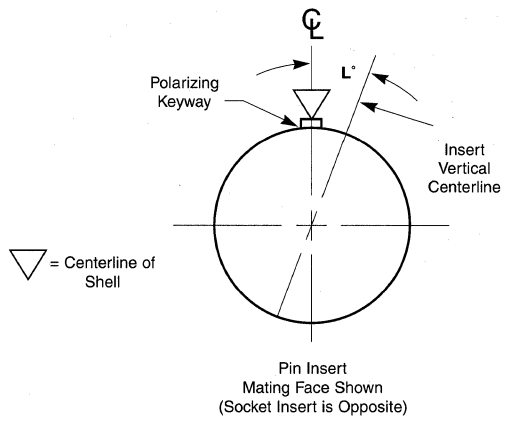
Specifications subject to change.
1-800-522-6752 Product Information Center/ AMP FAX Service
1-800-722-1111 Tooling/Technical Assistance Center

MIL-C-5015 (Continued)

Polarization

Clocking Positions (Per MIL-STD-1651)

1. In the Normal position, the insert vertical centerline and key/keyway centerlines coincide: L=0°.
2. In the "Alternate" insert position (positions W, X, Y & Z), the insert is rotated relative to the centerline of the master key or keyway of the shell.
   a. In Alternate positions the pin insert is rotated clockwise within the shell so that the angle "L" between the indexing radius and the centerline of the master key or keyway of the shell is as required.
   b. In Alternate positions the socket insert is rotated counterclockwise within the shell so that the angle "A" between the indexing radius and the centerline of the master key or keyway of the shell is as required



Insert Arrangement and Clocking Chart (Per MIL-STD-1651)

Shell Size & Insert Arrangement	Contacts Quantity	Contacts Size	Service Rating	Alternate Insert Positions L Degrees W	X	Y	Z	Remarks
8S-1	1	16	A	–	–	–	–	
10S-2	1	16	A	–	–	–	–	
10SL-3	3	16	A	–	–	–	–	Service Rating Inst. Class K
10SL-4	2	16	A	–	–	–	–	
12S-3	2	16	A	70	145	215	290	
12S-4	1	16	D	–	–	–	–	
12-5	1	12	D	–	–	–	–	
14S-1**	3	16	A	–	–	–	–	
14S-2	4	16	Inst.	–	120	240	–	
14-3	1	8	A	–	–	–	–	
14S-5	5	16	Inst.	–	110	–	–	
14S-6	6	16	Inst.	–	–	–	–	
14S-7	3	16	A	90	180	270	–	
14S-9**	2	16	A	70	145	215	290	
16S-1	7	16	A	80	–	–	280	
16S-8	5	16	A	–	170	265	–	
16-9	2	16	A	35	110	250	325	
	2	12						
16-10	3	12	A	90	180	270	–	
16-11	2	12	A	35	110	250	325	
16-12	1	4	A	–	–	–	–	
16-13	2	12	A	35	110	250	325	One alumel and one chromel contact
18-1	10	16	A (B,C,F,G) Inst. (All Others)	70	145	215	290	
18-4	4	16	D	35	110	250	325	

Shell Size & Insert Arrangement	Contacts Quantity	Contacts Size	Service Rating	Alternate Insert Positions L Degrees W	X	Y	Z	Remarks
18-5	1	16	D	80	110	250	280	
	2	12						
18-8	7	16	A	70	–	–	290	
	1	12						
18-9	5	16	Inst.	80	110	250	280	
	2	12						
18-10**	4	12	A	–	120	240	–	
18-11	5	12	A	–	170	265	–	
18-12*	6	16	A	80	–	–	280	
18-13	3	12	A	80	110	250	280	
	1	8						
18-15*	4	12	A	–	120	240	–	
18-19**	10	16	A	–	120	240	–	
18-22**	3	16	D	70	145	215	290	
20-2	1	0	D	–	–	–	–	
20-4	4	12	D	45	110	250	–	
20-7	4	16	D (A,B,G,H)	80	110	250	280	
	4	16	A (C,D,E,F)					
20-8	4	16	Inst.	80	110	250	280	
	2	8						
20-14	3	12	A	80	110	250	280	
	2	8						
20-15	7	12	A	80	–	–	280	
20-16	7	16	A	80	110	250	280	
	2	12						

* Consult AMP for availability.
**Inactive for new design.

SOURCE: Catalog 82785

Specifications subject to change.
1-800-522-6752 Product Information Center/ AMP FAX Service
1-800-722-1111 Tooling/Technical Assistance Center

MIL-C-5015 (Continued)

Insert Arrangement and Clocking Chart (Continued)
(Per MIL-STD 1651)

Shell Size & Insert Arrangement	Contact Quantity	Contact Size	Service Rating	Alternate Insert Positions L Degrees W	X	Y	Z	Remarks
20-17	1	16	A	90	180	270	—	
	5	12						
20-18	6	16	A	35	110	250	325	
	3	12						
20-21	8	16	A	35	110	250	325	
	1	12						
20-22	3	16	A	80	110	250	280	
	3	8						
20-24	2	16	A	35	110	250	325	
	2	8						
20-27	14	16	A	35	110	250	325	
20-29	17	16	A	80	—	—	280	
20-33	11	16	A	—	—	—	—	
22-2	3	8	D	70	145	215	290	
22-4**	2	12	A	35	110	250	325	
	2	8						
22-5	4	16	D	35	110	250	325	
	2	12						
22-14	19	16	A	80	110	250	280	
22-19	14	16	A	80	110	250	280	
22-21	2	16	A	80	110	250	280	
	1	0						
22-22	4	8	A	—	110	250	—	
22-23	1	12	D (H)	35	—	250	—	
	7	12	A (All Others)					
24-1**	1	12	D	80	110	250	280	
	1	0						
24-2	7	12	D	80	—	—	280	
24-5**	16	16	A	80	110	250	280	
24-7	14	16	A	80	110	250	280	
	2	12						
24-10	7	8	A	80	—	—	280	
24-11	6	12	A	35	110	250	325	
	3	8						
24-12	3	12	A	80	110	250	280	
	2	4						

** Inactive for new design.

Shell Size & Insert Arrangement	Contact Quantity	Contact Size	Service Rating	Alternate Insert Positions L Degrees W	X	Y	Z	Remarks
24-20	9	16	D	80	110	250	280	
	2	12						
24-22	4	8	D	45	110	250	—	
24-28	24	16	Inst.	80	110	250	280	
28-1	2	12	D (A & E)	80	110	250	280	
	4	12	A (B,D,F,H)					
	1	8	D (J)					
	2	8	A (G&C)					
28-2	12	16	D	35	110	250	325	
	2	12						
28-9	6	16	D	80	110	250	280	
	6	12						
28-10	1	12	D (G)	80	110	250	280	
	2	12	A (A & F)					
	2	8	A (B & E)					
	2	4	A (C &D)					
28-11	18	16	A	80	110	250	280	
	4	12						
28-12	26	16	A	90	180	270	—	
28-15	35	16	A	80	110	250	280	
28-17	1	16	B (R)	80	110	250	280	
	3	16	D (M,N,P)					
	11	16	A (All Others)					
28-20	4	16	A	80	110	250	280	
	10	12						
28-21	37	16	A	80	110	250	280	
28-22	3	16	D	70	145	215	290	
	3	4						
32-1	1	12	E (A)	80	110	250	280	
	2	12	D (D & C)					
	2	0	D (B & E)					
32-6	16	16	A	80	110	250	280	
	2	12						
	3	8						
	2	4						

SOURCE: Catalog 82785

Specifications subject to change.
1-800-522-6752 Product Information Center/ AMP FAX Service
1-800-722-1111 Tooling/Technical Assistance Center

MIL-C-5015 (Continued)

Insert Arrangement and Clocking Chart (Continued)
(Per MIL-STD-1651)

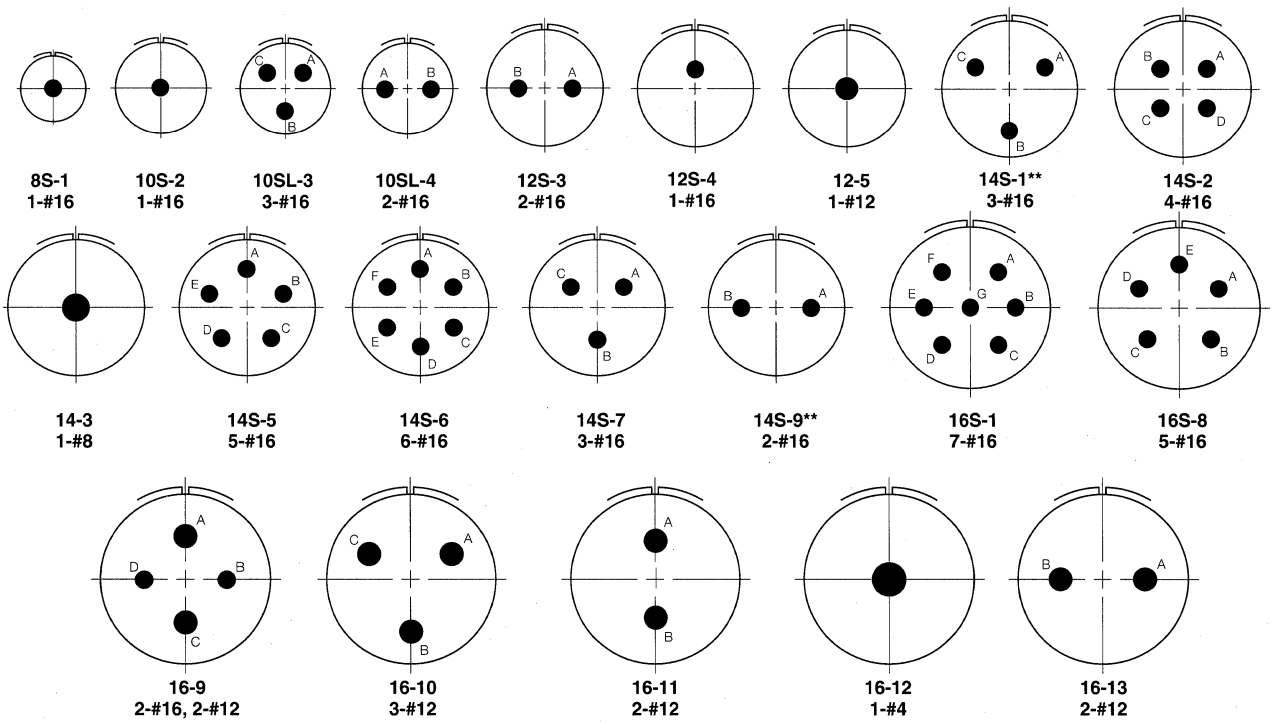
Shell Size & Insert Arrangement	Contacts Quantity	Contacts Size	Service Rating	Alternate Insert Positions L Degrees W	X	Y	Z	Remarks
32-7	4	16	Inst. (A,B,H,J)	80	125	235	280	
	24	16	A					
	7	12	(All Others)					
32-9	12	16	D	80	110	250	280	
	2	4						
32-13	18	16	D	80	110	250	280	
	5	12						
32-15	6	12	D	35	110	250	280	
	2	0						
32-17	4	4	D	45	110	250	—	
32-63	5	4	D	—	—	—	—	
32-73	46	16	A	36	—	—	—	
36-3	3	12	D	70	145	215	290	
	3	0						
36-5	4	0	A	—	120	240	—	
36-6	4	4	A	35	110	250	325	
	2	0						

Shell Size & Insert Arrangement	Contacts Quantity	Contacts Size	Service Rating	Alternate Insert Positions L Degrees W	X	Y	Z	Remarks
36-7	40	16	A	80	110	250	280	
	7	12						
36-8	46	16	A	80	110	250	280	
	1	12						
36-9	14	16	A	80	125	235	280	
	14	12						
	2	8						
	1	4						
36-10	48	16	A	80	125	235	280	
36-15	35	16	D (M) A (All Others)	60	125	245	305	
36-52	52	16	A	72	144	216	288	
40-1	24	16	D	65	130	235	300	
	6	12						
40-9	24	16	A	65	125	255	310	
	22	12						
	1	8						

Insert Arrangements (Per MIL-STD-1651)

Numbering identification example: **10SL-3** (Insert Number)
2-#16 (Contact quantity and size)

Note: For Service Rating see table above and on previous two pages.



**Inactive for new design.
Note: Mating face of pin insert is shown. Socket insert is opposite.

SOURCE: Catalog 82785

Specifications subject to change.
1-800-522-6752
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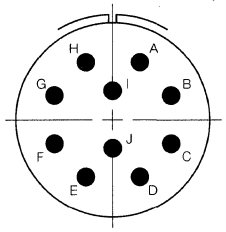
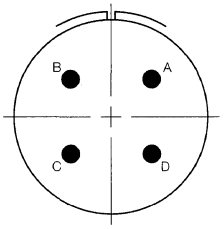
1-800-722-1111
Tooling/Technical Assistance Center

MIL-C-5015 (Continued)

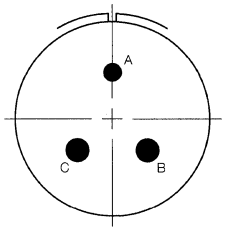
Insert Arrangements (Per MIL-STD-1651) (Continued)



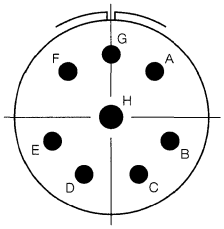
18-1
10-#16



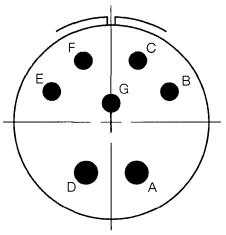
18-4
4-#16



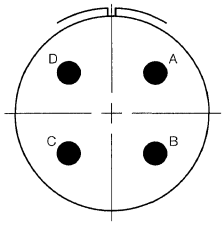
18-5*
1-#16, 2-#12



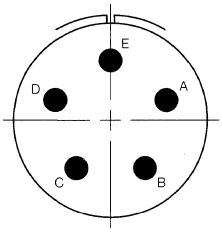
18-8
7-#16, 1-#12



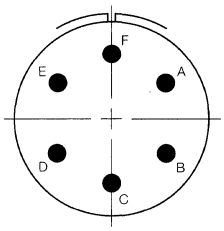
18-9
5-#16, 2-#12



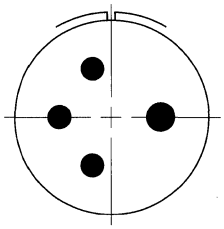
18-10**
4-#12



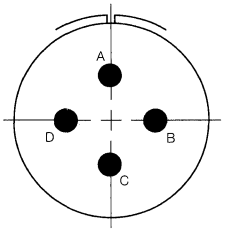
18-11
5-#12



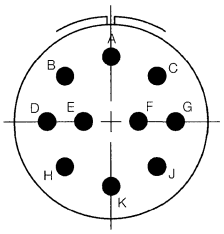
18-12*
6-#16



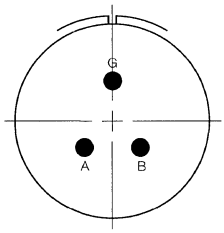
18-13
3-#12, 1-#8



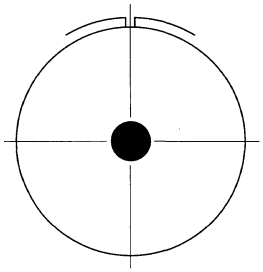
18-15*
4-#12



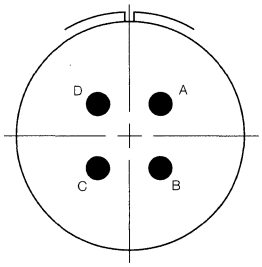
18-19**
10-#16



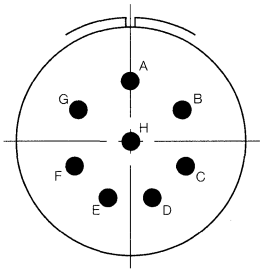
18-22**
3-#16



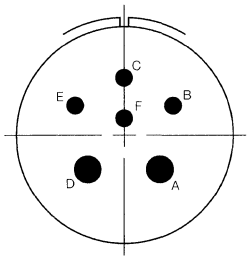
20-2
1-#0



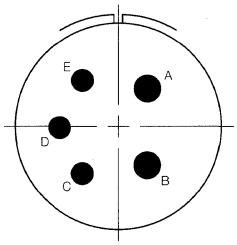
20-4
4-#12



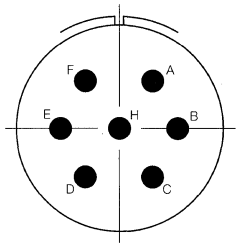
20-7
8-#16



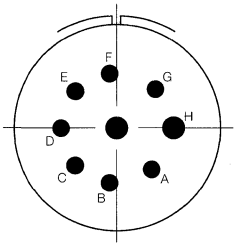
20-8
4-#16, 2-#8



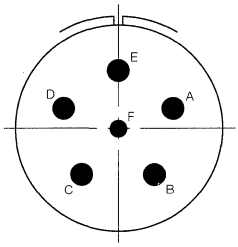
20-14
3-#12, 2-#8



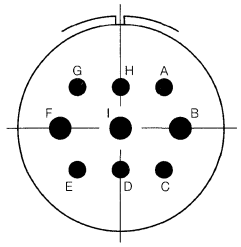
20-15
7-#12



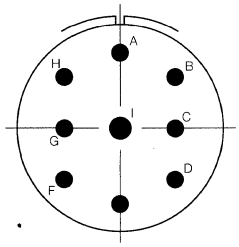
20-16
7-#16, 2-#12



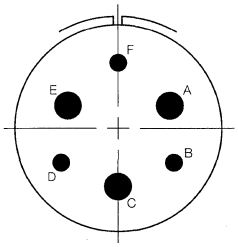
20-17
1-#16, 5-#12



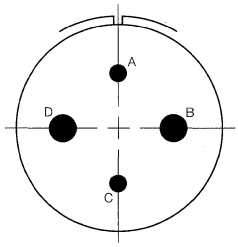
20-18
6-#16, 3-#12



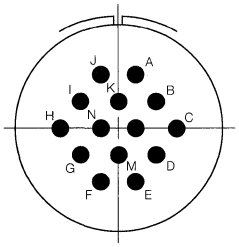
20-21
8-#16, 1-#12



20-22
3-#16, 3-#8



20-24
2-#16, 2-#8



20-27
14-#16

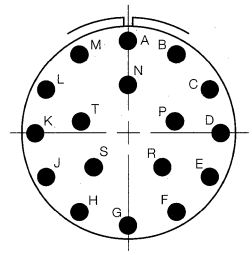
*Consult AMP for availability.
**Inactive for new design.
Note: Mating face of pin insert is shown. Socket insert is opposite.

SOURCE: Catalog 82785

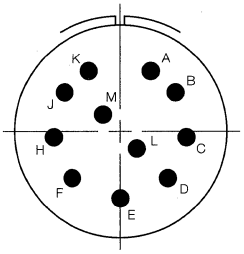
Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

MIL-C-5015 (Continued)

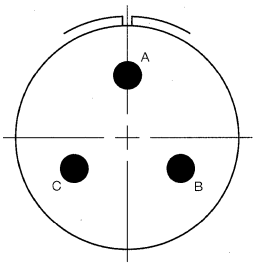
Insert Arrangements (Per MIL-STD-1651) (Continued)



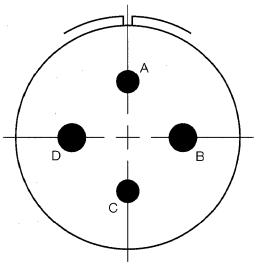
20-29
17-#16



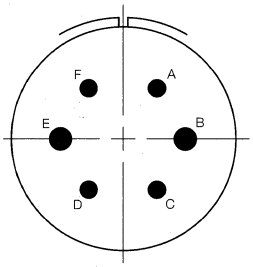
20-33
11-#16



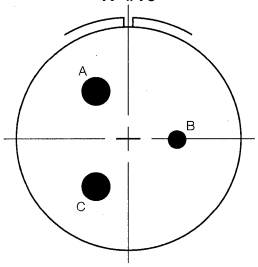
22-2
3-#8



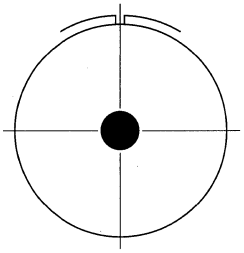
22-4**
2-#12, 2-#8



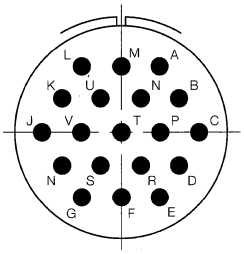
22-5
4-#16, 2-#12



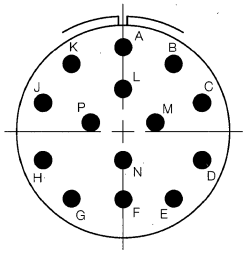
22-6**
1-#16, 2-#8



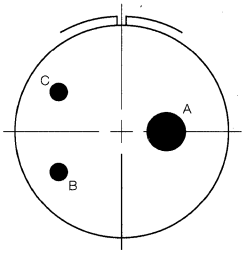
22-7*
1-#0



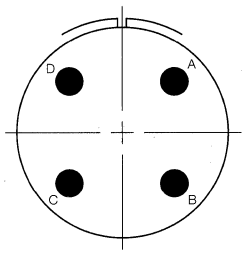
22-14
19-#16



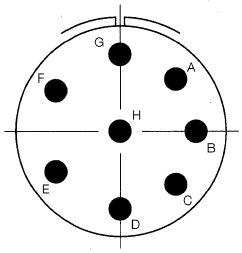
22-19
14-#16



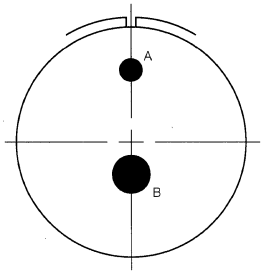
22-21
2-#16, 1-#0



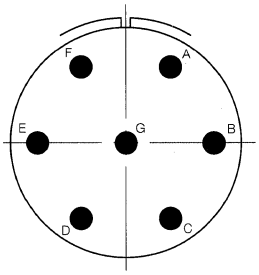
22-22
4-#8



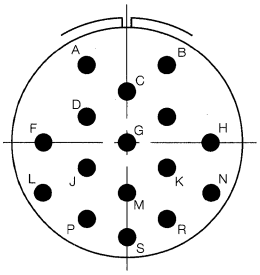
22-23
8-#12



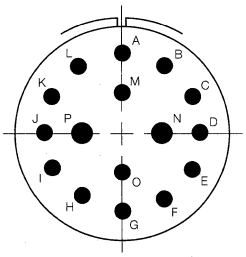
24-1**
1-#12, 1-#0



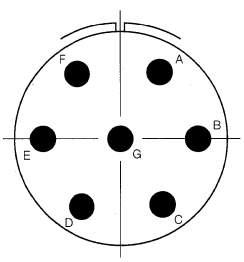
24-2
7-#12



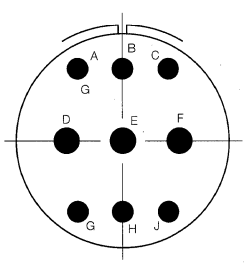
24-5**
16-#16



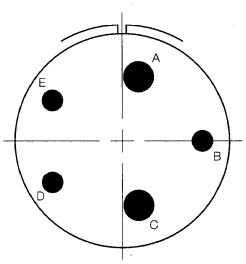
24-7
14-#16, 2-#12



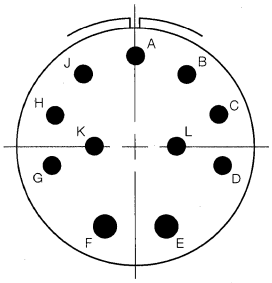
24-10
7-#8



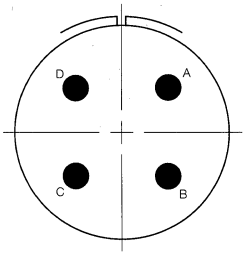
24-11
6-#12, 3-#8



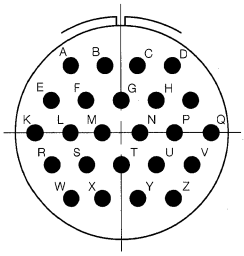
24-12
3-#12, 2-#4



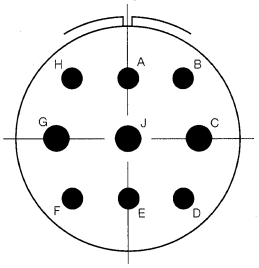
24-20
9#16, 2-#12



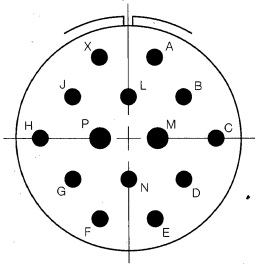
24-22
4-#8



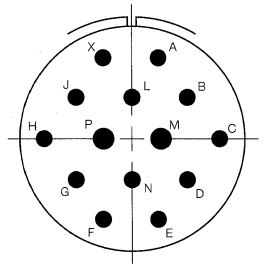
24-28
24-#16



28-1
6-#12, 3-#8



28-2
12-#16, 2-#12



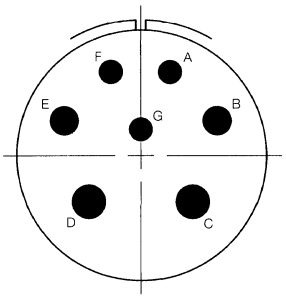
28-9
6-#16, 6-#12

* Consult AMP for availability.
**Inactive for new design.
Note: Mating face of pin insert is shown. Socket insert is opposite.

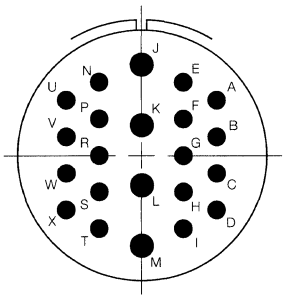
SOURCE: Catalog 82785

MIL-C-5015 (Continued)

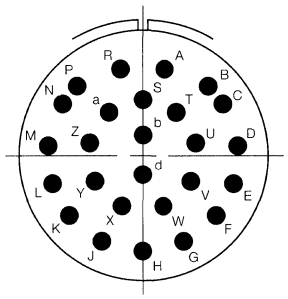
Insert Arrangements (Per MIL-STD-1651) (Continued)



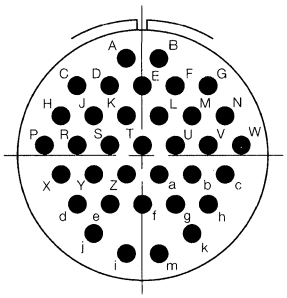
28-10
3-#12, 2-#8, 2-#4



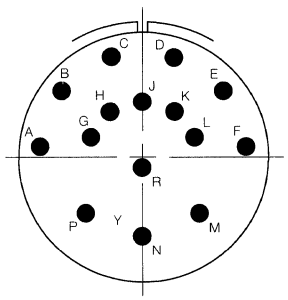
28-11
18-#16, 4-#12



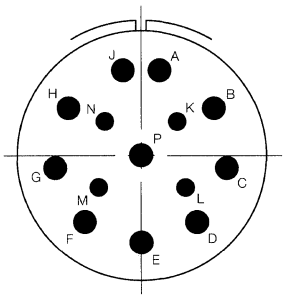
28-12
26-#16



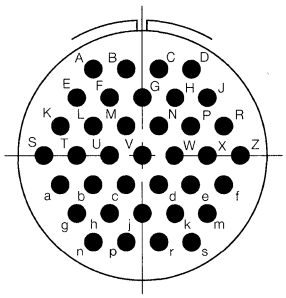
28-15
35-#16



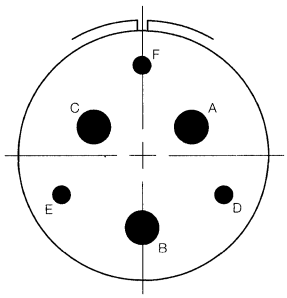
28-17
15-#16



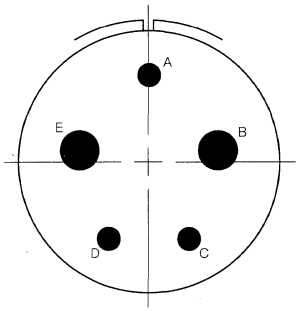
28-20
4-#16, 10-#12



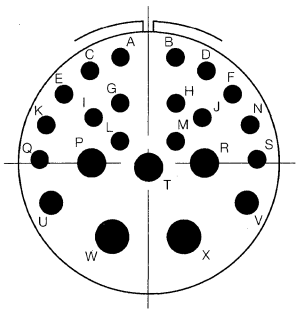
28-21
37-#16



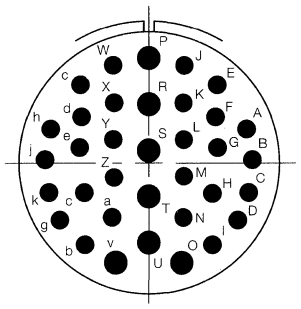
28-22
3-#16, 3-#4



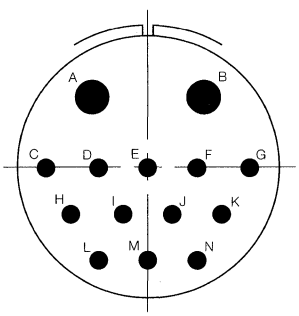
32-1
3-#12, 2-#0



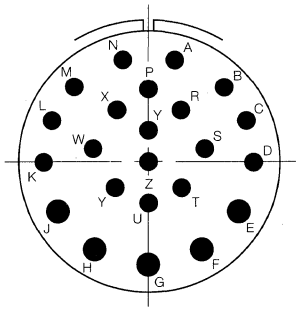
32-6
16-#16, 2-#12,
3-#8, 2-#4



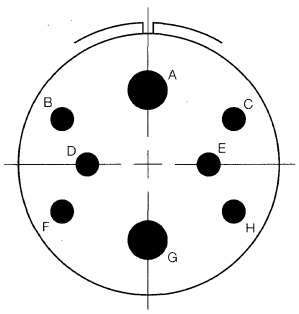
32-7
28-#16, 7-#12



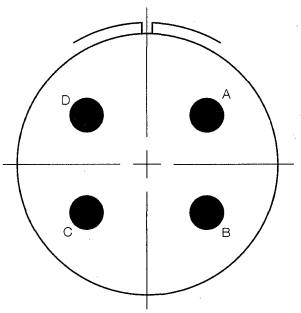
32-9
12-#16, 2-#4



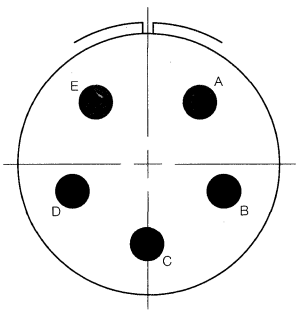
32-13
18-#16, 5-#12



32-15
6-#12, 2-#0



32-17
4-#4



32-63
5-#4

Note: Mating face of pin insert is shown. Socket insert is opposite.

SOURCE: Catalog 82785

Specifications subject to change.
1-800-522-6752
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1-800-722-1111
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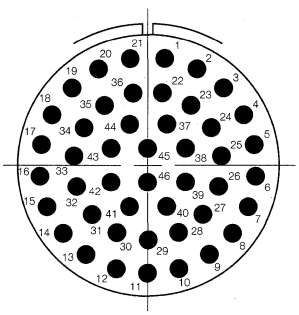
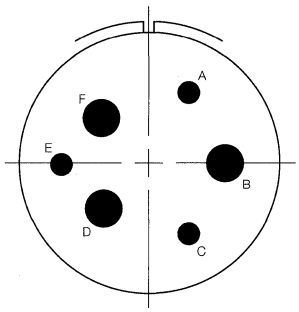
MIL-C-5015 (Continued)

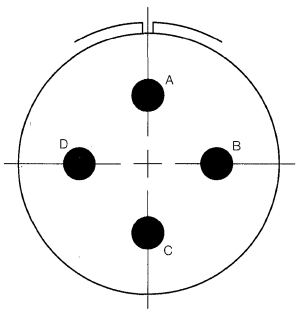
Insert Arrangements (Per MIL-STD-1651) (Continued)



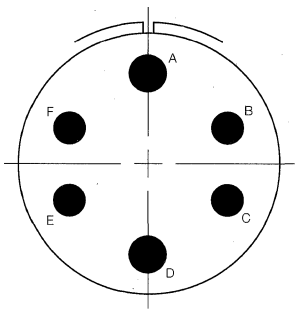
32-73
46-#16



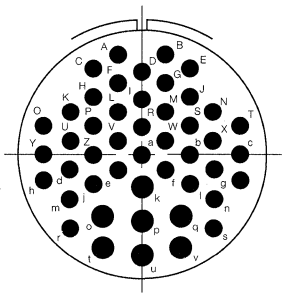
36-3
3-#12, 3-#0



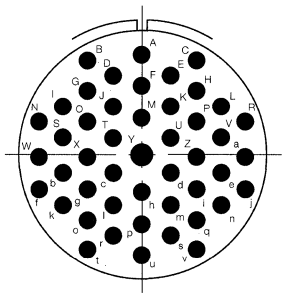
36-5
4-#0



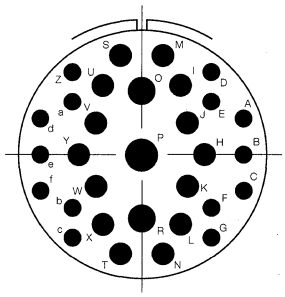
36-6
4-#4, 2-#0



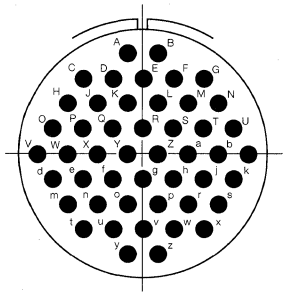
36-7
40-#16, 7-#12



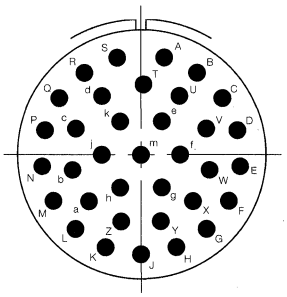
36-8
46-#16, 1-#12



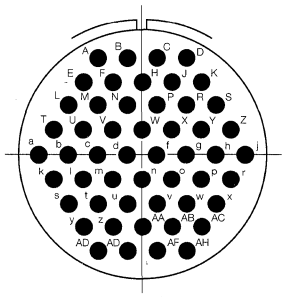
36-9
14-#16, 14-#12,
2-#8, 1,#4



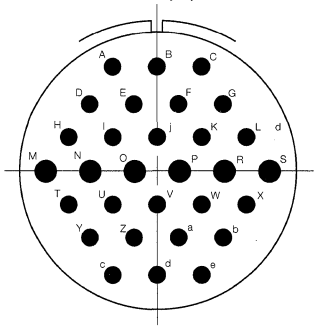
36-10
48-#16



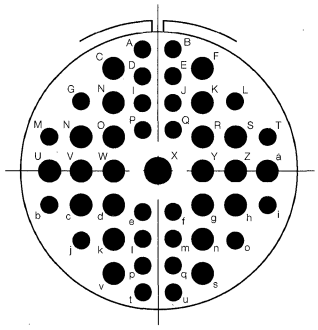
36-15
35-#16



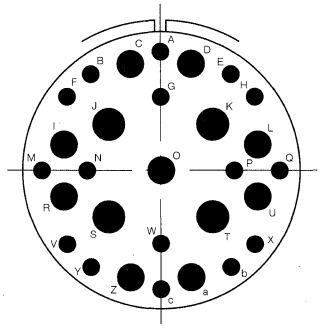
36-52
52-#16



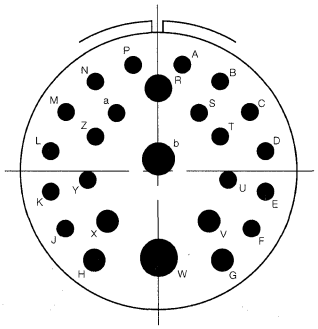
40-1
24-#16, 6-#12



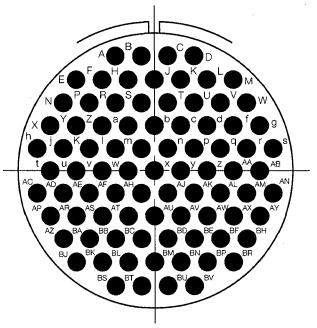
40-9
24-#16, 22-#12, 1-#8



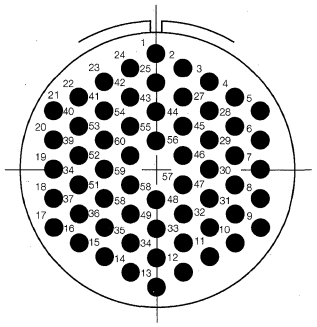
40-10*
16-#16, 9-#8, 4-#4



40-11*
18-#16, 4-#12, 1-#8, 1-#4, 1-#0



40-56*
85-#16



40-62*
60-#16

*Consult AMP for availability.
Note: Mating face of pin insert is shown. Socket insert is opposite.

SOURCE: Catalog 82785

MIL-C-5015 (Continued)

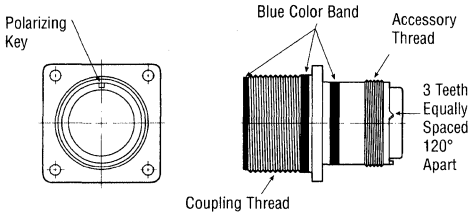
Shell Size
8S
10S
10SL
12
12S
14
14S
16
16S
18
20
22
24
28
32
36
40

Receptacle Shell, Flange Wall Mount, Threaded Coupling

Military No. MS3450

MATRIX No. 9440

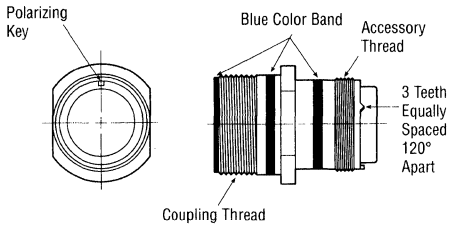
McDonnell Douglas BAN 7025 No. DC 62, DC 63



Receptacle Shell, Cable Connecting, Threaded Coupling

Military No. MS3451

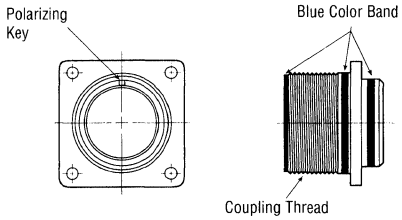
MATRIX No. 9441



Receptacle Shell, Flange Box Mount, Threaded Coupling

Military No. MS3452

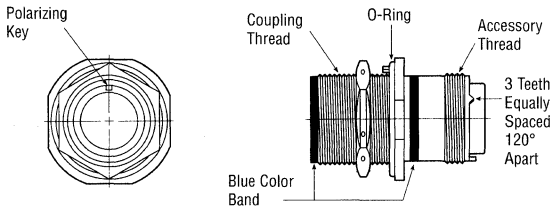
MATRIX No. 9442



Receptacle Shell, Jam Nut Mount, Threaded Coupling

Military No. MS3454

MATRIX No. 9444

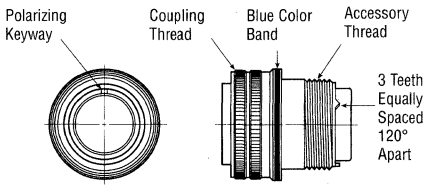


Plug Shell, Threaded Coupling

Military No. MS3456

MATRIX No. 9446

McDonnell Douglas BAN 7025 No. DC 62, DC 63

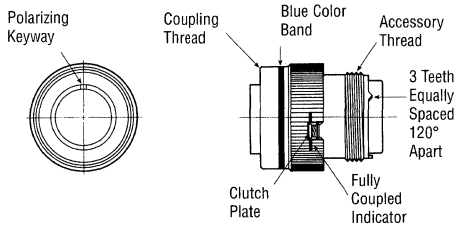


Plug Shell, Self-Locking, Threaded Coupling

Military No. MS3459

MATRIX No. 9816

McDonnell Douglas BAN 7025 No. DC 62, DC 63



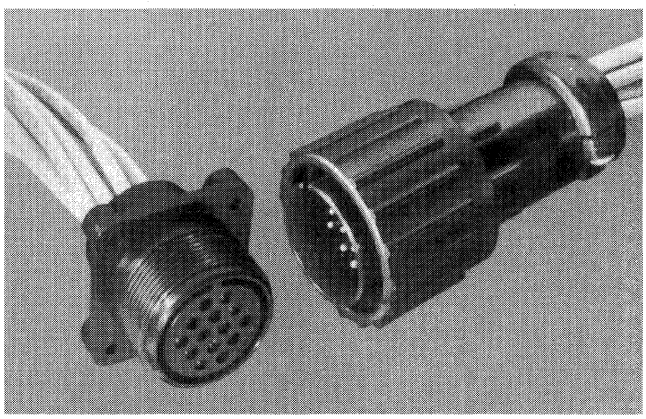
SOURCE: Catalog 82785

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

MIL-C-5015 Style Circular Plastic Connectors (CPC)

Product Facts

- Intermateable with Metal-Shell sizes 20-14 and 18-10, MIL-C-5015 Style connectors
- High impact resistant plastic housing
- Industry accepted, Type III+ pin and socket contacts, available on reels in strip-form for high volume, low cost, automatic machine terminations
- Contacts also available in loose piece form for low volume, prototype or maintenance and repair
- Lighter weight
- Lower cost
- Housing designed to prevent mismating with other insert arrangements
- Recognized under the Component Program of Underwriters Laboratories Inc., File No. E28476
- Certified by Canadian Standards Association, File No. LR7189



This new addition to the AMP Circular Plastic Connector line is specifically designed to be intermateable with Metal-Shell sizes 20-14 and 18-10, MIL-C-5015 Style connector systems. The high impact resistant plastic housing offers the advantages of lighter weight and lower cost than existing metal-shell connectors. In addition, the connector design prevents mismating when used with other insert arrangements.

Note: 14-Pos. Plug, Assembled with Cable Clamp Dim. (Typ.)—
2.839 [72.11] L x 1.565 [39.75] Dia.

14 Position Shell Size 20-14

Plug Kit, Unassembled

Reverse Sex Part No. 213571-1 with Cable Clamp

Reverse Sex Part No. 213571-2 without Cable Clamp

Standard Sex Part No. 213652-1 without Cable Clamp

Receptacle, Square Flange

Reverse Sex Part No. 213570-1

Standard Sex Part No. 213651-1

Receptacle, Free-Hanging

Reverse Sex Part No. 213650-1

10 Position Shell Size 18-10

Plug Kit, Unassembled

Reverse Sex Part No. 213671-1 without Cable Clamp

Receptacle, Square Flange

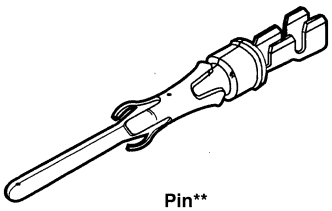
Reverse Sex Part No. 213667-1

Receptacle, Free-Hanging

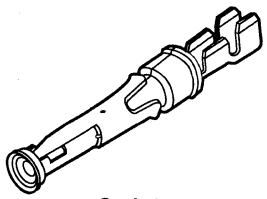
Reverse Sex Part No. 213668-1

Multimate Contacts

Type III+ Crimp Contacts



Pin**
(Order for Reverse Sex Plugs and Standard Sex Receptacles)



Socket
(Order for Standard Sex Plugs and Reverse Sex Receptacles)

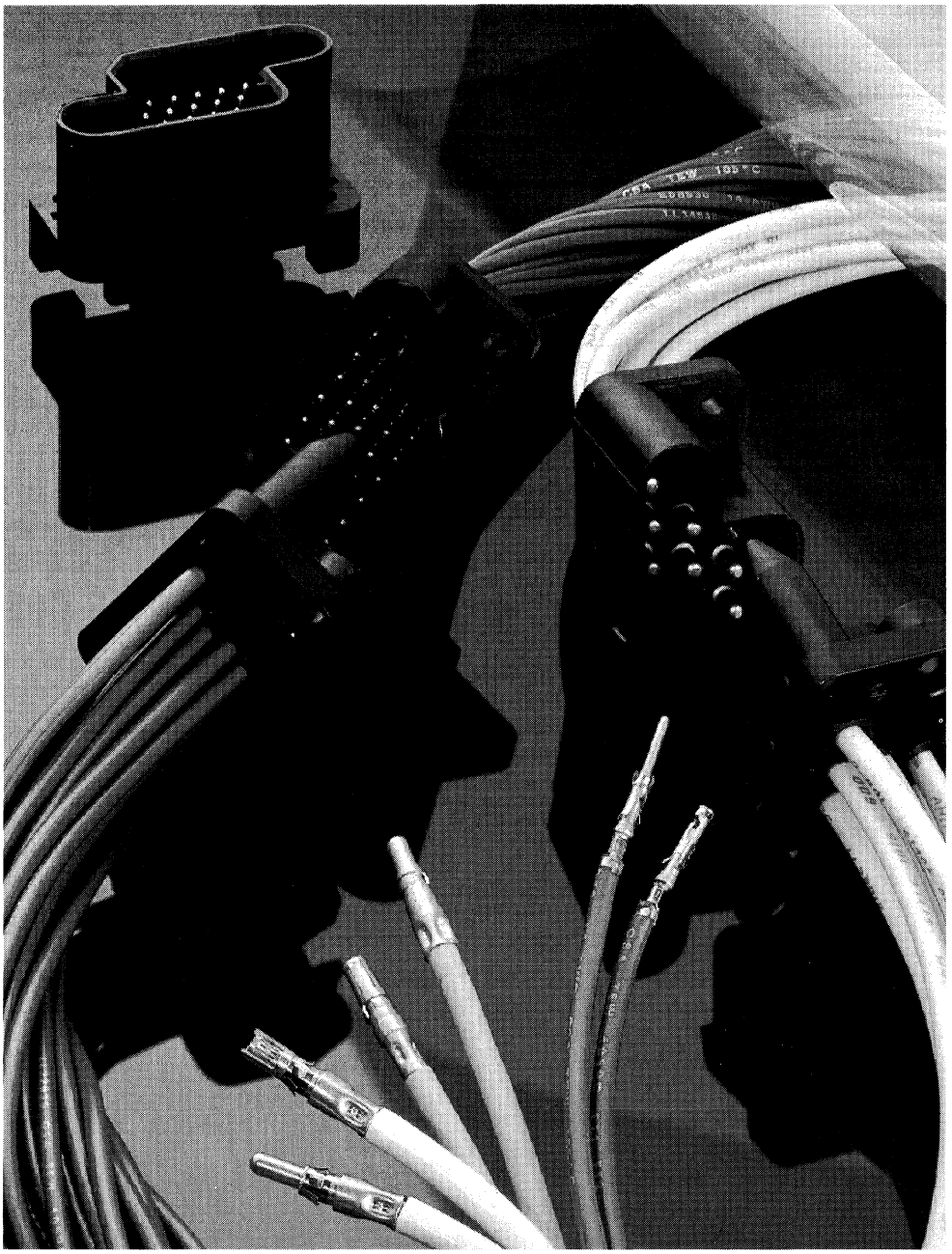
Wire Size Range		Ins. Dia. Range	Contact Material	Contact Finish	Part Numbers					
					Strip Form Contact		Loose Piece Contact		Tooling	
AWG	mm²				Pin	Socket	Pin	Socket	Applicator*	Hand Tool
24-20	0.2-0.6	.060-.135 1.52-3.43	Brass	Tin	213605-1	66563-6	213605-2	66565-2	567363-3	90331-1
				15 µin. Gold/Nickel	—	—	—	66565-3		
				30 µin. Gold/Nickel	213605-5	66563-8	213605-6	66565-4		
18-14	0.8-2	.110-.150 2.79-3.81	Brass	Tin	213603-1	66598-1	—	66601-1	466752-4	90310-2
				30 µin. Gold/Nickel	213603-3	66598-2	213603-4	66601-2		

*For use in the AMP-O-LECTRIC Model "G" Termination Machine.
**MIL-C-5015 Style connectors require a longer Multimate pin contact. This contact is .145 [3.68] longer than the standard Multimate pin contacts. It is not for use in other Multimate connectors; socket contacts are standard Multimate Type III+ contacts.
Extraction Tool **Part No. 305183-2**
Note: Gold-plated contacts should not be mated with tin- or silver-plated contacts.

SOURCE: Catalog 82623

METRIC

Metrimate Pin and Socket Connectors



Product Facts

- Recognized under the Component Program of Underwriters Laboratories Inc., File No. E28476
- Certified by Canadian Standards Association, File No. LR7189
- Tested to VDE requirements outlined in VDE Test Report No. 4751-1431-1029/A1l 3544
- Produced under a Quality Management System certified to ISO 9001

  A copy of the certificate is available upon request
- Designed to meet IEC (440 V) requirements
- True metric dimensions—contacts on 5 [.197] centers (drawer connectors and special in-line connectors and pin headers have contacts on 5.08 [.200] centers)
- Panel mount versions require no hardware for mounting
- Polarized housings
- 4- thru 36-position square grid configurations can be mounted to and removed from either front or rear of panel
- Housings made of UL rated 94V-0 thermoplastic
- Strain reliefs available for 6- thru 36-position square grid, panel mount housings
- Drawer connectors available in 4- thru 25-position sizes (see pages 2208 and 2209)

AMP Metrimate connectors are true metric specification connectors designed for panel, free-hanging or pc board application. These connectors offer improvements in durability, density and electrical performance over competitive soft-shell pin and socket connectors. They are ideally suited for equipment manufacturers engaged in both national and international markets. This versatile pin and socket connector line is designed to meet the general requirements of various testing and approval agencies, including UL, CSA, VDE and IEC.

Presently, connectors are available in various design configurations and the most popular sizes to satisfy a variety of application requirements. Such designs include: square grid connectors for free-hanging and/or panel mounting; free-hanging in-line connectors; square grid and in-line pin and socket headers for pc board mounting; and drawer connectors for rack and panel mounting with radial float.

For high electrical performance and maximum economy, all connectors employ housings made of UL rated 94V-0 thermoplastic.

SOURCE: Catalog 82045

Specifications subject to change.

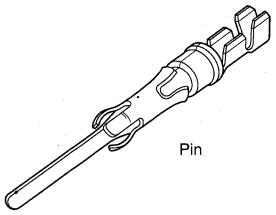
1-800-522-6752
Product Information Center/ AMP FAX Service

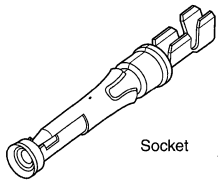
1-800-722-1111
Tooling/Technical Assistance Center

METRIC

Contacts
Type III+ (Crimp)

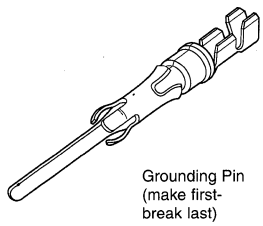
Contact Size— 16
Pin Diameter— 1.57 [.062]


Pin


Socket

Wire Size Range mm²	Wire Size Range AWG	Ins. Dia. Range[1]	Contact Finish	Strip Form Contact No. Pin	Strip Form Contact No. Socket	Loose Form Contact No. Pin	Loose Form Contact No. Socket
0.05–0.15	30–26	**1.02–1.52** .040–.060	Tin-Lead	66425-6	66424-6	—	—
			Gold / Nickel	66425-7	66424-7	66429-3	66428-3
			Sel. Gold / Nickel	66425-8	66424-8	66429-4	66428-4
		0.36–0.76 .014–.030	Gold / Nickel	66393-7	66394-7	—	—
			Sel. Gold / Nickel	66393-8	66394-8	66406-4	66405-4
0.12–0.2	26–24	**0.89–1.4** .035–.055	Tin-Lead	66106-6	66108-6	66107-2	66109-2
			Gold / Nickel	66106-7	66108-7	66107-3	66109-3
			Sel. Gold / Nickel	66106-8	66108-8	66107-4	66109-4
0.2–0.6	24–20	**1.02–2.03** .040–.080	Tin-Lead	66102-7	66104-7	66103-2	66105-2
			Gold / Nickel	66102-8	66104-8	66103-3	66105-3
			Sel. Gold / Nickel	66102-9	66104-9	66103-4	66105-4
		2.03–2.54 .080–.100	Tin-Lead	66098-7	66331-5	66400-1	66399-1
			Gold / Nickel	66332-7	66331-7	66400-3	66399-3
			Sel. Gold / Nickel	66332-8	66331-8	66400-4	66399-4
0.8–1.4	18–16	**2.03–2.54** .080–.100	Tin-Lead	66098-7	66100-7	66099-2	66101-2
			Gold / Nickel	66098-8	66100-8	66099-3	66101-3
			Sel. Gold / Nickel	66098-9	66100-9	66099-4	66101-4
0.8*	18–14	**2.79–3.81** .110–.150	Tin-Lead	66597-1	66598-1	66602-1	66601-1
			Sel. Gold / Nickel	66597-2	66598-2	66602-2	66601-2
0.8–2	18–14	**2.03–2.54** .080–.100	Tin-Lead	66359-6	66358-6	66361-2	66360-2
			Gold / Nickel	66359-9	66358-9	66361-3	66360-3
			Sel. Gold / Nickel	1-66359-0	1-66358-0	66361-4	66360-4

[1]Overall insulation crimp diameter, including crimp barrel, must not exceed 3.18 [.125].
Insertion Tool **Part No. 91002-1** (for insulation diameters 1.78 [.070] or less); **Part No. 200893-2** (for insulation diameter 2.42 [.095] max.).
Extraction Tool **Part No. 305183.**
*Wire Wrap Insulation Contact. Crimp width—3.05 [.120]


Grounding Pin
(make first-
break last)

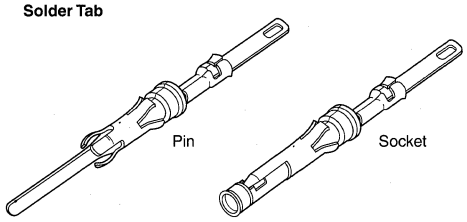
Wire Size Range mm²	Wire Size Range AWG	Ins. Dia. Range[1]	Contact Finish	Strip Form Pin Contact No.	Loose Form Pin Contact No.
0.12–0.2	26–24	**0.89–1.4** .035–.055	Tin-Lead	164159-3	164162-1
			Sel. Gold / Nickel	164159-4	164162-2
0.2–0.6	24–20	**1.14–1.78** .045–.070	Tin-Lead	164160-3	164163-1
			Sel. Gold / Nickel	164160-4	164163-2
0.8–1.4	18–16	**1.98–2.49** .078–.098	Tin-Lead	164161-3	164164-1
			Sel. Gold / Nickel	164161-4	164164-2

[1]Overall insulation crimp diameter, including crimp barrel, must not exceed 3.18 [.125].
Extraction Tool **Part No. 725840-1.**

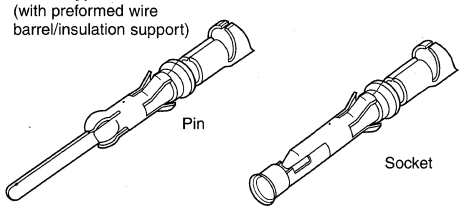
Type III+
(Solder Version)

Contact Size—16
Pin Diameter—1.57 [.062]

Solder Tab


Pin Socket

Solder Type
(with preformed wire
barrel/insulation support)


Pin Socket

Wire Size Range mm²	Wire Size Range AWG	Contact Finish	Loose Form Contact No. Pin	Loose Form Contact No. Socket
0.12–0.6	26–20	Gold / Nickel	66182-1	66183-1
0.8–1.4	18–16	Gold / Nickel	66180-1	66181-1
Solder Tab		Duplex	202236-1	202237-1
		Tin-Lead	202236-2	202237-2

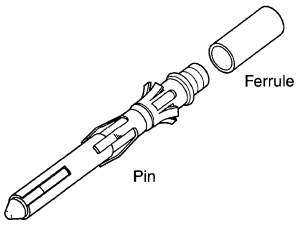
Extraction Tool **Part No. 305183.**

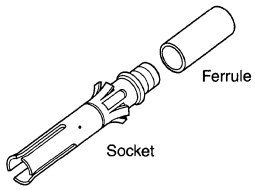
SOURCE: Catalog 82045

METRIC

Contacts
(Continued)

Subminiature COAXICON Contacts



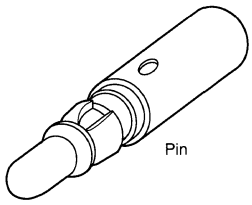


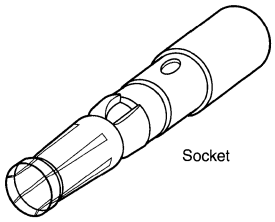
Cable or Wire Size		Loose Form Contact No.		Ferrule No.
mm²	RG or AWG	Pin	Socket	
—	RG-178, 196	226537-2	51565-2	1-332057-0
—	RG-196 Double Braid	226537-2	51565-2	225088-1
—	RG-174, 188, 316	226537-1	51565-1	1-332056-0
—	RG-174 Double Braid	226537-1	51565-1	225088-3
—	RG-179, 187	226537-1	51565-1	1-332056-0
—	RG-187	226537-1	51565-1	225088-1
—	RG-161	226537-1	51565-1	1-332056-0
0.12–0.15 (Twisted Pair Solid or Stranded, 7 str., 0.16 [.0063] Dia.)	26	226537-3	51565-3	1-332057-0
0.08–0.09 (Twisted Pair Solid)	28	226537-3	51565-3	1-332057-0
0.08–0.09 (Twisted Pair Stranded, 7 str., 0.13 [.005] Dia.)	28	226537-3	51565-3	1-332057-0
0.05 (Twisted Pair Solid)	30	226537-3	51565-3	1-332057-0

Extraction Tool **Part No. 305183.**

Power Contacts

Contact Size—8

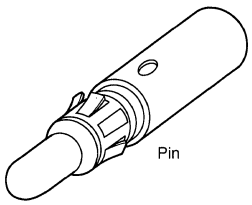


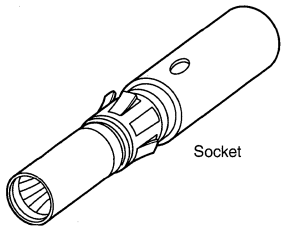


Standard, Size 8

Wire Range		Contact Part No.		Crimping Tools	
mm²	AWG	Pin	Socket	Tool No.	Positioner
0.8–1.4	18–16	213567-1	212014-1	608668-1	(P) SP867 (S) 608668-2
2–3	14–12	213662-1	212008-1	608651-1	(P) SP867 (S) 608651-2
5	10	213740-1	213737-1	608651-1	(P) 608651-3 (S) 608651-3
8	8	213552-2	213750-1	608651-1	(P) 608651-3 (S) 608651-2

Extraction Tool **Part No. 58095-1.**





High Current, Size 8

Wire Range		Contact Part No.		Daniels Crimping Tools	
mm²	AWG	Pin	Socket	Tool No.	Positioner
2–3	14–12	193534-1	193535-1	M-310	TP944
5	10	193642-1	193643-1		
8	8	193457-1	193458-1		

Extraction Tool **Part No. 58095-1.**

SOURCE: Catalog 82045

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

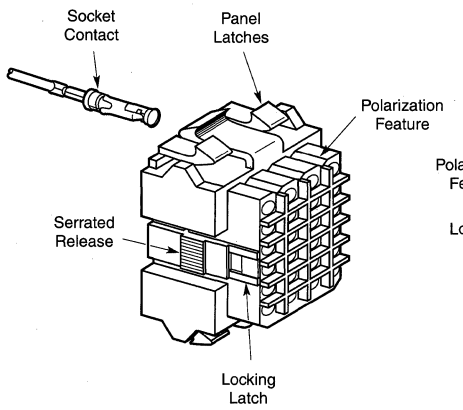
METRIC

Square Grid Connectors

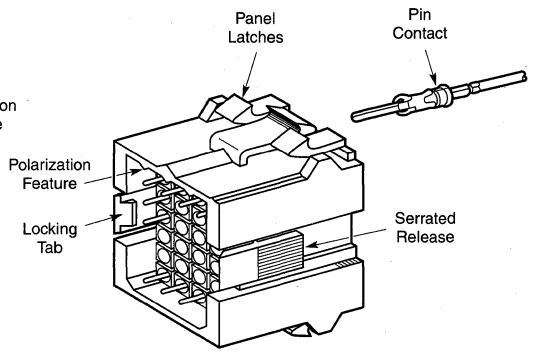
Free-Hanging and Panel Mount Plug and Receptacle Housings

Mates with— Square Grid Pc Board Mount Headers

Plug Housing
(Accepts Socket Contacts)



Receptacle Housing
(Accepts Pin Contacts)



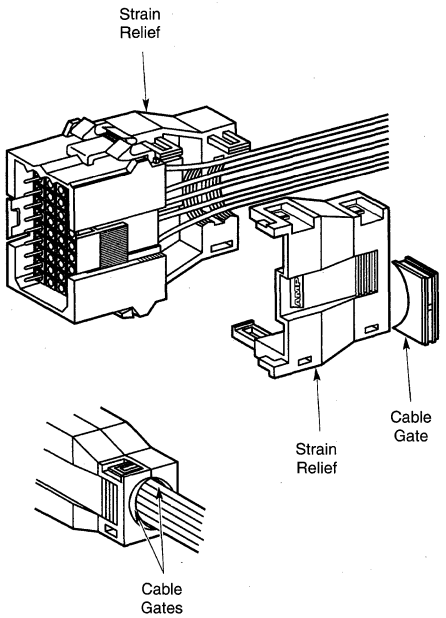
Note: 24 Pos. Housing Dim. (Typ.)—
Plug, 27.95 [1.100] L x 27.15 [1.069] W x 27.85 [1.096] H;
Receptacle, 27.95 [1.100] L x 33 [1.300] W x 27.85 [1.096] H

No. of Positions	Housing Part No.*	
	Plug	Receptacle
4	207015-1	207016-1
6	207152-1	207153-1
9	207439-1	207440-1
12	207017-1	207018-1
18	207442-1	207443-1
24	207304-1	207305-1
36	207019-1	207020-1

*Housing only, order contacts separately.

Strain Relief Kits

(For use with plugs and/or receptacles)



No. of Positions (Connector)	Cable O.D. (Max.)	Strain Relief Kit No.	
		Individual Packs	Bulk Packaging
6	**9.5** .375	207600-1	213792-1
9	**11.7** .460	207601-1	213793-1
12	**13.45** .530	207602-1	213794-1
18	**16.5** .650	207603-1	213795-1
24	**19.05** .750	207088-1	213796-1
36	**23.3** .918	207604-1	213797-1

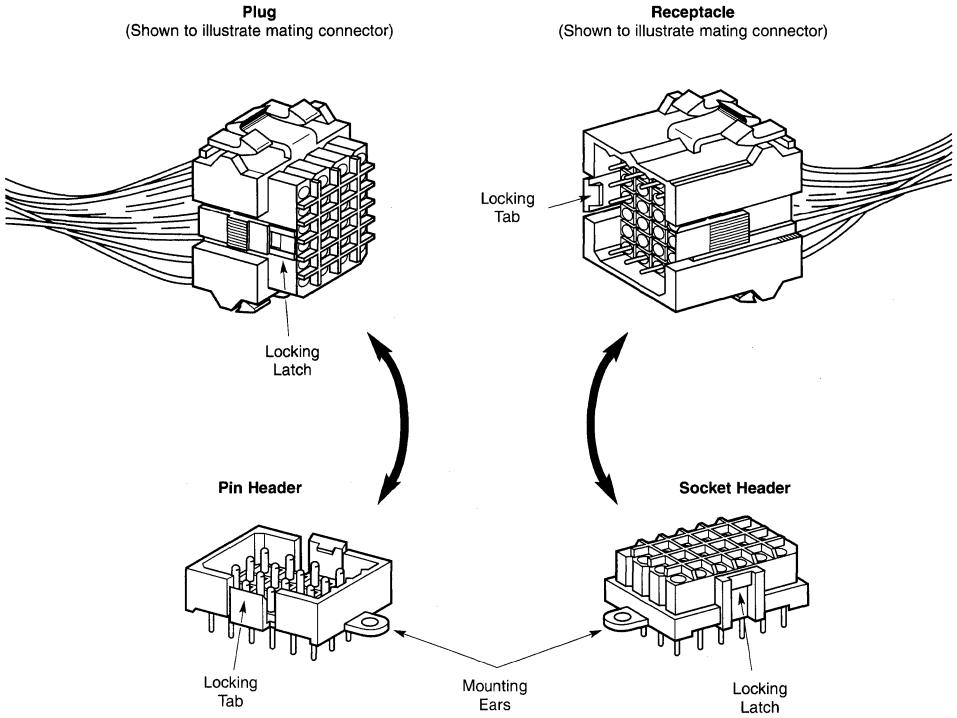
Notes: 1. Cable gates are supplied with each strain relief kit to accommodate various cable diameters up to the maximum specified.
2. Components for all strain relief kits are packaged unassembled.

SOURCE: Catalog 82045

METRIC

Square Grid Connectors
(Continued)

Pc Board Mount
Pin and Socket Headers



Mates with—Square Grid Free-Hanging Plug and Receptacle Housings

Note: 24 Pos. Housing Dim. (Typ.)—Pin, 47.32 [1.863] L x 29.36 [1.156] W x 11.80 [.465] H; Socket, 47.32 [1.863] L x 25.55 [1.006] W x 14.35 [.565] H

No. of Positions	Contact Plating	Pin Header Part No. With Mounting Ears	Pin Header Part No. Without Mounting Ears	Mates with Plug Part No.	Socket Header Part No. With Mounting Ears	Socket Header Part No. Without Mounting Ears	Mates with Receptacle Part No.
4	Tin	207119-1	207119-2	207015-1	207496-1	207496-2	207016-1
	Gold	207119-3	207119-4		207496-3	207496-4	
6	Tin	207158-1	207158-2	207152-1	207524-1	207524-2	207153-1
	Gold	207158-3	207158-4		207524-3	207524-4	
9	Tin	207441-1	207441-2	207439-1	207526-1	207526-2	207440-1
	Gold	207441-3	207441-4		207526-3	207526-4	
12	Tin	207120-1	207120-2	207017-1	207528-1	207528-2	207018-1
	Gold	207120-3	207120-4		207528-3	207528-4	
18	Tin	207444-1	207444-2	207442-1	207530-1	207530-2	207443-1
	Gold	207444-3	207444-4		207530-3	207530-4	
24	Tin	206763-1	206763-2	207304-1	207532-1	207532-2	207305-1
	Gold	206763-3	206763-4		207532-3	207532-4	
36	Tin	207121-1	—	207019-1	207534-1	207534-2	207020-1
	Gold	207121-3	207121-4		207534-3	—	

Note: Pin and socket headers do not mate.

SOURCE: Catalog 82045

Specifications subject to change.
1-800-522-6752
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1-800-722-1111
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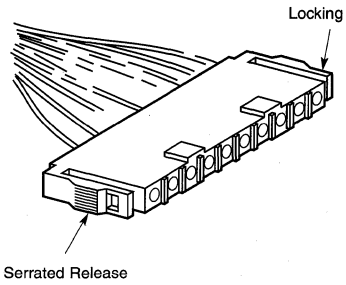
METRIC

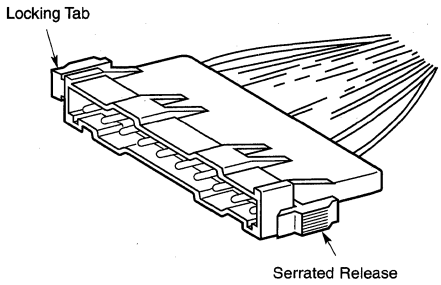
In-Line Connectors

Free-Hanging Plug and Receptacle Housings

Plug Housing
(Accepts Socket Contacts)



Receptacle Housing
(Accepts Pint Contacts)



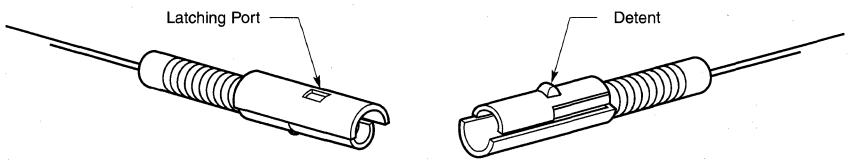
Note: 10 Pos. Housing Dim. (Typ.)—
Plug, 58.7 [2.312] L x 27.5 [1.083] W x 7.85 [.310] H;
Receptacle, 61.3 [2.413] L x 33.7 [1.327] W x 12.32 [.485] H

Mates with—In-Line Pc Board Mount Pin and Socket Headers

No. of Positions	Housing Part No.*	
	Plug	Receptacle
1 (Positive Latch)	207535-1**	207535-1**
1 (Breakaway Latch)	211076-1**	211076-1**
3	207360-1	207359-1
6	207377-1	207376-1
10	207396-1	207397-1
16	207542-1	207543-1

*Housing only, order contacts separately.
**Hermaphroditic housing accepts pins or sockets and mates with itself.

1 Position Housing
(Hermaphroditic housing accepts pins or sockets and mates with itself.)



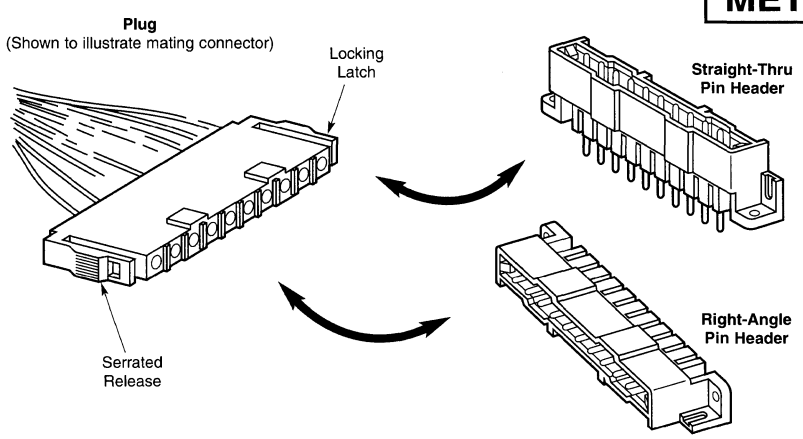
SOURCE: Catalog 82045

METRIC

In-Line Connectors
(Continued)

Pc Board Mount Pin Headers

Mates with—In-Line Free-Hanging Plug and Receptacle Housings

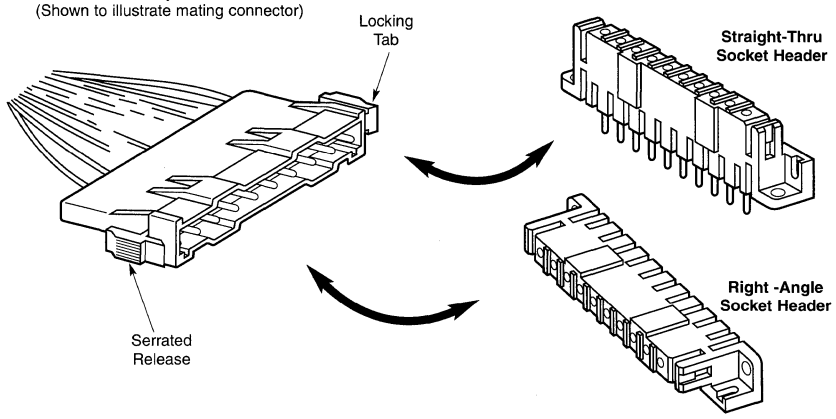


Note: 10 Pos. Housing Dim. (Typ.)—Straight-Thru, 71.86 [2.829] L x 12.7 [.500] W x 17.5 [.689] H; Right-Angle, 66.6 [2.622] L x 17.5 [.689] W x 12.7 [.500] H

No. of Positions	Contact Plating	Pin Header Part No.		Mates with Plug Part No.
		Straight-Thru	Right-Angle	
3	Tin	207365-1	207541-1	207360-1
	Gold	207365-3	207541-3	
6	Tin	207583-1	207378-1	207377-1
	Gold	207583-3	207378-3	
10	Tin	207584-1	207398-1	207396-1
	Gold	207584-3	207398-3	
16	Tin	207599-1	207544-1	207542-1
	Gold	207599-3	207544-3	

Note: Pin and socket headers do not mate.

Pc Board Mount Socket Headers



Note: 10 Pos. Housing Dim. (Typ.)—Straight-Thru, 71.6 [2.819] L x 11.00 [.433] W x 19.5 [.768] H; Right-Angle, 71.6 [2.819] L x 19.50 [.768] W x 11.00 [.433] H

No. of Positions	Contact Plating	Socket Header Part No.		Mates with Receptacle Part No.
		Straight-Thru	Right-Angle	
3	Tin	207609-1	—	207359-1
	Gold	207609-3	207608-3	
6	Tin	207611-1	207610-1	207376-1
	Gold	207611-3	207610-3	
10	Tin	207613-1	207612-1	207397-1
	Gold	207613-3	207612-3	
16	Tin	207615-1	207614-1	207543-1
	Gold	207615-3	207614-3	

Note: Pin and socket headers do not mate.

SOURCE: Catalog 82045

Specifications subject to change.
1-800-522-6752
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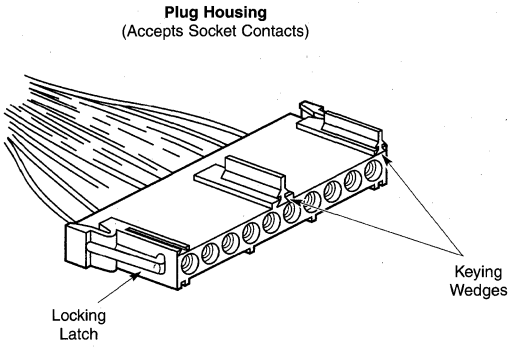
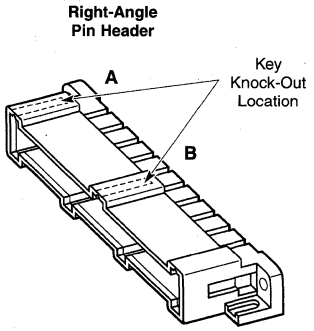
1-800-722-1111
Tooling/Technical Assistance Center

METRIC

In-Line Connectors, 5.08 [.200] Centerline

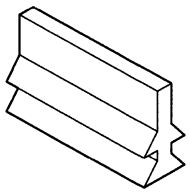
Free-Hanging Plugs and Pc Board Mount Right-Angle Headers





Note: 10 Pos. Housing Dim. (Typ.)— Plug, 63.50 [2.500] L x 28.20 [1.110] W x 9.14 [.360] H; Header, 68.58 [2.700] L x 23.88 [.940] W x 13.97 [.550] H

Keying Wedge Part No. 208400-1

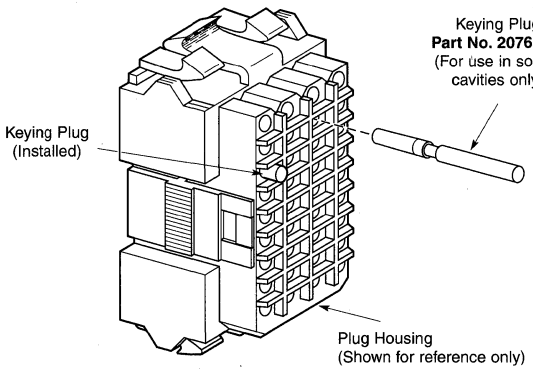


No. of Positions	In-Line Connector Plug Part No.*	Right-Angle Pin Header		
		Contact Plating	Standard Part No.	Keyed Part No.
6	208117-1	Tin	208116-1	—
10	208404-1	Tin	208403-1	1-208403-1[1]
				2-208403-1[2]
19	208100-1	Tin	208099-1	—
		Gold	212630-1	—

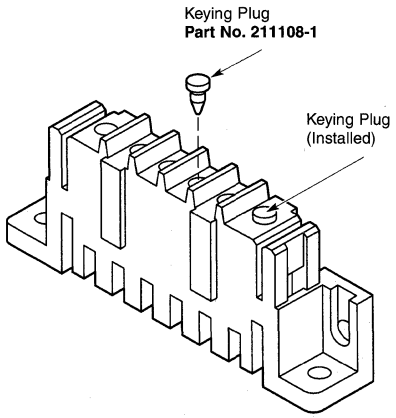
*Housing only, order contacts separately.
[1] Location A knocked out.
[2] Location B knocked out.

Keying Plugs

For Plug Housings



For Socket Header

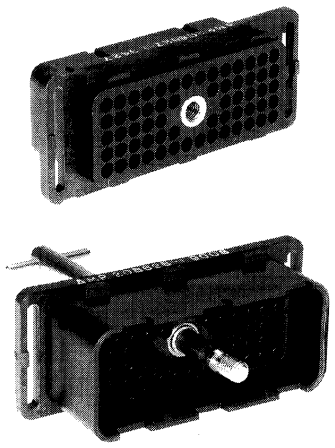


SOURCE: Catalog 82045

METRIC

Rectangular Connectors (Panel Mount)

62-Position Rectangular Plug and Receptacle



Note: 62 Pos. Housing Dim. (Typ.)—
Plug, 98.3 [3.870] L x 31.06 [1.223] W x 40.18 [1.582] H
Receptacle, 98.3 [3.870] L x 39.34 [1.549] W x 40.18 [1.582] H

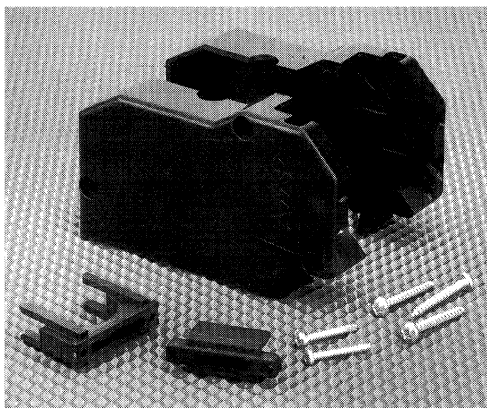
Rectangular Connectors

Mating Half	With Male Jackscrew	With Female Jackscrew Threads	Pin Header
Plug	208334-2[1]	208627-1[2]	—
Receptacle	208628-1	—	211580-2 211580-3

[1] Mates with **Part No. 211580-2 or 211580-3**.
[2] Mates with **Part No. 208628-1.**
Note: Housings shown with jackscrew in plug and female jackscrew threads in receptacle. Either half can be equipped with female jackscrew threads or jackscrew as necessary.

Strain Relief Kit

(for 62-Position Rectangular Connectors)

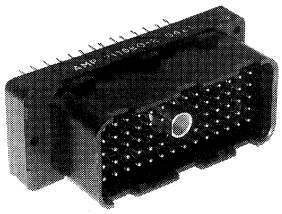


Note: Accommodates 90°, 135°, or 180° cable exit.

Part Number 208335-1
(for Plug or Receptacle)
Housing color—red

62-Position Pc Board Mount Pin Header

Part No. 211580-2
with 19.76 [.778] post length
Part No. 211580-3
with 3.56 [.140] post length



Note: 62 Pos. Housing Dim. (Typ.)—98.30 [3.870] L x 40.18 [1.582 W x 39.34 [1.549] H

Mates with—Receptacle
Part No. 208628-1

SOURCE: Catalog 82045

Specifications subject to change.
1-800-522-6752
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1-800-722-1111
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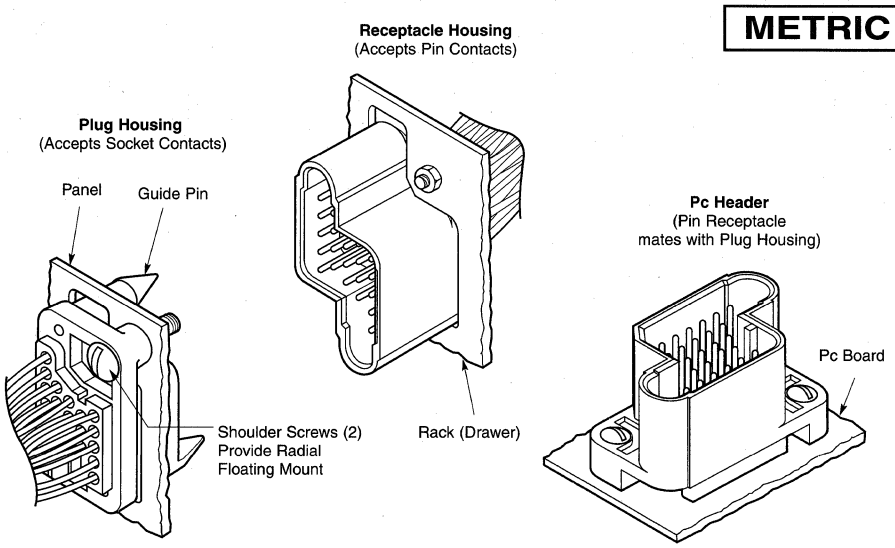
METRIC

Standard Drawer Connectors Panel Mount

Product Facts

- **4-, 12-, 19- and 25-position connectors for size 16 contacts**
- **8-position connector for size 8 power contacts, and a 15-position connector for 3 size 8 power contacts and 12 size 16 contacts**
- **Provides "blind" mating with up to 2.3 [.090] misalignment in any direction**
- **Guide pins molded into plug half**
- **Plug and receptacle can be front or rear-panel mounted**



Pc Header Plating Code:

A. Contact Brass plated 0.00076 [.000030] min. gold on mating end, gold flash remainder, both over 0.00127 [.000050] min. nickel underplating. Post end 0.00254 [.000100] min. tin-lead over 0.00254 [.000100] min. copper. Spring—Stainless steel.

B. Contact Phosphor Bronze plated 0.00254 [.000100] min. tin-lead over 0.00127 [.000050] min. nickel.

C. Contact Phosphor Bronze plated 0.00076 [.000030] min. gold on the mating area, 0.00038 [.000150] min. tin-lead on the ACTION PIN end, all over 0.00127 [.000050] min. nickel.

Standard Drawer Connectors

No. of Positions	Connector Housing Part Nos.*			Pc Header Part Nos.		Grounding Pins should not be used in these receptacle cavities
	Plug	Receptacle	Receptacle With 8/32 Inserts	With Solder Tails	With ACTION PIN Posts	
4	212608-1	212609-1	213749-1	—	—	1 and 4
12	211758-1	211759-1	213748-1	—	—	1 and 12
19	208210-2	208209-2	—	213738-2[A]	—	1 and 19
25	211150-1	211149-1	—	213672-1[A]	213558-1[B] / 213558-2[C]	1 and 25

*Housings only, order contacts separately.

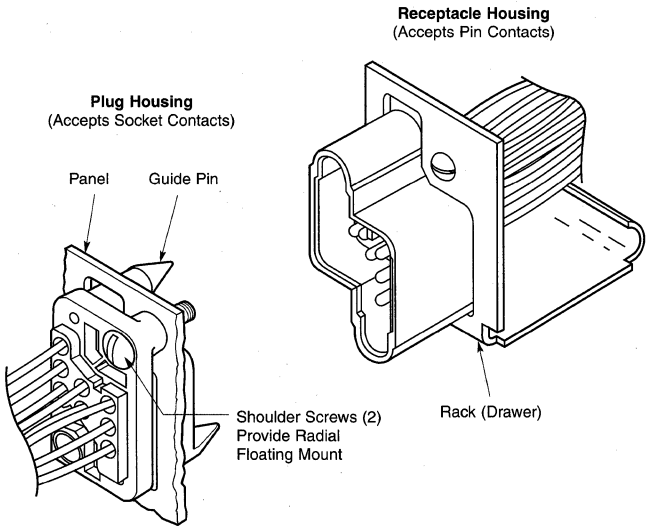
Power Drawer Connectors

Screw Kit
Part No. 213283-2
Kit Includes: 2 M4 screws,
2 Springs, 2 Washers

Material: Stainless steel

Thread Size	Part No.
M4x0.7-6H/6g	208211-1
SAE 6/32	208211-4

Note: These shoulder screws are used for mounting the plug housing and they provide float for positioning of misaligned connectors. Two are required for each plug. Mounting screws are to be ordered separately. Nuts are to be supplied by the customer.



Power Drawer Connectors

No. of Positions	Housing Part No.*		With 8/32 Insert
	Plug	Receptacle	
8 (8 size 8)	213499-1	213500-1	213752-1
15 (3 size 8, 12 size 16)	213426-1	213427-1	—

*Housing only, order contacts separately.

SOURCE: Catalog 82045

Specifications subject to change.
1-800-522-6752
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1-800-722-1111
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METRIC

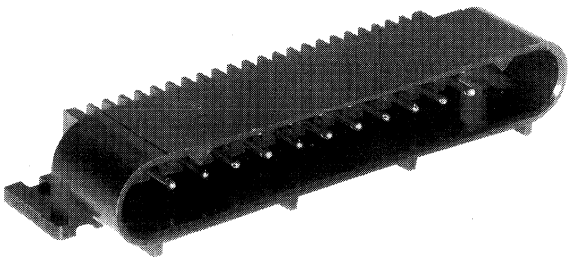
Drawer Connectors
(Continued)

In-Line—23 Position Plug Housing (for Sockets) Part No. 213766-1

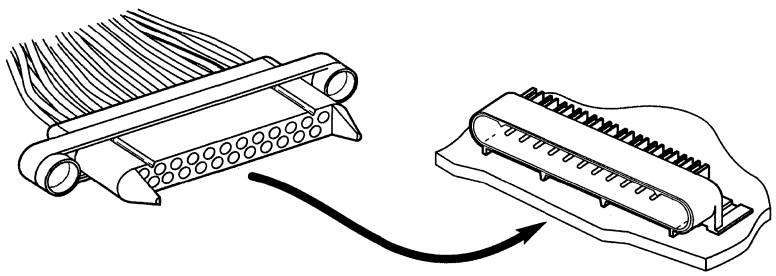
Note: 23 Position Housing Dim. (Typ.)—
122.99 [4.842] L x 38.61 [1.520] W x 15.24 [.600] H

In-Line—23 Position Receptacle Header, Right-Angle Part No. 213768-1

Note: 23 Position Housing Dim. (Typ.)—
98.09 [3.862] L x 28.96 [1.140] W x 17.53 [.690] H



Typical Wire-to-Board Application



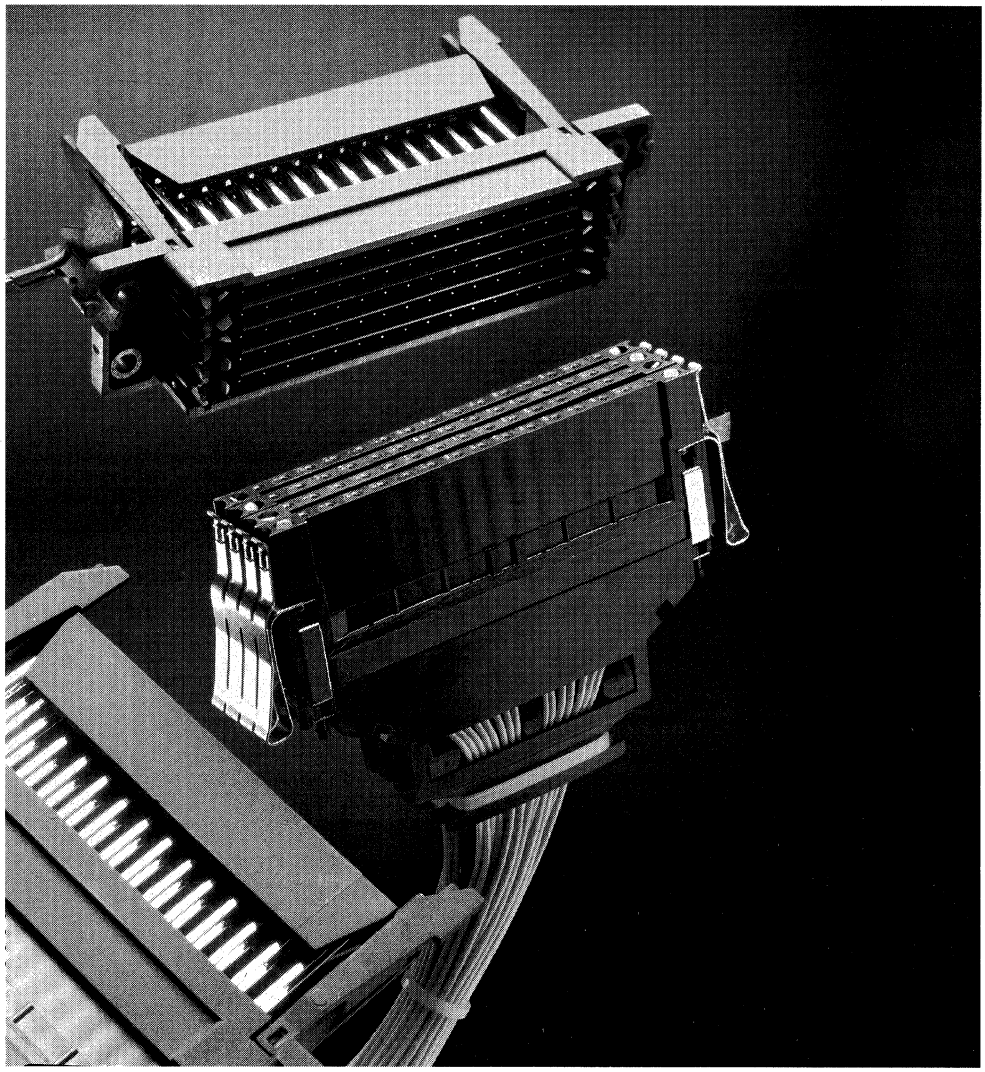
SOURCE: Catalog 82045

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

Wire Integration Unit (WIU) Connector

Product Facts

- **Modular for easy assembly, maintenance, and modification**
- **Wrap-type posts for high-speed, off-line panel assembly**
- **ARINC socket contacts maintain compatibility with existing tooling and black boxes**
- **Rugged design and proven technology for high performance and reliable wiring**
- **Plastic housings, space-efficient wire wrapping, and fewer components reduce complexity, and save space and weight**
- **Lower manufacturing and maintenance costs**



Simplify wiring integration panels with the next generation of modular simplicity. The AMP Wire Integration Unit (WIU) connector replaces labor-intensive terminal junction blocks with plug-in simplicity and off-line automated assembly.

The 30- and 75-position receptacle connectors contain pin contacts with 1 [25.4] long .045 [1.14] square posts for wire wrapping. Mating 15-position plug modules stack together into assemblies and use rear-release Size 20 ARINC socket contacts. Quick-release latches combine fast mating and unmating with exceptional high-vibration retention.

By capitalizing on such proven technologies as wire wrapping and ARINC contacts, the connectors allow high-speed off-line assembly and testing of integration panels and wire harnesses. Plastic instead of metal hardware is employed wherever possible to reduce weight, and the connector is inherently more space efficient than existing methods. Built-in polarization and optional keying further enhance easy, reliable interconnections.

While developed for avionics applications, WIU connectors also mean simplified assembly, modification, and servicing of electronic bays in test equipment, flight simulators, automated train controls, and nuclear power plant simulators.

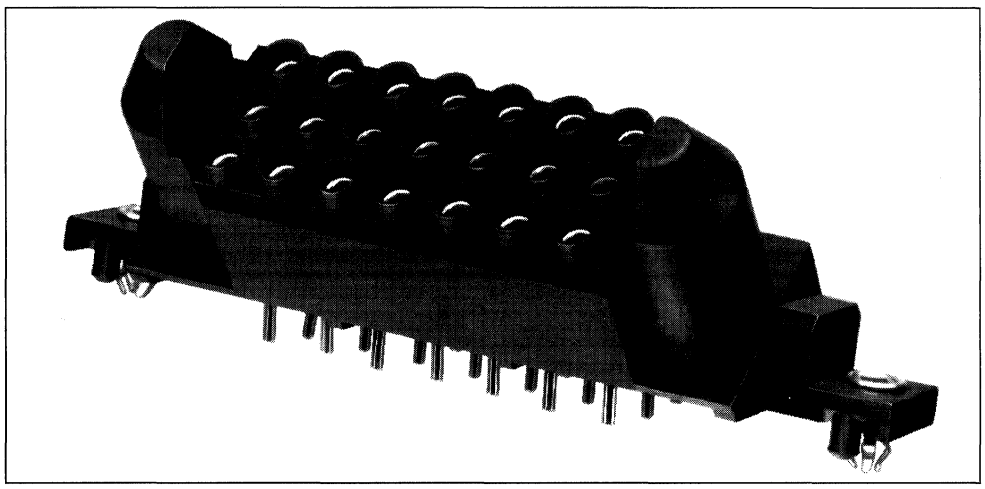
SOURCE: Catalog 82117

METRIC

Metrimate 43°– Mount Printed Circuit Board Plug Header

Drawer Connector, 43°– Mount, Printed Circuit Board Plug Header, 21 Positions

Socket Contacts mate with 1.57 [.062] Dia. Pin Contacts. Contacts are on 5.08 X 5.08 [.200 X .200] centerlines



Product Facts

- True blind mating
- Housings, 94V-0 rated material
- Choice of tin-plated brass or phosphor bronze contacts, mate with 1.57 [.062] dia. pin contacts
- Tin-plated brass contacts rated up to 5 amps
- Tin-plated phosphor bronze contacts rated up to 7 amps
- Molded-in guide pins and keyed housing for positive mating
- Housing design compatible with robotic board-mount applications
- Boardlocks provide board retention prior to soldering
- Compatible with standard through-hole solder and surface-mount reflow soldering process
- Recognized under the Component Program of Underwriters Laboratories, Inc., File No. E28476
- Certified by Canadian Standards Association, File No. LR 7189A-198

The Metrimate drawer connector, when mounted on a pc board, presents a mating angle of 43° from vertical that is ideally suited for applications in swing-out modular power supply drawers. This precise angling of the connector surface provides a true blind mate with the receptacle. Molded-in guide pins and polarized housing direct the receptacle assembly into exact mating position.

The flat-top design of the connector is perpendicular to the mounting surface facilitating robotic pick-and-place board-mount application. Integral boardlocks provide positive board retention prior to soldering. Connectors are compatible with standard through-hole soldering and surface-mount reflow soldering process.

This connector is made of 94V-0 rated, thermoplastic and contains 21 Multimate socket contacts, with stainless steel retention springs. Socket contacts accept 1.57 [0.62] dia. pin contacts and are rated at up to 5 amperes, tin-plated brass, and up to 7 amperes, tin-plated phosphor bronze.

Note: 21 Pos. Housing Dim. (Typ.)—73.66 [2.90] L x 16.51 [.650] W x 22.86 [.900] H

No. of Positions	Contact Material	Plug Header (w/socket contacts) Part Number	Mating Receptacle Part Number*
21	Brass	213518-1	213516-1
	Phosphor Bronze	213518-2	

*Housing only. Contacts must be ordered separately.
Note: Consult AMP on receptacle housing availability.

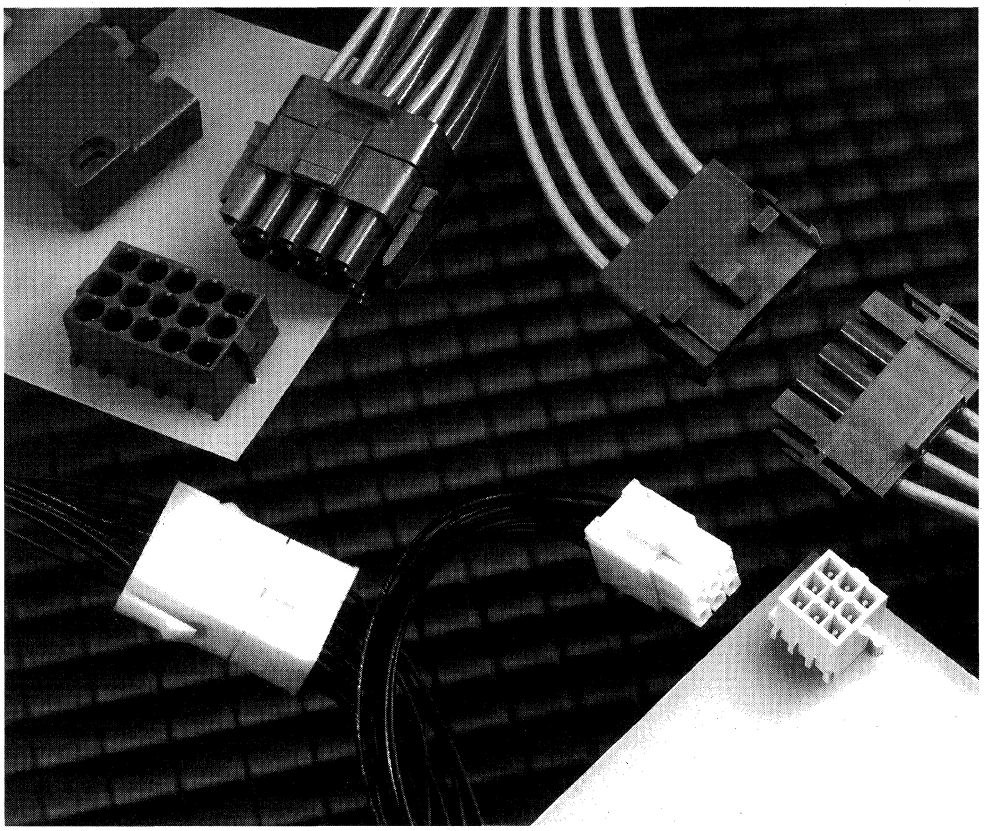
SOURCE: Catalog 82725

Specifications subject to change.

1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

Soft Shell Pin and Socket Connectors



AMP Soft Shell Pin and Socket connectors provide a highly reliable and economic means of grouping multiple-lead connections in today's computer, computer/peripheral equipment, business machines, entertainment centers, appliances and other sophisticated commercial equipment. The electrical connector is an integral component in these applications. They also offer worldwide application approval because of their reliability and economy. Electrical functions have increased in complexity and new designs continually call for the maximum use of space. The Soft Shell Pin and Socket family of connectors offers the design and features to answer these modern industry requirements.

Included in this family of Soft Shell Pin and Socket Connectors are:

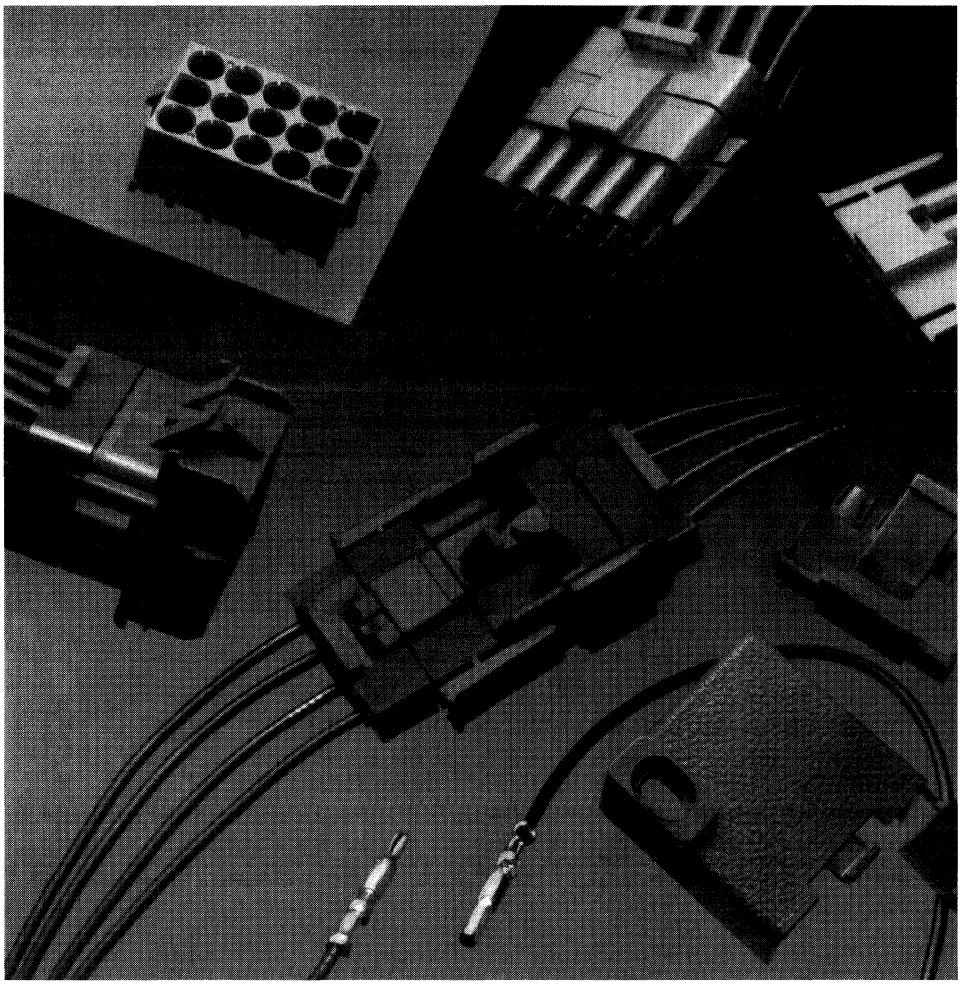
Universal MATE-N-LOK II Connectors, Universal MATE-N-LOK Connectors, Commercial MATE-N-LOK Connectors, .140 MATE-N-LOK Connectors, .093 [2.36] Commercial Pin and Socket Connectors, Mini-Universal MATE-N-LOK Connectors, (MR) Miniature Rectangular Connectors, .062 [1.57] Commercial Pin and Socket Connectors, and (CMPC) Circular Multi-Pin Connectors.

SOURCE: Catalog 82181

Universal MATE-N-LOK II Connectors

Product Facts

- Ultimate reliability
- For use where repair or replacement would be difficult
- Pins and sockets can be intermixed in the same housing
- Available in 2 through 15 circuit sizes for free-hanging or panel mount wire-to-wire connection
- Mates with standard Universal MATE-N-LOK housings and Pc board headers
- Uses standard Universal MATE-N-LOK panel cutouts and strain reliefs
- Polarized housings available in UL 94V-0 flammability rated material
- Enclosed contact for shock protection
- F-Crimp terminals accept 30-10 AWG [.05-5.0 mm^2] wire sizes
- Contacts available in strip and loose form
- Lanceless contacts for tangle free handling
- Insulation capability to .200 [5.08] diameter
- Connector design provides assurance of complete contact insertion
- Three point stabilization precisely controls contact alignment, minimizing stubbing
- Tin or duplex gold plated contacts
- Contacts are on .250 [6.35] centerline spacing
- Not for interrupting current
- Recognized under the Component Program of Underwriters Laboratories Inc., File No. E28476
- Certified by Canadian Standards Association, File No. LR 7189
- Passed test by VDE under their Test Report No. 4751-1431-4016/A8E



Wire Size		Termination Resistance		Tensile Force Per Contact (Wire Pullout)	
AWG	mm^2	Test Current (amps)	Resistance Milliohms (Max. Init.)	Force (Min.) lbs.	Force (Min.) N
30	.05	—	—	1.5	7
28	.08	—	—	3	13
26	.12	—	—	5	22
24	.2	1.5	3.50	7	31
22	.3	3	3.50	12	53
20	.5	4.5	3.00	17	66
18	.8	6	3.00	30	133
16	1.2	8	2.75	45	200
14	2.0	10	2.75	50	222
12	3.0	—	—	60	267
10	5.0	—	—	70	311

Note: This is the total resistance between wire crimps of a mated pin and socket.

SOURCE: Catalog 82181

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

Universal
MATE-N-LOK II Connectors
(Continued)

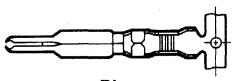
Universal MATE-N-LOK II Mating Combinations

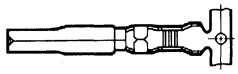
Number of Circuits	Flammability Rating	Style	Part Numbers		Plating	Pc Board Part Numbers							
						Vertical Pin Header*			Vertical Socket Header**			Right-Angle Pin Header	Right-Angle Socket Header
			Plug Housing	Cap Housing		Standard Tail	Standard Tail Polarized	Long Tail	Standard Tail	Standard Tail Polarized	Long Tail		
2	UL 94V-0	In-Line	770017-1	770024-1	Tin	350786-1	641964-1	350787-1	350824-1	643412-1	350831-1	1-350942-0	643226-1
					Duplex[1]	350786-2	641964-2	350787-2	350824-2	—	—	2-350942-0	—
3	UL 94V-0	In-Line	770018-1	770025-1	Tin	350789-1	641966-1	350790-1	350825-1	643414-1	350832-1	1-350943-0	643228-1
					Duplex[1]	350789-2	—	350790-2	350825-2	643414-2	350832-2	2-350943-0	—
4	UL 94V-0	In-Line	770019-1	770026-1	Tin	350792-1	641968-1	350793-1	350826-1	643416-1	350833-1	1-350944-0	643230-1
					Duplex[1]	350792-2	—	350793-2	350826-2	—	350833-2	2-350944-0	643230-2
5	UL 94V-0	In-Line	770016-1	—	Tin	640900-1	643406-1	—	640467-1	—	—	1-350945-0	643232-1
					Duplex[1]	640900-2	—	—	640467-2	—	—	2-350945-0	643232-2
6	UL 94V-0	Matrix	770020-1	770027-1	Tin	350711-1	—	350732-1	350827-1	643424-1	350834-1	640583-1	643234-1
					Duplex[1]	350711-2	641970-2	350732-2	350827-2	643424-2	350834-2	640583-2	643234-2
9	UL 94V-0	Matrix	770021-1	770028-1	Tin	350712-1	641972-1	350742-1	350828-1	643426-1	350835-1	—	—
					Duplex[1]	350712-2	641972-2	350742-2	350828-2	643426-2	350835-2	—	—
12	UL 94V-0	Matrix	770022-1	770029-1	Tin	350713-1	641974-1	350737-1	350829-1	643428-1	350836-1	—	—
					Duplex[1]	350713-2	641974-2	350737-2	350829-2	—	350836-2	—	—
15	UL 94V-0	Matrix	770023-1	770030-1	Tin	350714-1	641976-1	350738-1	350830-1	643430-1	350837-1	—	—
					Duplex[1]	350714-2	—	350738-2	350830-2	—	350837-2	—	—

[1]Duplex Finish—Plated with .000030 [.00076] min. gold in mating area, matte tin-lead on solder tail end over .000050 [.00127] min. nickel underplate on entire contact.
*Mates with Plug Housing (Socket Contact)
**Mates with Plug Housing (Pin Contact)

Contacts

Split Pin Diameter – .086 [2.18]
Stock Thickness – .012 [.305]


Pin


Socket

Wire Size Range AWG [mm²]	Ins. Dia. Range	Material & Finish	Contact Part Numbers				Hand Tool Part No.
			Pin		Socket		
			Strip Form	Loose Form	Strip Form	Loose Form	
30-26 [.05-.12]	**.032-.057** .813-1.45	Phos. Brz., Gold[1]	770011-6	770512-6	770012-6	770416-6	58439-1
24-18 [.2-.8]	**.040-.100** 1.02-2.54	Brass, Pre-tin	770009-1	770252-1	—	—	90300-2 90548-1*
		Brass, Duplex[2]	770009-2	770252-2	—	—	
		Phos. Brz., Pre-tin	—	—	770010-3	770253-3	
		Phos. Brz., Duplex[2]	—	—	770010-4	770253-4	
20-14 [.5-2.0]	**.060-.130** 1.52-3.30	Brass, Pre-tin	770007-1	770250-1	—	—	90296-2 90546-1*
		Brass, Duplex[2]	770007-2	770250-2	—	—	
		Phos. Brz., Pre-tin	—	—	770008-3	770251-3	
		Phos. Brz., Duplex[2]	—	—	770008-4	770251-4	
20-14 [.5-2.0]	**.130-.200** 3.30-5.08	Brass, Pre-tin	770005-1	770248-1	—	—	90298-2[4] 90299-2[4] 90547-1*
		Brass, Duplex[2]	770005-2	770248-2	—	—	
		Phos. Brz., Pre-tin	—	—	770006-3	770249-3	
		Phos. Brz., Duplex[2]	770005-4	—	770006-4	770249-4	
12-10 [3.0-5.0]	**.200** max.[3] 5.08	Phos. Brz., Pre-tin	770003-3	770246-3	770004-3	770247-3	69710-1[5] 58530-1*
		Phos. Brz., Duplex[2]	770003-4	770246-4	770004-4	770247-4	

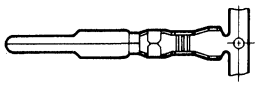
[1]Gold Finish—Plated with .000030 [.00076] min. gold in mating area and inside wire barrel over .000050 [.00127] min. nickel underplate on entire contact.
[2]Duplex Finish—Plated with .000030 [.00076] min. gold in mating area and .000050 [.00127] min. tin-lead in crimp area over .000050 [.00127] min. nickel underplate on entire contact.
[3]There is no insulation barrel on this contact. Insulation maxium diameter is limited by the housing. Use of strain relief is recommended with these contacts.
[4]Use Hand Tool **Part No. 90298-2** for 20-18 AWG and **Part No. 90299-2** for 16-14 AWG.
[5]Hand Tool **Part No. 69710-1** uses die set **Part No. 58380-1** for 12 AWG and **Part No. 58380-2** for 10 AWG.
Note: These contacts are to be used in Universal MATE-N-LOK II plug or cap housings and 10 and 13 circuit Circular Multi-Pin plug or receptacle housings only.
*PRO-CRIMPER II Hand Tool for maintenance and field repair use only.

SOURCE: Catalog 82181

Universal MATE-N-LOK II Connectors
(Continued)

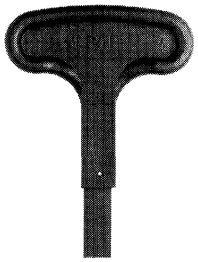
Grounding Pin

Solid Pin Diameter – .084 [2.13]
.100 [2.54] longer than standard pin
Stock Thickness – .012 [.305]

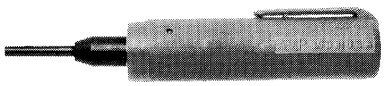


Wire Size Range AWG [mm²]	Ins. Dia. Range	Material & Finish	Contact Part Numbers		Hand Tool Part No.
			Strip Form	Loose Form	
20-14 [.5-2.0]	**.060-.130** 1.52-3.30	Brass, Pre-tin	770193-1	770254-1	90296-2
		Brass, Duplex[1]	770193-2	770254-2	90546-1*
20-14 [.5-2.0]	**.130-.200** 3.30-5.08	Brass, Pre-tin	770194-1	770255-1	90298-2[2]
		Brass, Duplex[1]	770194-2	770255-2	90299-2[2] 90547-1*

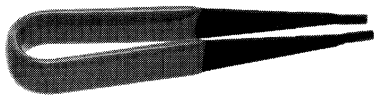
[1]Duplex Finish—Plated with .000030 [.00076] min. gold in mating area and .000050 [.00127] min. tin-lead in crimp area over .000050 [.00127] min. nickel underplate on entire contact.
[2]Use Hand Tool **Part No. 90298-2** for 20-18 AWG and **Part No. 90299-2** for 16-14 AWG.
Note: These grounding pins are to be used in Universal MATE-N-LOK II plug or cap housings and 10 and 13 circuit Circular Multi-Pin plug or receptacle housings only.
*PRO-CRIMPER II Hand Tool for maintenance and field repair use only.



Latch Disengaging Tool
Part No. 58382-1

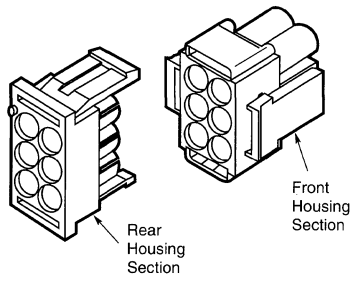


Contact Extraction Tool
Part No. 458994-2

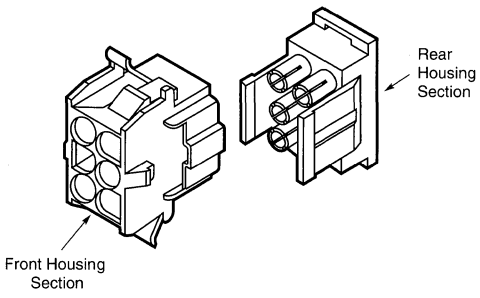


Contact Insertion Tool
(For inserting contacts applied to small diameter wire)
Part No. 455830-1

Housing Components
Free-Hanging or Panel Mount
.250 [6.35] Centerline Spacing



Plug Housing



Cap Housing

Number of Circuits	Kit Component Part Numbers UL 94V-0 Nylon					
	Plug			Cap		
	Kit	Front	Rear	Kit	Front	Rear
2	770017-1	770031-1	770032-1	770024-1	770045-1	770046-1
3	770018-1	770033-1	770034-1	770025-1	770047-1	770048-1
4	770019-1	770035-1	770036-1	770026-1	770049-1	770050-1
5	770016-1	770319-1	770320-1	—	—	—
6	770020-1	770037-1	770038-1	770027-1	770051-1	770052-1
9	770021-1	770039-1	770040-1	770028-1	770053-1	770054-1
12	770022-1	770041-1	770042-1	770029-1	770055-1	770056-1
15	770023-1	770043-1	770044-1	770030-1	770057-1	770058-1

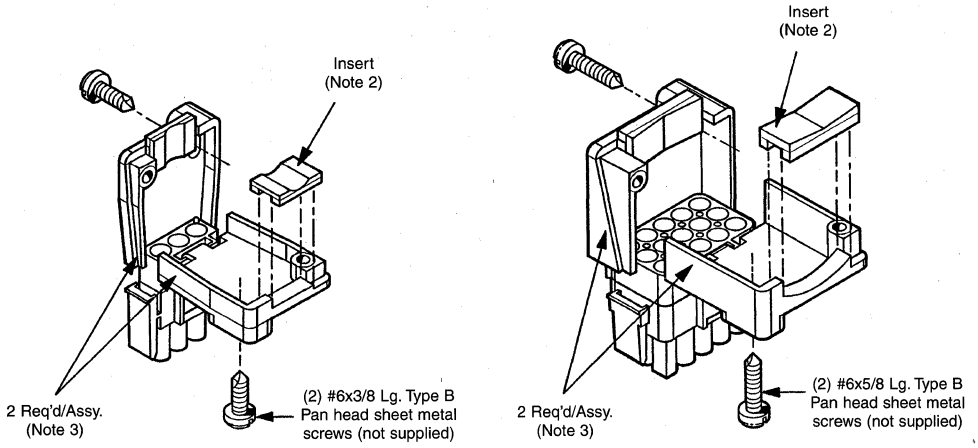
Notes: 1. Kits consist of a front and rear component.
2. Kit components can be purchased separately.

SOURCE: Catalog 82181

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

Universal MATE-N-LOK II Connectors
(Continued)

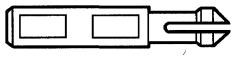
Plug or Cap Housing Strain Reliefs



Style	Number of Circuits	Insert Supplied	Single Wire Dia. Range	Wire Bundle Dia. Range	Part Numbers UL 94V-0 Nylon
In-Line	2	Yes	.040–.190 1.02–4.83	—	640713-1
		No	—	.200–.350 5.08–8.89	640713-2
	3	Yes	.040–.190 1.02–4.83	—	640714-1
		No	—	.200–.350 5.08–8.89	641945-1
	4	Yes	.040–.190 1.02–4.83	—	641776-1
		No	—	.200–.350 5.08–8.89	641776-2
	5	Yes	.040–.190 1.02–4.83	—	643030-1
		No	—	.200–.350 5.08–8.89	643030-4
Matrix	6	Yes	—	.120–.650 3.05–16.51	640715-1
	9	Yes	—	.120–.650 3.05–16.51	640716-1
	12	Yes	—	.150–.750 3.81–19.05	640717-1
	15	Yes	—	.200–.850 5.08–21.59	640718-1

Notes: 1. Insert comes attached to strain relief. It can be used to provide additional adjustment for small wire bundles or discarded.
2. Insert to be positioned as shown by dotted lines.
3. Strain relief part number represents one-half of a strain relief. Two of a part number are required for one connector.

Keying Plug

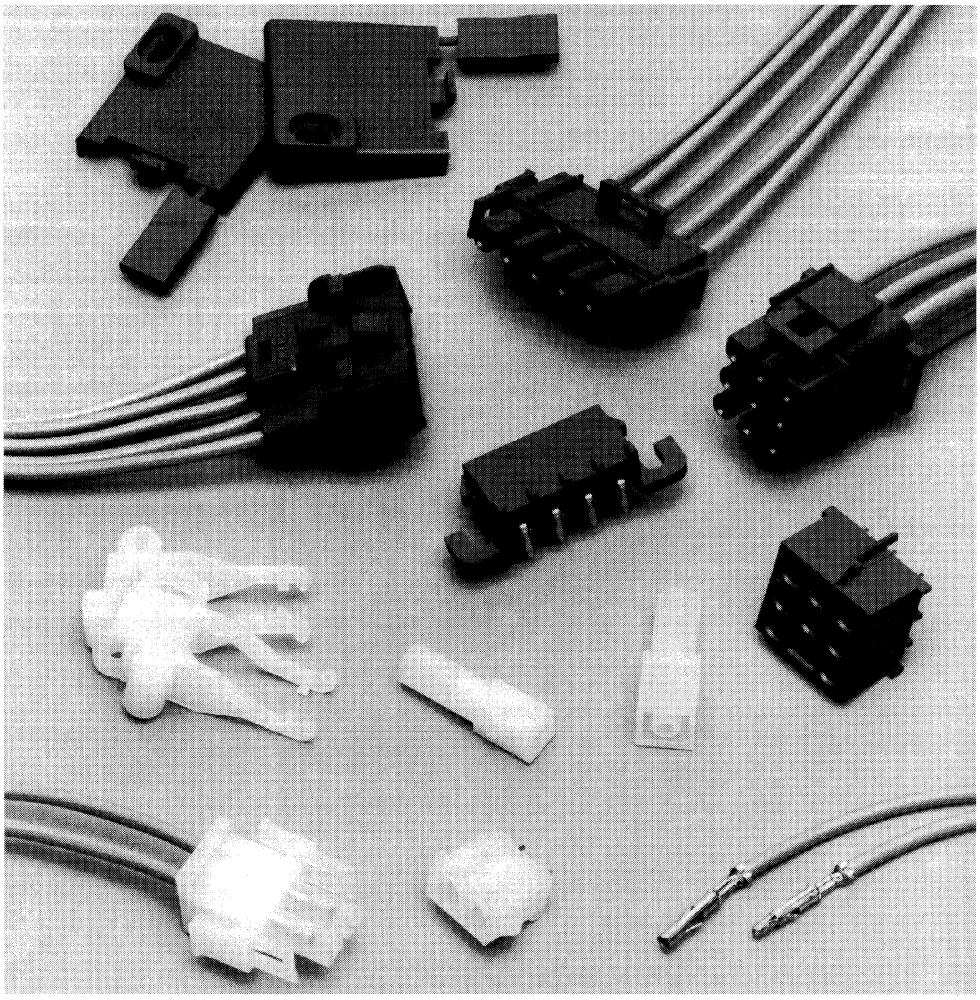


Part Number 770377-1
UL 94V-0 Nylon material

Universal MATE-N-LOK Connectors

Product Facts

- Pins and sockets can be intermixed in the same housing
- Positive polarization
- Rear cavity identification
- Contacts completely enclosed in housings
- Positive locking housings
- Insulation capability to .200 [5.08] diameter
- Removable, crimp snap-in contacts
- Low contact mating force
- Contacts accept 30-10 AWG [.05-5.0 mm^2] wire sizes
- Contacts available with pre-tin or gold plating
- Dual locking lances provide optimum contact stability
- Panel mount or free-hanging
- Mates with Universal MATE-N-LOK II housings
- Available in UL 94V-O flame retardant material. Meets the material requirements of Table 25.1 of UL Standard 1410 (television receivers and video products)
- Not for interrupting current
- Harness to Pc board capability using pin or socket headers
- Pin and socket headers are available in both vertical and right-angle style
- Solderability—headers meet MIL-STD-202, Method 208
- Contacts are on .250 [6.35] centerline spacing
- Recognized under the Component Program of Underwriters Laboratories Inc., File No. E28476
- Certified by Canadian Standards Association, File No. LR 7189
- Passed test by VDE under their Test Report No. 14397-1431-1003/continuous surveillance



Wire Size		Termination Resistance		Tensile Force Per Contact (Wire Pullout)	
AWG	mm^2	Test Current (amps)	Resistance Milliohms (Max. Init.)	Force (Min.) lbs.	N
30	.05	—	—	2	9
28	.08	—	—	3	13
26	.12	—	—	6	27
24	.2	1.5	3.50	8	36
22	.3	3	3.50	14	62
20	.5	4.5	3.00	14	62
18	.8	6	3.00	30	133
16	1.2	8	2.75	45	200
14	2.0	10	2.75	50	222
12	3.0	—	—	60	267
10	5.0	—	—	70	311

Note: This is the total resistance between wire crimps of a mated pin and socket.

SOURCE: Catalog 82181

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

Universal
MATE-N-LOK Connectors
(Continued)

Universal MATE-N-LOK Mating Combinations

Number of Circuits	Flammability Rating	Style	Part Numbers		Plating	Pc Board Part Numbers							
						Vertical Pin Header*			Vertical Socket Header**			Right-Angle Pin Header	Right-Angle Socket Header
			Plug Housing	Cap Housing		Standard Tail	Standard Tail Polarized	Long Tail	Standard Tail	Standard Tail Polarized	Long Tail		
1	UL 94V-2	In-Line	1-350867-0	770421-1	—	—	—	—	—	—	—	—	—
	UL 94V-0	In-Line	350865-1	350866-1	—	—	—	—	—	—	—	—	—
2	UL 94V-2	In-Line	1-480698-0	1-480699-0	Tin	350428-1	641963-1	350582-1	350759-4	643411-1	350986-4	—	—
					Duplex[1]	350428-2	641963-2	350582-2	350759-3	—	—	—	—
	UL 94V-0	In-Line	350777-1	350778-1	Tin	350786-1	641964-1	350787-1	350824-1	643412-1	350831-1	1-350942-0	643226-1
					Duplex[1]	350786-2	641964-2	350787-2	350824-2	—	—	2-350942-0	—
3	UL 94V-2	In-Line	1-480700-0	1-480701-0	Tin	350429-1	641965-1	350583-1	350760-4	643413-1	350987-4	—	—
					Duplex[1]	350429-2	641965-2	350583-2	350760-3	—	—	—	—
	UL 94V-0	In-Line	350766-1	350767-1	Tin	350789-1	641966-1	350790-1	350825-1	643414-1	350832-1	1-350943-0	643228-1
					Duplex[1]	350789-2	—	350790-2	350825-2	643414-2	350832-2	2-350943-0	—
4	UL 94V-2	In-Line	1-480702-0	1-480703-0	Tin	350430-1	641967-1	350584-1	350761-4	643415-1	350988-4	—	—
					Duplex[1]	350430-2	—	350584-2	350761-3	—	350988-3	—	—
	UL 94V-0	In-Line	350779-1	350780-1	Tin	350792-1	641968-1	350793-1	350826-1	643416-1	350833-1	1-350944-0	643230-1
					Duplex[1]	350792-2	—	350793-2	350826-2	—	350833-2	2-350944-0	643230-2
5	UL 94V-2	In-Line	1-480763-0	1-480764-0	Tin	640466-1	643405-1	—	640467-1	—	—	—	—
					Duplex[1]	640466-2	—	—	640467-2	—	—	—	—
	UL 94V-0	In-Line	350809-1	350810-1	Tin	640900-1	643406-1	—	640901-1	—	—	1-350945-0	643232-1
					Duplex[1]	640900-2	—	—	640901-2	—	—	2-350945-0	643232-2
6	UL 94V-2	In-Line	640855-1	926307-1	Tin	641832-1	643407-1	—	—	—	—	—	—
					Duplex[1]	—	—	—	—	—	—	—	—
	UL 94V-0	In-Line	640581-1	926307-3	Tin	641831-1	643408-1	—	—	—	—	640583-1	643234-1
					Duplex[1]	—	—	—	770262-2	—	—	640583-2	643234-2
	UL 94V-2	Matrix	1-480704-0	1-480705-0	Tin	350431-1	641969-1	350585-1	350762-4	643423-1	350989-4	—	—
					Duplex[1]	350431-2	—	350585-2	350762-3	—	350989-3	—	—
	UL 94V-0	Matrix	350715-1	350781-1	Tin	350711-1	641970-1	350732-1	350827-1	643424-1	350839-1	—	—
					Duplex[1]	350711-2	641970-2	350732-2	350827-2	643424-2	350839-2	—	—
8	UL 94V-2	In-Line	640586-1	926308-1	Tin	641825-1	—	770143-1	—	—	—	—	—
					Duplex[1]	—	—	—	—	—	—	—	—
	UL 94V-0	In-Line	640582-1	926308-3	Tin	641828-1	643410-1	—	—	—	—	640584-1	643326-1
					Duplex[1]	—	—	—	—	—	—	640584-2	643326-2
9	UL 94V-2	Matrix	1-480706-0	1-480707-0	Tin	350432-1	641971-1	350586-1	350763-4	643425-1	350990-4	—	—
					Duplex[1]	350432-2	641971-2	350586-2	350763-3	—	350990-3	—	—
	UL 94V-0	Matrix	350720-1	350782-1	Tin	350712-1	641972-1	350742-1	350828-1	643426-1	350835-1	—	—
					Duplex[1]	350712-2	641972-2	350742-2	350828-2	643426-2	350835-2	—	—
10	UL 94V-2	In-Line	926302-1	926309-1	Tin	—	—	—	—	—	—	—	—
					Duplex[1]	—	—	—	—	—	—	—	—
	UL 94V-0	In-Line	926302-3	926309-3	Tin	—	—	—	—	—	—	—	—
					Duplex[1]	—	—	—	—	—	—	—	—
12	UL 94V-2	Matrix	1-480708-0	1-480709-0	Tin	350433-1	641973-1	350587-1	350764-4	—	350991-4	—	—
					Duplex[1]	350433-2	—	350587-2	350764-3	—	350991-3	—	—
	UL 94V-0	Matrix	350735-1	350783-1	Tin	350713-1	641974-1	350737-1	350829-1	643428-1	350836-1	—	—
					Duplex[1]	350713-2	641974-2	350737-2	350829-2	—	350836-2	—	—
15	UL 94V-2	Matrix	1-480710-0	1-480711-0	Tin	350434-1	641975-1	350588-1	350765-4	643429-1	350992-4	—	—
					Duplex[1]	350434-2	—	350588-2	350765-3	—	350992-3	—	—
	UL 94V-0	Matrix	350736-1	350784-1	Tin	350714-1	641976-1	350738-1	350830-1	643430-1	350837-1	—	—
					Duplex[1]	350714-2	—	350738-2	350830-2	—	350837-2	—	—

[1]Duplex Finish — Plated with .000030 [.00076] min. gold in mating area, matte tin-lead on solder tail end over .000050 [.00127] min. nickel underplate on entire contact.
*Mates with Plug Housing (Socket Contact)
**Mates with Plug Housing (Pin Contact)

SOURCE: Catalog 82181

Specifications subject to change.
1-800-522-6752
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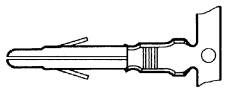
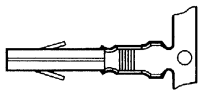
Universal
MATE-N-LOK Connectors
(Continued)

Contacts

Solid Pin Diameter – .084 [2.13]
Split Pin Diameter – .086 [2.13]
Stock Thickness – .012 [.305]
unless otherwise noted



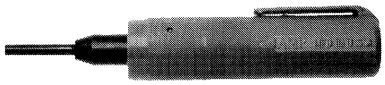
Pin



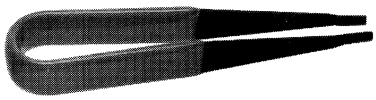
Socket

Wire Size Range AWG [mm²]	Ins. Dia. Range	Material & Finish	Contact Part Numbers				Hand Tool Part No.
			Pin		Socket		
			Strip Form	Loose Form	Strip Form	Loose Form	
30-26 [.05-.12]	**.032-.057** .813-1.45	Brass, Pre-tin	350924-1	770672-1	350925-1	770673-1	58439-1
		Phos. Brz., Gold[2]	350924-6	770672-6	350925-6	—	
24-18 [.2-.8]	**.040-.100** 1.02-2.54	Brass, Pre-tin	350561-1	350690-1	350851-1	350689-1[1]	90300-2 90548-1*
					350570-1[1]		
		Brass, Gold[2]	350561-2	350690-2	350851-2	640347-2	
					350570-2[1]	350689-2[1]	
		Brass, Select Gold[3]	350561-7	350690-7	350851-7	350689-7[1]	
					350570-7[1]		
		Phos. Brz., Pre-tin	350561-3	350690-3	350570-3[1]	350689-3[1]	
		Phos. Brz., Select Gold[3]	—	—	350570-6[1]	—	
20-14 [.5-2.0]	**.060-.130** 1.52-3.30	Brass, Pre-tin	350218-1	350547-1	350536-1	350550-1	90296-2 90546-1*
		Brass, Gold[2]	350218-2	350547-2	350536-2	350550-2	
		Brass, Select Gold[3]	350218-7	350547-7	350536-7	350550-7	
		Phos. Brz., Pre-tin	350218-3	350547-3	350536-3	350550-3	
		Phos. Brz., Select Gold[3]	350218-6	350547-6	350536-6	350550-6	
20-14 [.5-2.0]	**.130-.200** 3.30-5.08	Brass, Pre-tin	350538-1	350552-1	350537-1	350551-1	90298-2[6] 90299-2[6] 90547-1*
		Brass, Gold[2]	350538-2	350552-2	350537-2	350551-2	
		Brass, Select Gold[3]	350538-7	350552-7	350537-7	350551-7	
		Phos. Brz., Pre-tin	350538-3	350552-3	350537-3	350551-3	
		Phos. Brz., Select Gold[3]	350538-6	350552-6	350537-6	350551-6	
18-14[4] [.8-2.0]	**.130-.200** 3.30-5.08	Brass, Pre-tin	350873-1	—	350874-1	—	90298-2[6] 90299-2[6] 90547-1*
		Phos. Brz., Pre-tin	350873-3	350918-3	350874-3	350919-3	
12-10 [3.0-5.0]	**.200** max.[5] 5.08	Phos. Brz., Pre-tin	350922-3	640309-3	350923-3	640310-3	69710-1[6] 58530-1*
		Phos. Brz., Select Gold[3]	350922-6	640309-6	350923-6	640310-6	
		Phos. Brz., Gold[2]	350922-4	—	350923-4	—	

[1]Socket Contact — .010 [.254] stock thickness
[2]Gold Finish — Plated with .000030 [.00076] min. gold in mating area and inside wire barrel over .000050 [.00127] min. nickel underplate on entire contact.
[3]Select Gold Finish — Plated with .000030 [.00076] min. gold in mating area over .000050 [.00127] min. nickel underplate on entire contact.
[4]Recommended for predominant use of 14 AWG wire.
[5]There is no insulation barrel on this contact. Insulation maximum diameter is limited by the housing.
[6]Hand Tool **Part No. 90298-2** is for wire size 20-18 AWG; Hand Tool **Part No. 90299-2** is for wire size 16-14 AWG. Hand Tool **Part No. 69710-1** uses die set **Part No. 58380-1** for 12 AWG and **Part No. 58380-2** for 10 AWG.
Notes: 1. Phosphor bronze material contacts should be used in high temperature/humidity cycling applications.
2. These contacts are to be used in Universal MATE-N-LOK plug or cap housing
*PRO-CRIMPER II Hand Tool for maintenance and field repair use only.



Contact Extraction Tool
Part No. 458994-2



Contact Insertion Tool
(for inserting contacts applied to small diameter wire)
Part No. 455830-1

SOURCE: Catalog 82181

Specifications subject to change.
1-800-522-6752
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1-800-722-1111
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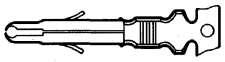
Universal MATE-N-LOK Connectors
(Continued)

Contacts
(Continued)

Split Pins

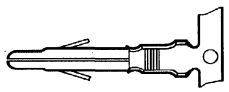
Solid Pin Diameter – .084 [2.13]
Split Pin Diameter – .086 [2.18]
Stock Thickness – .012 [.305]



Wire Size Range AWG [mm²]	Ins. Dia. Range	Material & Finish	Contact Part Numbers		Hand Tool Part No.
			Strip Form	Loose Form	
24-18 [.2-.8]	**.040-.100** 1.02-2.54	Brass, Pre-tin	350699-1	350706-1	90300-2 90548-1*
		Brass, Gold[1]	350699-2	350706-2	
		Brass, Select Gold[2]	350699-7	350706-7	
20-14 [.5-2.0]	**.060-.130** 1.52-3.30	Brass, Pre-tin	350687-1	350705-1	90296-2 90546-1*
		Brass, Gold[1]	350687-2	350705-2	
		Brass, Select Gold[2]	350687-7	350705-7	
20-14 [.5-2.0]	**.130-.200** 3.30-5.08	Brass, Pre-tin	350700-1	350707-1	90298-2[3]
		Brass, Gold[1]	350700-2	350707-2	90299-2[3]
		Brass, Select Gold[2]	350700-7	350707-7	90547-1*

[1]Gold Finish — Plated with .000030 [.00076] min. gold in mating area and inside wire barrel over .000050 [.00127] min. nickel underplate on entire contact.
[2]Select Gold Finish — Plated with .000030 [.00076] min. gold in mating area over .000050 [.00127] min. nickel underplate on entire contact.
[3]Hand Tool **Part No. 90298-2** for wire size 20-18 AWG. Hand Tool **Part No. 90299-2** for wire size 16-14 AWG.
Notes: 1. AMP recommends split pins be used in housings having 6, 9, 12 and 15 circuits to reduce mating force.
2. Phosphor bronze material contacts are available for use in high temperature/humidity cycling applications, consult AMP.
3. These contacts are to be used in Universal MATE-N-LOK plug or cap housings only.
*PRO-CRIMPER II Hand Tool for maintenance and field repair use only.

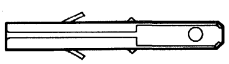
Grounding Pins



Wire Size Range AWG [mm²]	Ins. Dia. Range	Material & Finish	Contact Part Numbers		HDM Applicator Part No.[2]	Hand Tool Part No.
			Strip Form	Loose Form		
24-18 [.2-.8]	**.060-.130** 1.52-3.30	Brass, Pre-tin	770210-1	—	567216-2	—
20-14 [.5-2.0]	**.060-.130** 1.52-3.30	Brass, Pre-tin	350654-1	350669-1	687763-1 687763-2	90296-2 90546-1*
12-10 [3.0-5.0]	**.200** max.[1] 5.08	Phos. Brz., Pre-tin	770234-3	—	466597-2	—

[1]There is no insulation barrel on this contact. Insulation maximum diameter is limited by the housing.
[2]Heavy-Duty Miniature (HDM) applicator part number with -1 is for a Model "T" AMP-O-LECTRIC terminating unit used in automatic lead making machines such as the AMPOMATOR CLS III machines; -2 is for a Model "K" AMP-O-LECTRIC Bench-Top Machine. Stripper-Crimper (SCA) and Crimp Quality Monitor (CQM) applicators are available, call the Tooling/Technical Assistance Center.
*PRO-CRIMPER II Hand Tool for maintenance and field repair use only.

Programmable Connector Contact
(Socket with 110 Series Special FASTON Tab)

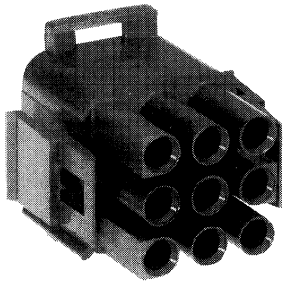


Part Number 350877-1

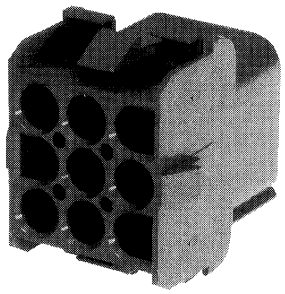
Note: This contact will accept a 110 Series FASTON Receptacle— **Part No. 350871-1** (strip form) allows simple field wiring or wiring changes.

Universal MATE-N-LOK Connectors
(Continued)

Housings, Free-Hanging or Panel Mount .250 [6.35] Centerline Spacing



9 Circuit Plug



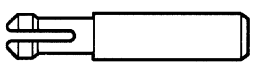
9 Circuit Cap

Note: 9 Cir. Housing Dim. (Typ.)—Plug, 1.080 [27.43] L x 1.080 [27.43] W x .800 [20.32] H;
Cap, 1.120 [28.45] L x 1.080 [27.43] W x .800 [20.32] H

Number of Circuits	Style	Housing Part Numbers			
		Plug		Cap	
		UL 94V-2 Nylon, Natural	UL 94V-0 Nylon	UL 94V-2 Nylon, Natural	UL 94V-0 Nylon
1	—	1-350867-0	350865-1	770421-1	350866-1
		1-641084-0[2]	—	1-641083-0[1,2]	—
2	In-Line	1-480698-0	350777-1	1-480699-0	350778-1
		1-770113-0[2]	—	1-770114-0[2]	—
3	In-Line	1-480700-0	350766-1	1-480701-0	350767-1
		1-641771-0[2]	—	1-641767-0[2]	—
4	In-Line	1-480702-0	350779-1	1-480703-0	350780-1
		770208-1[2]	—	1-770209-1[1,2]	—
5	In-Line	1-480763-0	350809-1	1-480764-0	350810-1
6	In-Line	640585-1	640581-1	1-926307-1	926307-3
	Matrix	1-480704-0	350715-1	1-480705-0	350781-1
		1-641770-0[2]	—	1-641766-0[2]	—
8	In-Line	640586-1[2]	640582-1	1-926308-1	926308-3
9	Matrix	1-480706-0	350720-1	1-480707-0	350782-1
		1-641769-0[2]	—	1-641765-0[2]	—
10	In-Line	926302-1	926302-3	1-926309-1	926309-3
12	Matrix	1-480708-0	350735-1	1-480709-0	350783-1
		1-641768-0[2]	—	641764-1[2]	—
15	Matrix	1-480710-0	350736-1	1-480711-0	350784-1

[1]In-Line version.
[2]Housing material has 125°C temperature rating. Lime Green color. 12 Circuit cap black color.

Keying Plug



Part Numbers
UL 94V-2 Nylon material, natural color—**1-640415-1**

UL 94V-0 Nylon material—**1-640415-0**
Note: Keying plug snaps into plug or cap housing

SOURCE: Catalog 82181

Specifications subject to change.
1-800-522-6752
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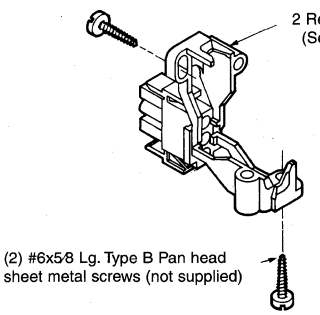
1-800-722-1111
Tooling/Technical Assistance Center

Universal MATE-N-LOK Connectors
(Continued)

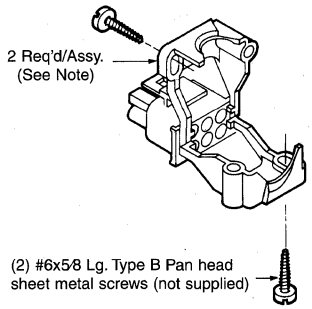
Plug or Cap Housing Strain Reliefs

2, 3, 4, 5, 6 and 8 Circuit, In-Line



Part Numbers
UL 94V-2 Nylon material, natural color—**1-350589-0**
UL 94V-0 Nylon material—**350811-1**
Wire Bundle Dim.— .312 [7.92] max.

6, 9, 12 and 15 Circuit, Matrix

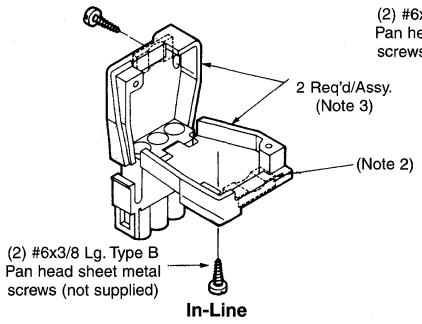


Part Numbers
UL 94V-2 Nylon material, natural color—**1-350590-0**
UL 94V-0 Nylon material—**350812-1**
Wire Bundle Dim.— .500 [12.7] max.

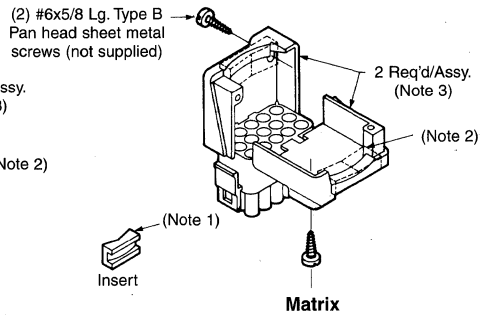
Note: Strain relief part number represents one half of a strain relief. Two strain reliefs required per housing.

Cap Housing Adapters

Note: These adapters are designed to anchor the cap housing strain reliefs to the housings and prevent the strain relief halves from "drawing in" when the screws are being torqued down to clamp the cable.

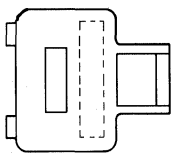


In-Line



Matrix

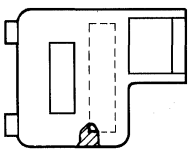
For All Positions Except 2, 6 and 8 Circuit Cap Housings



UL 94V-2 Nylon material, natural color—**Part No. 641777-1**

UL 94V-0 Nylon material —**Part No. 641778-1**

For 2 In-Line and 6 Matrix Circuit Cap Housings Only



UL 94V-2 Nylon material, natural color—**Part No. 643182-1**

UL 94V-0 Nylon material —**Part No. 643182-2**

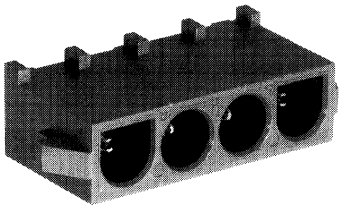
Style	Number of Circuits	Insert Supplied	Single Wire Dia. Range	Wire Bundle Dia. Range	Part Numbers: UL 94V-2 Nylon, Natural	Part Numbers: UL 94V-0 Nylon
In-Line	2	Yes	**.040-.190** 1.02-4.83	—	1-640719-0	640713-1
		No	—	**.200-.350** 5.08-8.89	1-640719-1	640713-2
	3	Yes	**.040-.190** 1.02-4.83	—	1-640720-0	640714-1
		No	—	**.200-.350** 5.08-8.89	641763-1	641945-1
	4	Yes	**.040-.190** 1.02-4.83	—	641775-1	641776-1
		No	—	**.200-.350** 5.08-8.89	641775-2	641776-2
	5	Yes	**.040-.190** 1.02-4.83	—	643030-3	643030-1
		No	—	**.200-.350** 5.08-8.89	643030-2	643030-4
	6 Note 5	Yes	**.040-.190** 1.02-4.83	—	643585-1	643313-1
		No	—	**.200-.350** 5.08-8.89	643585-2	643313-2
	8 Note 5	Yes	**.040-.190** 1.02-4.83	—	—	643314-1
		No	—	**.200-.350** 5.08-8.89	—	643314-2
Matrix	6	Yes	—	**.120-.650** 3.05-16.51	1-640721-0	640715-1
	9	Yes	—	**.120-.650** 3.05-16.51	1-640722-0	640716-1
	12	Yes	—	**.150-.750** 3.81-19.05	1-640723-0	640717-1
	15	Yes	—	**.200-.850** 5.08-21.59	1-640724-0	640718-1

Notes: 1. Cable clamping insert comes attached to strain relief. It can be used to provide additional adjustment for small wire bundles or discarded.
2. Insert to be positioned as shown by dotted lines.
3. Strain relief part number represents one-half of a strain relief. Two strain reliefs required per housing.
4. Must use cap housing adapters when attaching strain reliefs to a cap housing. **Two adapters required per housing.**
5. Strain reliefs for 6 and 8 position In-Line fits plug housings only.

SOURCE: Catalog 82181

Universal MATE-N-LOK Connectors
(Continued)

Pc Board Vertical Pin Headers .250 [6.35] Centerline Spacing



4 Circuit
Standard Tail Polarized

In-Line

Solder Tail Diameter—.062 [1.57]

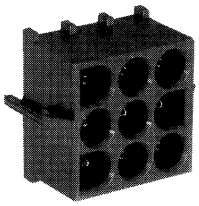
Note: 4 Cir. Housing Dim. (Typ.)—1.050 [26.67] L x .300 [7.62] W x .550 [13.97] H

Number of Circuits	Housing Material	Pin Finish	Pin Header Part Numbers			Mates with Plug Housing Part Number (Using Socket Contacts)
			Standard Tail[2]	Standard Tail Polarized[2]	Long Tail[3]	
2	94V-2	Pre-tin	350428-1	641963-1	350582-1	1-480698-0
		Duplex[1]	350428-2	641963-2	350582-2	
	94V-0	Pre-tin	350786-1	641964-1	350787-1	350777-1
		Duplex[1]	350786-2	641964-2	350787-2	
3	94V-2	Pre-tin	350429-1	641965-1	350583-1	1-480700-0
		Duplex[1]	350429-2	641965-2	350583-2	
	94V-0	Pre-tin	350789-1	641966-1	350790-1	350766-1
		Duplex[1]	350789-2	—	350790-2	
4	94V-2	Pre-tin	350430-1	641967-1	350584-1	1-480702-0
		Duplex[1]	350430-2	—	350584-2	
	94V-0	Pre-tin	350792-1	641968-1	350793-1	350779-1
		Duplex[1]	350792-2	—	350793-2	
5	94V-2	Pre-tin	640466-1	643405-1	—	1-480763-0
		Duplex[1]	640466-2	—	—	
	94V-0	Pre-tin	640900-1	643406-1	—	350809-1
		Duplex[1]	640900-2	—	—	
6	94V-2	Pre-tin	641832-1	643407-1	—	640585-1
	94V-0	Pre-tin	641831-1	643408-1	—	640581-1
8	94V-2	Pre-tin	641825-1	—	770143-1	640586-1
	94V-0	Pre-tin	641828-1	643410-1	—	640582-1

[1]Duplex Finish — Plated with .000030 [.00076] min. gold in mating area, matte tin-lead on solder tail end over .000050 [.00127] min. nickel underplate on entire contact.
[2]Use Standard Tail .175 [4.45] for .062 [1.57] thick Pc board.
[3]Use Long Tail .235 [5.97] for .125 [3.18] thick Pc board.

Matrix

Solder Tail Diameter—.062 [1.57]



9 Circuit
Standard Tail Polarized

Note: 9 Cir. Housing Dim. (Typ.)—.800 [20.32] L x .800 [20.32] W x .550 [13.97] H

Number of Circuits	Housing Material	Pin Finish	Pin Header Part Numbers			Mates with Plug Housing Part Number (Using Socket Contacts)
			Standard Tail[2]	Standard Tail Polarized[2]	Long Tail[3]	
6	94V-2	Pre-tin	350431-1	—	350585-1	1-480704-0
		Duplex[1]	350431-2	—	350585-2	
	94V-0	Pre-tin	350711-1	—	350732-1	350715-1
		Duplex[1]	350711-2	641970-2	350732-2	
9	94V-2	Pre-tin	350432-1	—	350586-1	1-480706-0
		Duplex[1]	350432-2	641971-2	350586-2	
	94V-0	Pre-tin	350712-1	641972-1	350742-1	350720-1
		Duplex[1]	350712-2	641972-2	350742-2	
12	94V-2	Pre-tin	350433-1	641973-1	350587-1	1-480708-0
		Duplex[1]	350433-2	—	350587-2	
	94V-0	Pre-tin	350713-1	641974-1	350737-1	350735-1
		Duplex[1]	350713-2	641974-2	350737-2	
15	94V-2	Pre-tin	350434-1	641975-1	350588-1	1-480710-0
		Duplex[1]	350434-2	—	350588-2	
	94V-0	Pre-tin	350714-1	641976-1	350738-1	350736-1
		Duplex[1]	350714-2	—	350738-2	

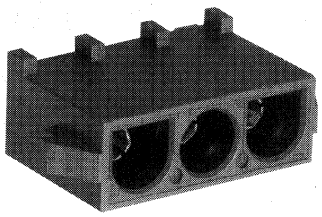
[1]Duplex Finish — Plated with .000030 [.00076] min. gold in mating area, matte tin-lead on solder tail end over .000050 [.00127] min. nickel underplate on entire contact.
[2]Use Standard Tail .175 [4.45] for .062 [1.57] thick Pc board.
[3]Use Long Tail .235 [5.97] for .125 [3.18] thick Pc board.

SOURCE: Catalog 82181

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

Universal MATE-N-LOK Connectors
(Continued)

Pc Board Vertical Socket Headers .250 [6.35] Centerline Spacing



3 Circuit
Standard Tail Polarized

In-Line

Solder Tail Diameter—.062 [1.57]

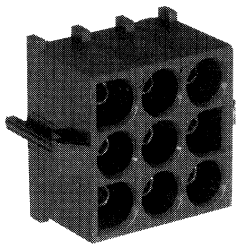
Note: 3 Cir. Housing Dim. (Typ.)—.800 [20.32] L x .300 [7.62] W x .550 [13.97] H

Number of Circuits	Housing Material	Socket Finish	Socket Header Part Numbers			Mates with Plug Housing Part Number (Using Pin Contacts)
			Standard Tail[2]	Standard Tail Polarized[2]	Long Tail[3]	
2	94V-2	Pre-tin	350759-4	643411-1	350986-4	1-480698-0
		Duplex[1]	350759-3	—	—	
	94V-0	Pre-tin	350824-1	643412-1	350831-1	350777-1
		Duplex[1]	350824-2	—	—	
3	94V-2	Pre-tin	350760-4	643413-1	350987-4	1-480700-0
		Duplex[1]	350760-3	—	—	
	94V-0	Pre-tin	350825-1	643414-1	350832-1	350766-1
		Duplex[1]	350825-2	643414-2	350832-2	
4	94V-2	Pre-tin	350761-4	643415-1	350988-4	1-480702-0
		Duplex[1]	350761-3	—	350988-3	
	94V-0	Pre-tin	350826-1	643416-1	350833-1	350779-1
		Duplex[1]	350826-2	—	350833-2	
5	94V-2	Pre-tin	640467-1	—	—	1-480763-0
	94V-0	Pre-tin	640901-1	—	—	350809-1
		Duplex[1]	640901-2	—	—	
6	94V-0	Duplex[1]	770262-2	—	—	640581-1

[1]Duplex Finish—Plated with .000030 [.00076] min. gold in mating area, matte tin-lead on solder tail end over .000050 [.00127] min. nickel underplate on entire contact.
[2]Use Standard Tail .175 [4.45] for .062 [1.57] thick Pc board.
[3]Use Long Tail .235 [5.97] for .125 [3.18] thick Pc board.

Matrix

Solder Tail Diameter—.062 [1.57]



9 Circuit
Standard Tail Polarized

Note: 9 Cir. Housing Dim. (Typ.)—.800 [20.32] L x .800 [20.32] W x .550 [13.97] H

Number of Circuits	Housing Material	Socket Finish	Socket Header Part Numbers			Mates with Plug Housing Part Number (Using Pin Contacts)
			Standard Tail[2]	Standard Tail Polarized[2]	Long Tail[3]	
6	94V-2	Pre-tin	350762-4	643423-1	350989-4	1-480704-0
		Duplex[1]	350762-3	—	350989-3	
	94V-0	Pre-tin	350827-1	643424-1	350834-1	350715-1
		Duplex[1]	350827-2	643424-2	350834-2	
9	94V-2	Pre-tin	350763-4	643425-1	350990-4	1-480706-0
		Duplex[1]	350763-3	—	350990-3	
	94V-0	Pre-tin	350828-1	643426-1	350835-1	350720-1
		Duplex[1]	350828-2	643426-2	350835-2	
12	94V-2	Pre-tin	350764-4	—	350991-4	1-480708-0
		Duplex[1]	350764-3	—	350991-3	
	94V-0	Pre-tin	350829-1	643428-1	350836-1	350735-1
		Duplex[1]	350829-2	—	350836-2	
15	94V-2	Pre-tin	350765-4	643429-1	350992-4	1-480710-0
		Duplex[1]	350765-3	—	350992-3	
	94V-0	Pre-tin	350830-1	643430-1	350837-1	350736-1
		Duplex[1]	350830-2	—	350837-2	

[1]Duplex Finish—Plated with .000030 [.00076] min. gold in mating area, matte tin-lead on solder tail end over .000050 [.00127] min. nickel underplate on entire contact.
[2]Use Standard Tail .175 [4.45] for .062 [1.57] thick Pc board.
[3]Use Long Tail .235 [5.97] for .125 [3.18] thick Pc board.

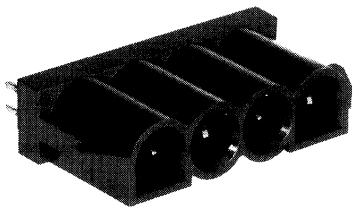
SOURCE: Catalog 82181

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

Universal MATE-N-LOK Connectors
(Continued)

Pc Board Vertical Pin Headers with ACTION PIN Contacts

Material—
UL 94V-0 PBT, black



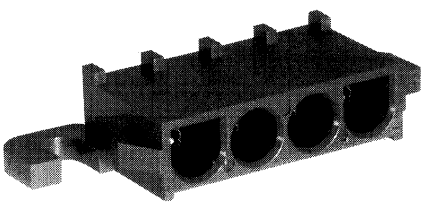
Note: 4 Cir. Housing Dim. (Typ.)—1.250 [31.75] L x .299 [7.59] W x .630 [16.00] H

Number of Circuits	Part Number	Mates with Housing Part Number
2	173924-1*	1-480698-0
		350777-1
3	173925-1*	1-480700-0
		350766-1
4	173926-1*	1-480702-0
		350779-1

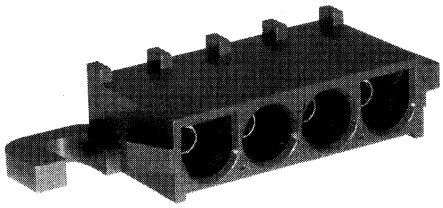
Note: Install in Pc board with arbor tool.
*UL Recognition pending.

Pc Board Right-Angle Pin and Socket Headers In-Line

Solder Tail Width—.052 [1.32]



Pin Headers



Socket Headers

Note: 4 Cir. Housing Dim. (Typ.)—1.745 [44.32] L x .680 [17.27] W x .360 [9.14] H

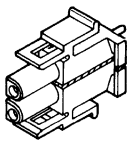
Number of Circuits	Contact Finish	UL 94V-0 Part Numbers			UL 94V-2 Part Numbers	
		Pin Header	Socket Header	Mates with	Pin Header	Mates with
2	Pre-tin	1-350942-0	643226-1	350777-1	—	—
	Duplex[1]	2-350942-0	—	—	—	—
3	Pre-tin	1-350943-0	643228-1	350766-1	—	—
	Duplex[1]	2-350943-0	—	—	—	—
4	Pre-tin	1-350944-0	643230-1	350779-1	1-350948-0	1-480702-0
	Duplex[1]	2-350944-0	643230-2	—	—	—
5	Pre-tin	1-350945-0	643232-1	350809-1	1-350949-0	1-480763-0
	Duplex[1]	2-350945-0	643232-2	—	—	—
6	Pre-tin	640583-1	643234-1	640581-1	640587-1	640585-1
	Duplex[1]	640583-2	643234-2	—	—	—
8	Pre-tin	640584-1	643236-1	640582-1	—	—
	Duplex[1]	640584-2	643236-2	—	—	—

[1]Duplex Finish—Plated with .000030 [.00076] min. gold in mating area, matte tin-lead on solder tail end over .000050 [.00127] min. nickel underplate on entire contact.

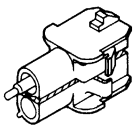
Test Connectors (with spring loaded contacts)

Material
Housing—UL 94V-0 Nylon

2, 3, 4 and 5 Circuit, In-Line



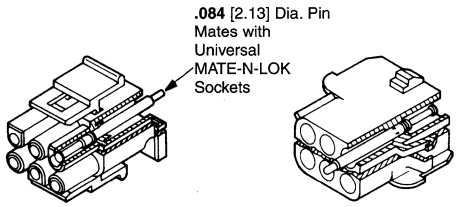
Plug



Cap

Number of Circuits	Part Numbers	
	Plug	Cap
2	350848-2	350849-2
3	350848-3	350849-3
4	350848-4	350849-4
5	350848-5	350849-5

6, 9, 12 and 15 Circuit, Matrix



Plug **Cap**

Number of Circuits	Part Numbers	
	Plug	Cap
6	350848-6	350849-6
9	350848-9	350849-9
12	1-350848-2	1-350849-2
15	1-350848-5	1-350849-5

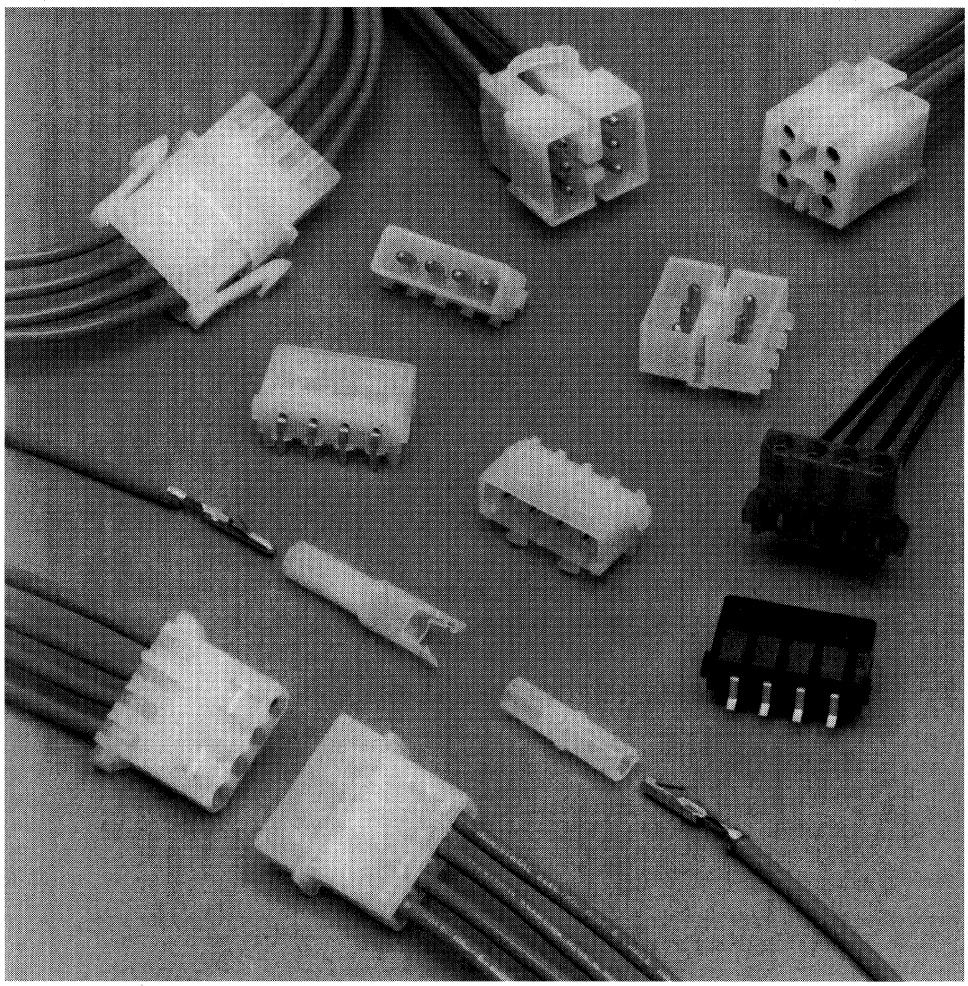
SOURCE: Catalog 82181

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

Commercial MATE-N-LOK Connectors

Product Facts

- Fully polarized nylon housings
- Easy cavity identification
- Locking devices are integral part of design. Connector halves will hold together under severe conditions of vibration and shock
- Built-in contact stabilization and self-aligning features
- Hot side egg-crate design for safety
- Precision molded to exacting tolerances
- Contacts accept a wire size range of 30-14 AWG [.05-2.0 mm²]
- Keying plug available
- "Clean" design contact—no sharp projections to impede insertion or damage housings
- Low insertion/extraction forces
- Contacts available in pre-tin or gold over nickel plated to fit the application requirements
- Wire to pc board capability using pin or socket headers
- Four circuit pc board-to-pc board capability available by mating vertical socket header with either vertical, right angle or surface mount pin header
- Four circuit insulation displacement connector (IDC) available
- Ultraviolet (UV) stable housings available in 1, 2 and 3 circuit
- Not for interrupting current
- Recognized under the Component Program of Underwriters Laboratories Inc., File No. E28476
- Certified by Canadian Standards Association, File No. LR 7189A-381



Wire Size		Termination Resistance		Tensile Force Per Contact (Wire Pullout)	
AWG	mm²	Test Current (amps)	Resistance Milliohms (Max. Init.)	Force (Min.) lbs.	Force (Min.) N
30	.05	.50	4.00	2	9
28	.08	.75	3.50	3	13
26	.12	1.00	3.50	7	31
24	.2	1.5	3.50	10	44
22	.3	3	3.50	15	67
20	.5	4.5	3.00	20	89
18	.8	6	3.00	30	133
16	1.2	8	2.75	30	133
14	2.0	10	2.75	35	156

Note: This is the total resistance between wire crimps of a mated pin and socket.

Commercial
MATE-N-LOK Connectors
(Continued)

Commercial MATE-N-LOK Mating Combinations

Number of Circuits	Flammability Rating	Style	Part Numbers		Plating	Pc Board Part Numbers							
						Vertical Pin Header*			Vertical Socket Header**			Right-Angle Pin Header	Right-Angle Socket Header
			Plug Housing	Cap Housing		Standard Tail	Standard Tail Polarized	Long Tail	Standard Tail	Standard Tail Polarized	Long Tail		
1	UL 94V-2	In-Line	1-480349-0	1-480350-0	—	—	—	—	—	—	—	—	—
				1-480351-0	—	—	—	—	—	—	—	—	—
			1-480400-0	1-480401-1	—	—	—	—	—	—	—	—	—
2	UL 94V-2	In-Line	1-480318-0	1-480319-0	Tin	350209-1	—	350422-1	—	—	—	—	—
					Duplex[1]	350209-2	—	—	—	—	—	—	—
			1-480393-1	1-480498-1	—	—	—	—	—	—	—	—	—
			1-480720-0[2]	794012-1	Tin	350539-1	—	350540-1	—	—	—	—	—
					Duplex[1]	350539-2	—	—	—	—	—	—	—
3	UL 94V-2	In-Line	1-480303-0	1-480305-0	Tin	350210-1	—	350423-1	—	—	—	643488-1	—
					Duplex[1]	350210-2	—	—	—	—	—	—	—
			1-480388-0	1-480387-0	—	—	—	—	—	—	—	—	—
			1-480721-0[2]	—	Tin	350541-1	—	—	—	—	—	—	—
					Duplex[1]	350541-2	—	—	—	—	—	—	—
			1-480304-0[3]	1-480305-0[3]	—	—	—	—	—	—	—	—	—
4	UL 94V-2	In-Line	1-480424-0	1-480426-0	Tin	350211-1	—	350424-1	—	—	—	641737-1	—
					Duplex[1]	350211-2	—	350424-2	—	—	—	—	—
	UL 94V-0	In-Line	770827-1	—	Duplex[1]	—	—	—	—	—	—	1-641737-1	—
4	UL 94V-2	In-Line	1-480722-0[2]	—	Tin	350543-1	—	350544-1	—	—	—	—	—
					Duplex[1]	350543-2	—	350544-2	—	—	—	—	—
			1-480425-0[3]	1-480426-0[3]	Tin	—	—	—	770997-1	—	—	—	—
			3-480425-0[3]	3-480426-0[3]	—	—	—	—	—	—	—	—	—
6	UL 94V-2	Matrix	1-480270-3	1-480340-0	—	—	—	—	—	—	—	—	—
					—	—	—	—	—	—	—	—	—
			1-480273-0[3]	1-480276-0[3]	Tin	—	—	—	350641-1	—	—	—	—
					Duplex[1]	—	—	—	350641-2	—	—	—	—
			1-480270-0[4]	1-480271-0[4]	Tin	1-380999-0[4]	—	350425-1[4]	—	—	—	—	—
					Duplex[1]	2-380999-0[4]	—	350425-2[4]	—	—	—	—	—
8	UL 94V-2	In-Line	1-480283-0	1-480345-0	Tin	350212-1	—	350426-1	—	—	—	—	—
					Duplex[1]	350212-2	—	350426-2	—	—	—	—	—
			1-480283-0[4]	1-480284-0[4]	Tin	350212-1[4]	—	350426-1[4]	—	—	—	—	—
					Duplex[1]	350212-2[4]	—	350426-2[4]	—	—	—	—	—
			1-480459-0[2]	1-480460-0[2]	—	—	—	—	—	—	—	—	—
9	UL 94V-2	Matrix	1-480274-0[3]	1-480277-0[3]	Tin	—	—	—	350642-1	—	—	—	—
					Duplex[1]	—	—	—	350642-2	—	—	—	—
10	UL 94V-2	In-Line	1-480285-0	1-480339-0	Tin	1-380991-0	—	—	—	—	—	—	—
					Duplex[1]	2-380991-0	—	—	—	—	—	—	—
			1-480285-0[4]	1-480286-0[4]	Tin	1-380991-0[4]	—	350219-1[4]	—	—	—	—	—
					Duplex[1]	2-380991-0[4]	—	—	—	—	—	—	—
12	UL 94V-2	Matrix	1-480275-0[3]	1-480278-0[3]	Tin	—	—	—	350643-1	—	—	—	—
			1-480287-0	1-480288-0	Tin	350213-1	—	350220-1	—	—	—	—	—
					Duplex[1]	350213-2	—	350220-2	—	—	—	—	—
15	UL 94V-2	Matrix	1-480323-0[3]	1-480324-0[3]	Tin	—	—	—	350644-1	—	—	—	—
					Duplex[1]	—	—	—	350644-2	—	—	—	—
16	UL 94V-2	Matrix	1-480438-0[4]	1-480439-0[4]	Tin	350214-1[4]	—	350427-1[4]	—	—	—	—	—
					Duplex[1]	350214-2[4]	—	350427-2[4]	—	—	—	—	—

[1]Duplex Finish — Plated with .000030 [.00076] min. gold in mating area, matte tin-lead on solder tail end over .000050 [.00127] min. nickel underplate on entire contact.
[2]Positive lock
[3]Panel mount
[4]Motor mount
*Mates with plug housing (socket contact)
**Mates with cap housing (pin contact)

SOURCE: Catalog 82181

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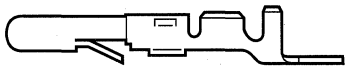
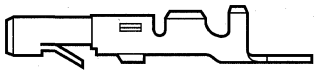
Contacts

Pin Diameter — .084 [2.13]
Stock Thickness — .012 [.305]



Pin



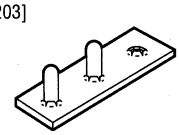
Socket

Wire Size Range AWG [mm²]	Ins. Dia. Range	Material & Finish	Contact Part Numbers				Hand Tool Part No.
			Pin		Socket		
			Strip Form	Loose Form	Strip Form	Loose Form	
30-22 [.05-.3]	**.040-.075** 1.02-1.91	Brass, Pre-tin	350079-1	61174-1	350078-1	61173-1	90066-8
		Phos. Brz., Pre-tin	350079-4	—	350078-4	61173-4	
		Brass, Gold[1]	350079-5	61174-5	350078-5	61173-5	
		Brass, Pre-tin	61116-1	60618-1	61314-1	60617-1	
24-18 [.2-.8]	**.060-.100** 1.52-2.54	Phos. Brz., Pre-tin	61116-4	60618-4	61314-4	60617-4	90123-2 90123-5[3] 90574-1*
		Brass, Gold[1]	61116-5	60618-5	61314-5	60617-5	
		Phos. Brz., Select Gold[2]	61116-6	60618-6	61314-6	60617-6	
		Brass, Select Gold[2]	61116-7	—	61314-7	—	
20-14 [.5-2.0]	**.100-.130** 2.54-3.30	Brass, Pre-tin	61118-1	60620-1	61117-1	60619-1	90124-2* 90575-1*
		Phos. Brz., Pre-tin	61118-4	60620-4	61117-4	60619-4	
		Brass, Gold[1]	61118-5	60620-5	61117-5	60619-5	
		Phos. Brz., Gold[1]	61118-6	—	61117-6	60619-7	
		Brass, Select Gold[2]	61118-7	—	61117-7	—	
(2) 18 [.8] or (1) 18 [.8] and (1) 16 [1.2]	(2) **.115** Max. 2.92 (stacked)	Brass, Pre-tin	350558-1	350639-1	350557-1	—	90124-2*
		Phos. Brz., Pre-tin	350558-4	—	350557-4	350638-4	90575-1*

[1]Gold Finish — Plated with .000030 [.00076] min. gold in mating area and inside wire barrel over .000050 [.00127] min. nickel underplate on entire contact.
[2]Select Gold Finish — Plated with .000030 [.00076] min. gold in mating area over .000050 [.00127] min. nickel underplate on entire contact.
[3]Use Hand Tool **Part No. 90123-5** for .043-.075 [1.09-1.91] insulation diameter.
Notes: 1. Extraction Tools: Pins — **Part No. 1-305183-1**; Sockets — **Part No. 1-305183-2**; Pins and Sockets — **Part No. 465644-1**
2. Insertion Tools: **Part No. 455830-1**
3. These contacts are to be used in commercial MATE-N-LOK housings only.
*PRO-CRIMPER II Hand Tool for maintenance and field repair use only.

Commoning Tabs

Stock Thickness— .008 [.203]



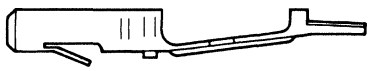
Number of Holes	Part Numbers
2	60843-1
2	350444-1
3	60842-1
3	350444-2

Note: Commoning tabs are designed to be used with pin housings.

Pc Board Contacts

Pin Diameter—.084 [2.13]
Stock Thickness—.012 [.305]

Pin

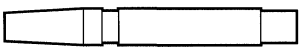


Socket

Type of Contact	Material & Finish	Part Numbers	
		Pin	Socket
		Loose Form	Loose Form
Pc Board	Phos. Brz., Pre-Tin	61518-1[1]	61320-1[1]
	Phos. Brz., Pre-Tin	350074-1[2]	350073-1[2]

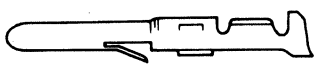
[1]For .062 [1.57] max. board thickness — Board hole size .057 [1.45]
[2]For .125 [3.14] max. board thickness — Board hole size .057 [1.45]
Note: These contacts are to be used in Commercial MATE-N-LOK housings only.

Keying Plug



Part Number 200821-1
Note: Keying plug snaps into socket housing

Grounding Pin

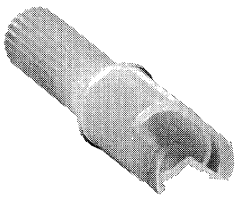


Wire Size Range AWG [mm²]	Ins. Dia. Range	Material & Finish	Contact Part Numbers		Hand Tool Part No.
			Strip Form	Loose Form	
24-18 [.2-.8]	**.060-.100** 1.52-2.54	Brass, Pre-Tin	61527-2	—	90123-2

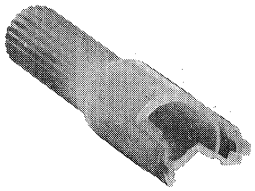
SOURCE: Catalog 82181

Commercial MATE-N-LOK Connectors
(Continued)

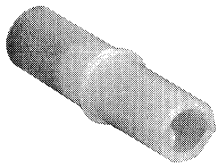
Housings, Free-Hanging
.200 [5.08] Centerline Spacing



1 Circuit
Pin Housing (Cap) Detent Lock

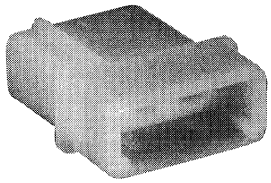


1 Circuit
Pin Housing (Cap) Positive Lock

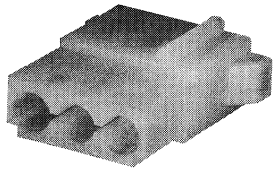


1 Circuit
Socket Housing (Plug)

In-Line

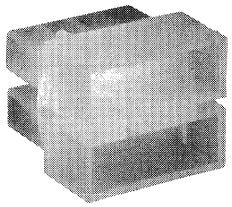


3 Circuit Pin Housing (Cap)

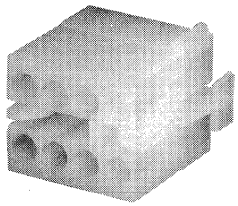


3 Circuit Socket Housing (Plug)

Dual Row



8 Circuit Pin Housing (Cap)



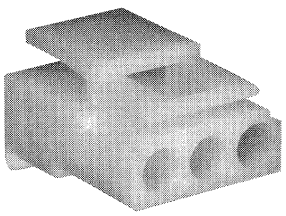
8 Circuit Socket Housing (Plug)

Note: 3 Cir. Housing Dim. (Typ.)—Cap, .810 [20.57] L x .930 [23.62] W x .325 [8.25] H;
Plug, .825 [20.95] L x .850 [21.60] W x .290 [7.37] H
8 Cir. Housing Dim. (Typ.)—Cap, .900 [22.86] L x .930 [23.62] W x .785 [19.94] H;
Plug, .805 [20.44] L x .850 [21.60] W x .725 [18.42] H

Number of Circuits	Style	UL 94V-2 Part Numbers	
		Pin Housing (Cap)	Socket Housing (Plug)
1	—	1-480350-0[1]	1-480349-0
		1-480351-0[2]	
		1-480401-0[1,3]	1-480400-0[3]
2	In-Line	1-480319-0[1,5]	1-480318-0[5]
		1-480498-1[1,3,5]	1-480393-1[3,5]
3	In-Line	1-480305-0[1,5]	1-480303-0[5]
		1-480387-0[1,3,5]	1-480388-0[3,5]
4	In-Line	1-480426-0[1,5]	1-480424-0[5]
		—	1-770827-1[4,5]
6	Dual Row	1-480340-0	1-480270-0[5]
8	Dual Row	1-480345-0	1-480283-0[5]
10	Dual Row	1-480339-0	1-480285-0[5]

[1]Detent lock
[2]Positive lock
[3]UV Stable black color
[4]Housing Material UL 94V-0 rated
[5]Housing accepts double wire applications where individual insulation diameters do not exceed .115 [2.92].

In line, Positive Lock
.200 [5.08] Centerline Spacing



Note: 3 Cir. Housing Dim. (Typ.)—.630 [16.00] L x .850 [21.59] W x .375 [9.52] H

Number of Circuits	UL 94V-2 Part Numbers	
	Socket Housing (Plug)	Mates with Pin Headers
2	1-480720-0	350539, 350540
3	1-480721-0	350541
4	1-480722-0	350543, 350544

SOURCE: Catalog 82181

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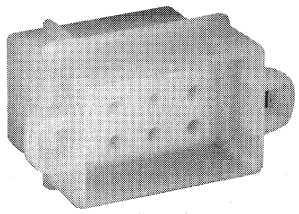
Housings

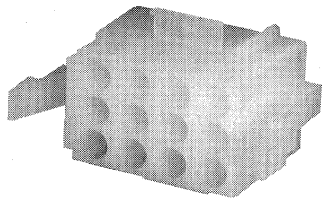
Panel Mount, Positive Lock



12 Circuit
Pin Housing (Cap)

Note: 12 Cir. Housing Dim. (Typ.)—
Cap, 1.145 [29.08] L x .930 [23.62] W x .850 [21.59] H;
Plug, 1.045 [26.54] L x .850 [21.59] W x .650 [16.51] H

Number of Circuits	Style	UL 94V-2 Part Numbers	
		Pin Housing (Cap)	Socket Housing (Plug)
3	In-Line	1-480305-0[2]	1-480304-0
4	In-Line	1-480426-0[2] 3-480426-0[1,2]	1-480425-0 3-480425-0[1]



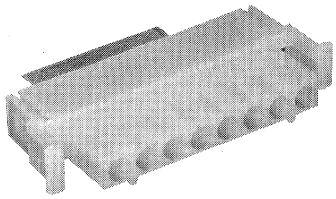
12 Circuit
Socket Housing (Plug)

Number of Circuits	Style	UL 94V-2 Part Numbers	
		Pin Housing (Cap)	Socket Housing (Plug)
6	Matrix	1-480276-0[3]	1-480273-0
9	Matrix	1-480277-0[3]	1-480274-0
12	Matrix	1-480278-0[3]	1-480275-0
15	Matrix	1-480324-0[3]	1-480323-0

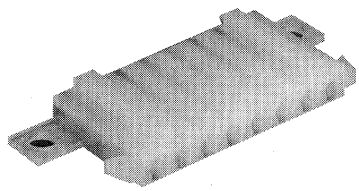
[1]Housing material has 125°C temperature rating
[2]Detent lock
[3]Positive lock

Flange Mount, Positive Lock, 8 Circuit, In Line

Note: 8 Cir. Housing Dim. (Typ.)—Cap, 1.710 [43.43] L x .930 [23.62] W x .300 [7.62] H;
Plug, 2.290 [58.17] L x .850 [21.59] W x .230 [5.84] H

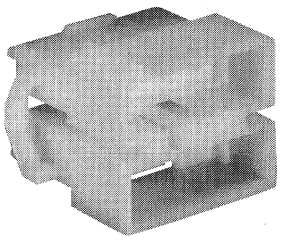


Pin Housing (Cap)
Part Numbers
UL 94V-2 Nylon material, natural color—
1-480460-0
UL 94V-0 Nylon material— **770861-1**

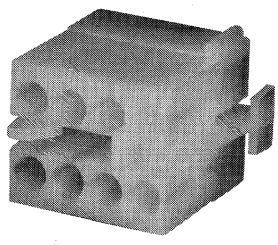


Socket Housing (Plug)
Part Number
UL 94V-2 Nylon material, natural color—
1-480459-0

Motor Mount, Positive Lock Dual Row



Pin Housing (Cap)



Socket Housing (Plug)

Note: 8 Cir. Housing Dim. (Typ.)—Cap, .900 [22.86] L x .930 [23.62] W x .785 [19.94] H;
Plug, .805 [20.45] L x .850 [21.59] W x .725 [18.41] H

Number of Circuits	Part Numbers	
	Pin Housing (Cap)	Socket Housing (Plug)
	UL 94V-2 Nylon, Natural	
6	1-480271-0	1-480270-0[1]
8	1-480284-0	1-480283-0[1]
10	1-480286-0	1-480285-0[1]

Number of Circuits	Part Numbers	
	Pin Housing (Cap)	Socket Housing (Plug)
	UL 94V-2 Nylon, Natural	
12	1-480288-0	1-480287-0
16	1-480439-0	1-480438-0

[1]Housing accepts double wire applications where individual insulation diameters do not exceed .115 [2.92].

SOURCE: Catalog 82181

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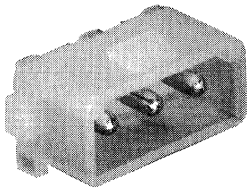
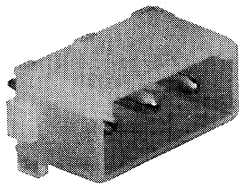
Pc Board
Vertical Pin Headers

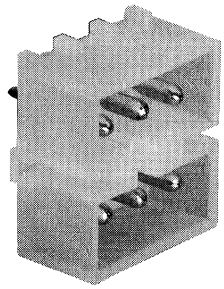
Solder Tail Diameter—
.062 [1.57]



3 Circuit
Positive Lock (Standard Tail)



3 Circuit
Detent Lock (Standard Tail)



6 Circuit
Positive Lock (Standard Tail)

Note: 6 Cir. Housing Dim. (Typ.)— .705 [17.91] L x .785 [19.93] W x .375 [9.14] H

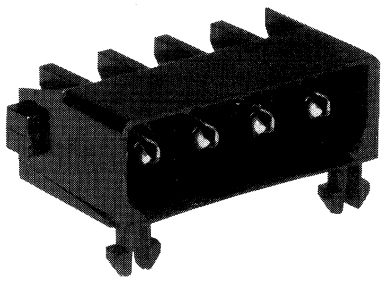
Number of Circuits	Style	Type Lock	Pin Finish	UL 94V-2 Part Numbers		Mates with Socket Housing Part Numbers
				Standard[2] Tail	Long[3] Tail	
2	In-Line	Positive	Pre-Tin	350539-1	350540-1	1-480720-0
			Duplex[1]	350539-2	—	
		Detent	Pre-Tin	350209-1	350422-1	1-480318-0
			Duplex[1]	350209-2	—	
3	In-Line	Positive	Pre-Tin	350541-1	—	1-480721-0
			Duplex[1]	350541-2	—	
		Detent	Pre-Tin	350210-1	350423-1	1-480303-0
			Duplex[1]	350210-2	—	
4	In-Line	Positive	Pre-Tin	350543-1	350544-1	1-480722-0
			Duplex[1]	350543-2	350544-2	
		Detent	Pre-Tin	350211-1	350424-1	1-480424-0[4]
			Duplex[1]	350211-2	350424-2	
6	Dual Row	Positive	Pre-Tin	1-380999-0	350425-1	1-480270-0
			Duplex[1]	2-380999-0	350425-2	
8	Dual Row	Positive	Pre-Tin	350212-1	350426-1	1-480283-0
			Duplex[1]	350212-2	350426-2	
10	Dual Row	Positive	Pre-Tin	1-380991-0	350219-1	1-480285-0
			Duplex[1]	2-380991-0	—	
12	Dual Row	Positive	Pre-Tin	350213-1	350220-1	1-480287-0
			Duplex[1]	350213-2	350220-2	
16	Dual Row	Positive	Pre-Tin	350214-1	350427-1	1-480438-0
			Duplex[1]	350214-2	350427-2	

[1]Duplex Finish — Plated with .000030 [.00076] min. gold in mating area, matte tin-lead on solder tail end over .000050 [.00127] min. nickel underplate on entire contact.
[2]Use standard tail .180/.150 [4.57/3.81] for .062 [1.57] thick Pc board.
[3]Use long tail .240/.210 [6.1/5.33] for .125 [3.18] thick Pc board.
[4]Other mating connectors include a vertical Pc board socket header and the insulation displacement connectors (IDC).

Pc Board Surface Mount
Pin Header

Solder Tail Width—
.052 [1.32]

4 Circuit, In-Line



Part No. 770829-1
UL 94V-2 Nylon material

Note: Mating parts include socket housings, a vertical pc board socket header and the insulation displacement connectors (IDC).

Note: 4 Cir. Housing Dim. (Typ.)— 1.000 [25.40] L x .484 [12.30] W x .330 [8.38] H

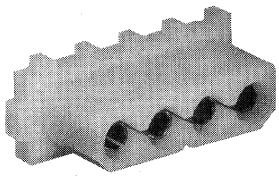
SOURCE: Catalog 82181

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

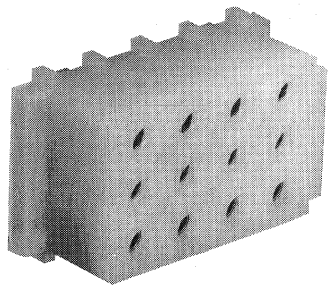
Commercial MATE-N-LOK Connectors
(Continued)

Pc Board Vertical Socket Headers

Solder Tail Diameter—
.062 [1.57]



4 Circuit, In-Line



12 Circuit, Matrix

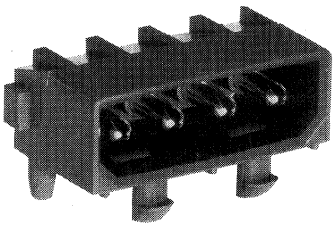
Note: 12 Cir. Housing Dim. (Typ.)— 1.200 [30.49] L x .645 [16.38] W x .470 [11.49] H

Number of Circuits	Style	Finish	UL 94V-2 Part Numbers Standard Tail	Mates with Pin Housing Part Number
4	In-Line	Pre-Tin	770997-1	1-480426-0[2]
6	Matrix	Pre-Tin	350641-1	1-480276-0
		Duplex[1]	350641-2	
9	Matrix	Pre-Tin	350642-1	1-480277-0
		Duplex[1]	350642-2	
12	Matrix	Pre-Tin	350643-1	1-480278-0
		Duplex[1]	—	
15	Matrix	Pre-Tin	350644-1	1-480324-0
		Duplex[1]	350644-2	

[1]Duplex Finish — Plated with .000030 [.00076] min. gold in mating area, matte tin-lead on solder tail end over .000050 [.00127] min. nickel underplate on entire contact.
[2]Other mating connectors include vertical, right-angle and surface mount Pc board pin headers.

Pc Board Right-Angle Pin Headers

Solder Tail Width—
.052 [1.32]



Note: 4 Cir. Housing Dim. (Typ.)— 1.000 [25.40] L x .484 [12.29] W x .345 [8.76] H

Number of Circuits	Style	Housing Material	Part Numbers	Mates with Socket Housing Part Number
3	In-Line	UL 94V-0 Nylon, natural	643488-1	1-480303-0
4	In-Line	UL 94V-2 Nylon, natural	641737-1 770846-1[1]	1-480424-0[2]
		UL 94V-0 Nylon	1-641737-1	770827-1[2]

[1]Surface Mount Compatible
[2]Other mating connectors include a vertical Pc board socket header and the insulation displacement connectors (IDC).

Dust Covers

For Feed-To Wiring
Part Number 770232-1

For Feed-Through Wiring
Part Number 770233-1

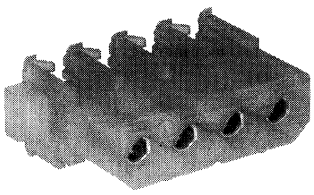
Note: These parts are used with the insulation displacement connectors.

Commercial MATE-N-LOK Connectors
(Continued)

Insulation Displacement Connectors (IDC)

Note: 4 Cir. Housing Dim. (Typ.)— .994 [25.24] L x .643 [16.33] W x .390 [9.90] H

4 Circuit, In-Line



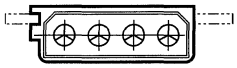
Part No. 770156-3
Socket Assembly (Plug)

Wire Size Range AWG [mm²]	Housing Color	Finish	UL 94V-2 Part Numbers	Mates with Pin Header Part Numbers
22 [.3]	Red	Pre-Tin	770156-2	1-480426-0[2] 350211-1 350211-2 350424-1 350424-2 641737-1 770829-1 770846-1
20 [.5]	Yellow	Pre-Tin	770156-4	
18 [.8]	Orange	Pre-Tin	770156-3	
		Duplex[1]	770526-1	
16 [1.2]	Blue	Pre-Tin	770156-5	

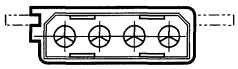
[1]Duplex Finish — Plated with .000030 [.00076] min. gold in mating area over .000050 [.00127] min. nickel underplate on entire contact.
[2]Pin Housing

Notes: 1. Insulation diameter: .095 [2.41] max.
2. Application Tooling Power Unit **Part No. 91112-2** uses Head **Part No. 231920-2** and Hand Tool Handle **Part No. 58074-1** uses Head **Part No. 231894-1.**

4 Circuit, Vertical Headers



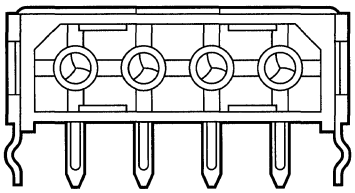
Part No. 175332-2
UL 94V-0 Thermoplastic material



Part No. 175332-3
UL 94V-0 Thermoplastic material

Notes: 1. Mates with plug housing **Part No. 1-480424-0**
2. Molded ribs provide interference for .057 [1.45] to .067 [1.70]

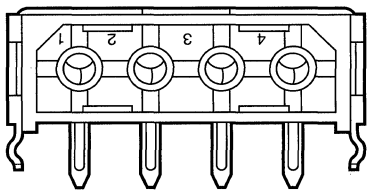
4 Circuit Right-Angle Headers with Fix Belt



Part No.	Description
174804-1	Long Clamp with Kink
174804-2	Clamp without Kink
174804-3	Short Clamp

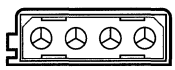
Note: Mates with plug housing **Part No. 1-480424-0**

4 Circuit Right-Angle Header with Fix Belt



Part No. 174552-1
Note: Mates with plug housing **Part No. 1-480424-0**

4 Circuit Right-Angle Mid-Mount Header Assembly, Reverse Plug Side Guided

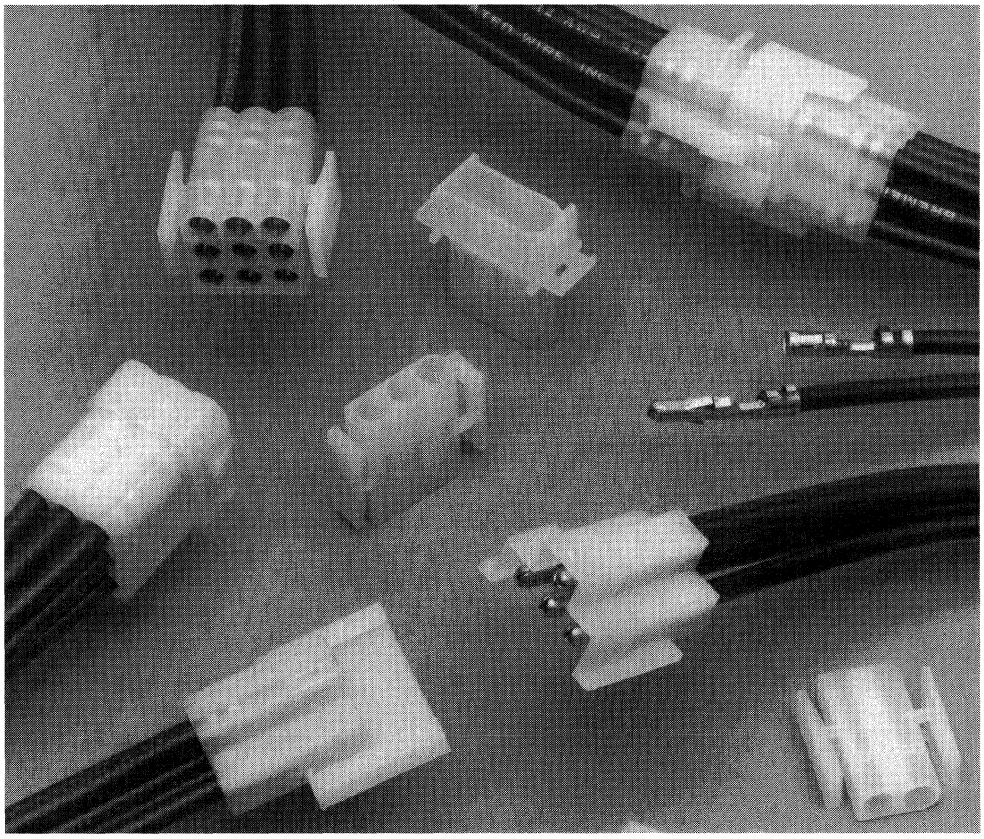


Part No. 84069-1
UL 94V-0 material
.047 [1.20] thick Pc Board

SOURCE: Catalog 82181

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

.140 MATE-N-LOK Connectors, Large Insulation .240 Centerline



Product Facts

- Available in 2, 3 and 9 circuit configurations for panel mounting; 4 and 9 circuit configurations for free-hanging applications
- Standard natural nylon housings
- Housings fully polarized
- Contacts fully protected in housings
- Contacts accept wire size range 20-10 AWG [.5-5.0 mm^2] with insulation diameters from .100 [2.54] to .180 [4.57]
- Low insertion/extraction forces
- Dual locking lances assure optimum contact stability
- Extraction tool removes both pins and sockets
- Contacts are on .240 [6.09] centerline spacing
- Not for interrupting current
- Recognized under the Component Program of Underwriters Laboratories Inc., File No. E28476
- Certified by Canadian Standards Association, File No. LR 7189A-381

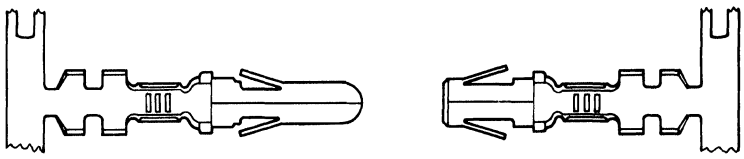
Wire Size		Termination Resistance		Tensile Force Per Contact (Wire Pullout)	
AWG	mm^2	Test Current (amps)	Resistance Milliohms (Max. Init.)	Force (Min.) lbs.	Force (Min.) N
20	.5	4.5	3.0	20	89
18	.8	6	2.5	30	133
16	1.2	8	2.5	45	200
14	2.0	10	2.0	50	222
12	3.0	12	1.5	60	267
10	5.0	14	1.5	65	289

Note: This is the total resistance between wire crimps of a mated pin and socket.

.140 MATE-N-LOK Connectors, Large Insulation .240 Centerline
(Continued)

Contacts

Pin Diameter — .140 [3.57]
Stock Thickness — .014 [.357]



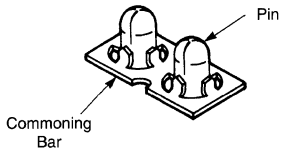
Pin Socket

Wire Size Range AWG [mm²]	Ins. Dia. Range	Material & Finish	Contact Part Numbers				Hand Tool Part No.
			Pin		Socket		
			Strip Form	Loose Form	Strip Form	Loose Form	
20-14 [.5-2.0]	.100-.180 2.54-4.5	Brass, Pre-tin	61627-1	350389-1	61626-1	350388-1	90247-1[1]
		Phos. Brz., Pre-tin	61627-2	—	61626-2	—	
14-10 [2.0-5.0]	.100-.180 2.54-4.5	Brass, Pre-tin	350201-1	350391-1	350200-1	350390-1	69710-1[1,2]
		Phos. Brz., Pre-tin	350201-2	350391-2	350200-2	350390-2	

[1]Contact Extraction Tool **Part No. 453300-1**
[2]Hand Tool **Part No. 69710-1** uses die set **Part No. 58374-1** for 14-12 AWG and **Part No. 58373-1** for 10 AWG.

Commoning Bar

Proper installation of the two pin commoning bar

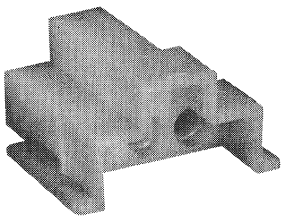


Part Number 61739-1

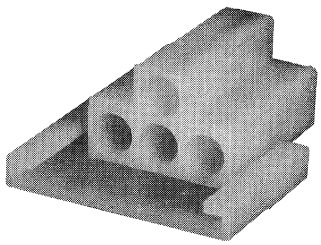
Note: Two pin commoning bar can be used to common adjacent pins in any column or row except at polarized end of 3 and 9 circuit housings. CANNOT BE USED in 2 circuit housings.

Housings, Free-Hanging

4 Circuit, Matrix



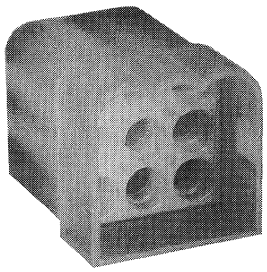
Pin Housing (Cap)
Part No. 1-480512-0
UL 94V-2 Nylon material



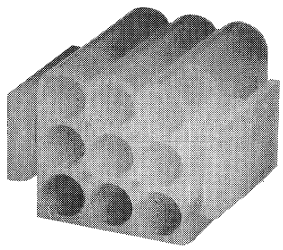
Socket Housing (Plug)
Part No. 1-480510-0
UL 94V-2 Nylon material

Note: 4 Cir. Housing Dim. (Typ.)— Cap, 1.065 [27.05] L x 1.130 [28.70] W x .565 [14.35] H; Plug, 1.180 [29.97] L x 1.350 [34.29] W x .580 [14.73] H

9 Circuit, Matrix



Pin Housing (Cap)
Part No. 1-480586-0
UL 94V-2 Nylon material



Socket Housing (Plug)
Part No. 1-480585-0
UL 94V-2 Nylon material

Note: 9 Cir. Housing Dim. (Typ.)— Cap, .845 [21.46] L x 1.130 [28.70] W x .845 [21.46] H; Plug, .755 [19.17] L x .950 [24.13] W x .755 [19.17] H

SOURCE: Catalog 82181

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

.140 MATE-N-LOK Connectors, Large Insulation .240 Centerline
(Continued)

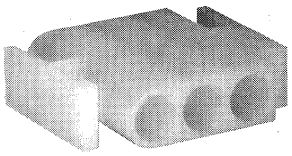
Housings, Panel Mount

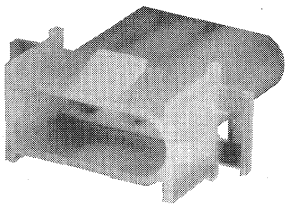
2 Circuit, In-Line

Socket Housing (Plug)
Part No. 1-350344-0
UL 94V-2 Nylon material

Pin Housing (Cap)
Part No. 1-350345-0
UL 94V-2 Nylon material

3 Circuit, In-Line



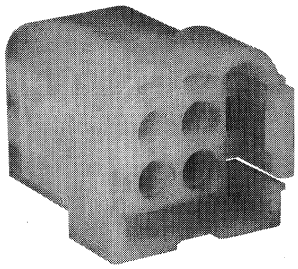


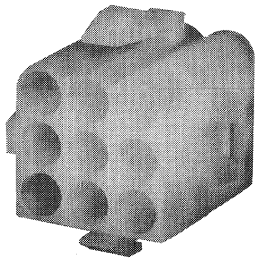
3 Circuit
Socket Housing (Plug)
Part No. 1-350346-0
UL 94V-2 Nylon material

3 Circuit
Pin Housing (Cap)
Part No. 1-350347-0
UL 94V-2 Nylon material

Note: 3 Cir. Housing Dim. (Typ.)— Plug, 1.055 [26.79] L x .950 [24.13] W x .275 [6.98] H;
Cap, 1.205 [30.60] L x 1.130 [28.70] W x .365 [9.27] H

9 Circuit, Matrix





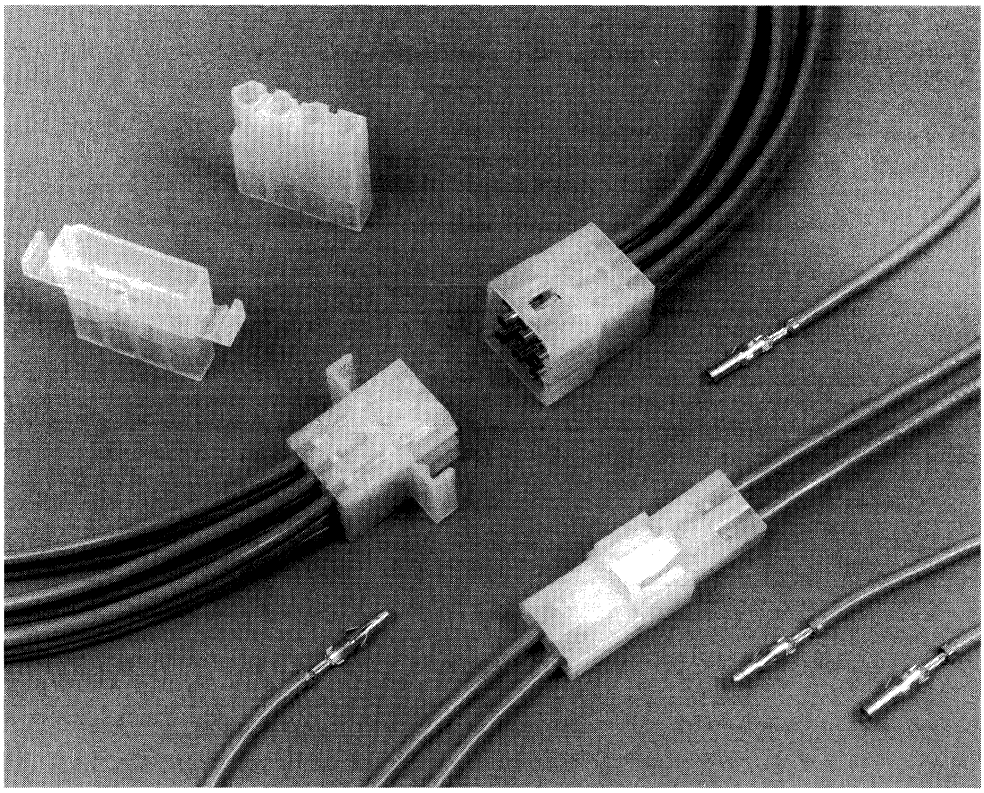
Socket Housing (Plug)
Part No. 1-480672-0
UL 94V-2 Nylon material

Pin Housing (Cap)
Part No. 1-480673-0
UL 94V-2 Nylon material

Note: 9 Cir. Housing Dim. (Typ.)— Plug, .755 [19.17] L x .950 [24.13] W x .755 [19.17] H;
Cap, .950 [24.13] L x 1.130 [28.70] W x .910 [23.11] H

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

.093 [2.36] Soft-Shell Commercial Pin and Socket Connectors



Product Facts

- Polarized
- Cavity identification
- Low contact-mating force
- Dual locking lances
- Detent and positive locking
- Available in brass and phosphor bronze with tin and gold plating
- Panel-mounting and free-hanging styles
- "F" crimping
- Applicator and hand tool available
- Economical commercial-grade connectors
- Compatible with high-speed application machinery and competitive soft shells
- Wire range from 24 to 14 AWG [0.2 to 2 mm²]
- Accepts wires with insulation diameters as broad as .180 [4.57]
- Housings available in 1 to 15 positions
- Not for interrupting current
- Recognized under the Component Program of Underwriters Laboratories Inc., File No. E28476
- Certified by Canadian Standards Association, File No. LR 7189

Wire Size		Termination Resistance		Tensile Force Per Contact (Wire Pullout)	
AWG	mm²	Test Current (amps)	Resistance Milliohms (Max. Init.)	Force (Min.) lbs.	Force (Min.) N
24	0.2	2.0	4.0	8	35.6
22	0.3–0.4	3.0	4.0	10	44.5
20	0.5–0.6	4.5	4.0	15	66.7
18	0.8–0.9	6.0	3.5	25	111.2
16	1.25–1.4	8.0	3.5	25	111.2
14	2	10.0	3.0	30	133.4

Note: This is the total resistance between wire crimps of a mated pin and socket.

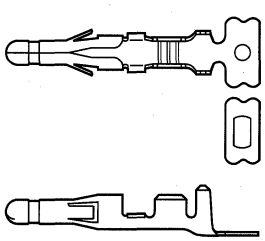
SOURCE: Catalog 82181

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

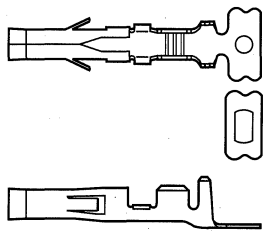
.093 [2.36] Soft-Shell Commercial Pin and Socket Connectors
(Continued)

Contacts

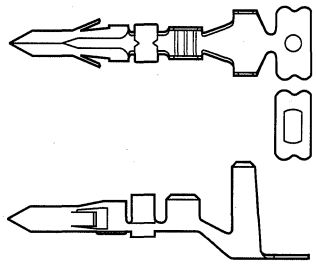
Pin Diameter — .093 [2.36]
Stock Thickness — .010 [0.25]



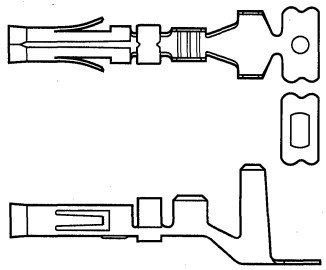
Pin



Socket



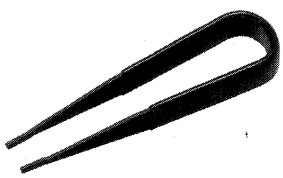
Pin
Part No. 770385-1*



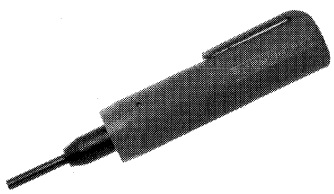
Socket
Part No. 770383-1*

Wire Size AWG	Wire Size mm²	Ins. Dia.	Material & Finish	Contact Part Numbers Pin Strip Form	Pin Loose Form	Socket Strip Form	Socket Loose Form	PRO-CRIMPER II Hand Tool Part No.
24–18	0.2–0.9	.110 2.79	Brass, Pre-tin	350418-1	770147-1	350417-1	770146-1	90872-1
			Brass, Gold	—	—	350417-3(B)	770146-3	
			Brass Select Gold	350418-5(A)	770147-5	350417-5(A)	770146-5	
20–14	0.6–2	.140 3.56	Brass, Pre-tin	350416-1	770145-1	350415-1	770144-1	90871-1
			Brass, Select Gold	350416-5(A)	770145-5	350415-5(A)	770144-5	
			Phos. Brz., Pre-tin	—	—	350415-6	770144-6	
		.180 4.57	Brass, Pre-tin	770530-1**	770979-1	770529-1**	—	—
18–14 or 2 (18)	0.8–2 or 2 (0.8–0.9)	.180 4.57 (per wire)	Brass, Pre-tin	770385-1*	—	—	—	—
			Phos. Brz., Pre-tin	—	—	770383-1*	—	

(A) Select Gold — .000030 [.00076] min. gold in mating area over .000050 [.00127] min. nickel.
(B) Select Gold — .000050 [.00127] min. gold in mating area, overall gold flash over .000050 [.00127] min. nickel.
*These contacts have a .0125 [.318] stock thickness and accept two wires, each with maximum .180 [4.57] insulation diameters. They can be used only with the following Dual Wire Housing part numbers: **Part Nos. 770364-1, 770365-1, 770450-1, 770451-1, 770452-1,** and **770453-1** (see page 2241).
**Contact length is .875 [22.23].
Notes: 1. Phosphor bronze contacts should be used in high-temperature/humidity cycling applications.
2. Pin and socket contacts can be used in either plug of receptacle housings.



Contact Insertion Tool
(for Pins and Sockets)
Part No. 91002-1

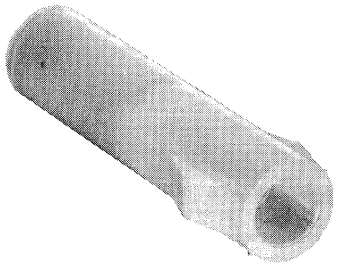


Contact Extraction Tool
Part No. 458994-3

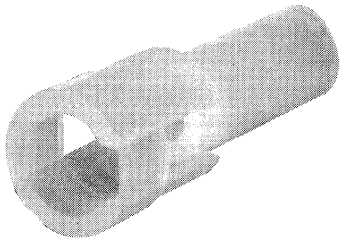
.093 [2.36] Soft-Shell Commercial Pin and Socket Connectors
(Continued)

Housings, Free-Hanging or Panel Mount

.198 [5.03] Centerline Spacing

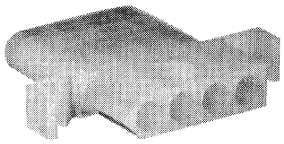


1 Circuit Receptacle

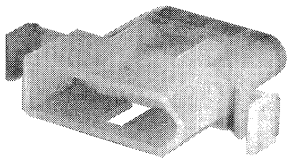


1 Circuit Plug

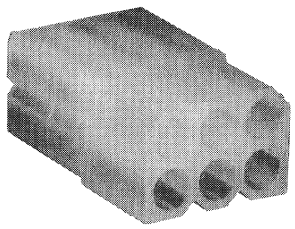
Material—
UL 94V-2 nylon, natural color



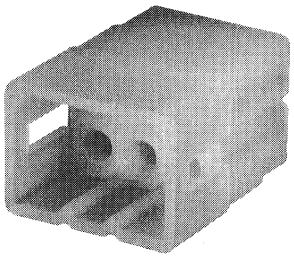
4 Circuit Receptacle



4 Circuit Plug



6 Circuit Receptacle



6 Circuit Plug

Note: 6 Cir. Housing Dim. (Typ.)— Receptacle, .435 [11.05] L x 1.000 [25.40] W x .635 [16.13] H;
Plug, .535 [13.59] L x .970 [24.64] W x .735 [18.67] H

No. of Circuits	Style	Receptacle Part Numbers				Plug Part Numbers	
		Panel Mount		Free-Hanging			
		Without Detents	With Detents	Without Detents	With Detents	Panel Mount	Free-Hanging
1	—	—	—	—	770063-1	—	770064-1
2	In-Line	—	770066-1*	770067-1*	770065-1*	770068-1*	770069-1*
3	In-Line	—	770071-1	770072-1	770070-1	770073-1	770074-1
4	In-Line	—	770076-1	—	770075-1	770077-1	770078-1
4	Matrix	—	—	—	770843-1	—	770842-1
5	In-Line	—	—	—	770083-1	—	770084-1
6	Matrix	770085-1	770087-1	770088-1	770086-1	770089-1	770090-1
9	Matrix	770091-1	770093-1	770094-1	770092-1	770095-1** 770108-1	770096-1
12	Matrix	770097-1	770099-1	770100-1	770098-1	770101-1	770102-1
15	Matrix	770103-1	—	770105-1	—	770106-1	770107-1

*.248 [6.30] centerline.
**Mounting ears at wire end.

SOURCE: Catalog 82181

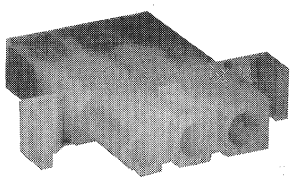
Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

.093 [2.36] Soft-Shell Commercial Pin and Socket Connectors
(Continued)

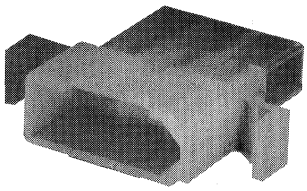
Housings, Free-Hanging or Panel Mount

.250 [6.35] Centerline Spacing

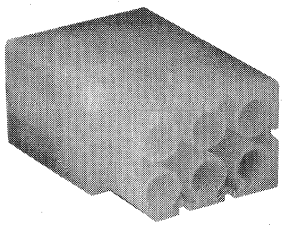
Material—
UL 94V-2 nylon, natural color



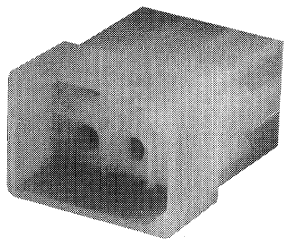
3 Circuit Receptacle



3 Circuit Plug



6 Circuit Receptacle



6 Circuit Plug

Note: 6 Cir. Housing Dim. (Typ.)— Receptacle, .790 [20.07] L x 1.145 [29.08] W x .545 [13.84] H; Plug, .886 [22.50] L x 1.105 [28.07] W x .641 [16.28] H

No. of Circuits	Style	Receptacle Part Numbers		Plug Part Numbers	
		Panel Mount	Free-Hanging	Panel Mount	Free-Hanging
3	In-Line	770269-1	770339-1	770338-1	770276-1
4	In-Line	770329-1	770337-1	770330-1	770336-1
6	Matrix	770372-1	770360-1	770373-1	770361-1

SOURCE: Catalog 82181

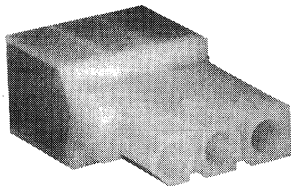
.093 [2.36] Soft-Shell Commercial Pin and Socket Connectors
(Continued)

Housings, Free-Hanging or Panel Mount
(Continued)

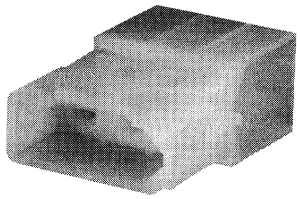
.250 [6.35] Centerline Spacing

Dual Wire Housings

Material—
UL 94V-2 nylon, natural color



Receptacle
Part No. 770451-1



Plug
Part No. 770450-1

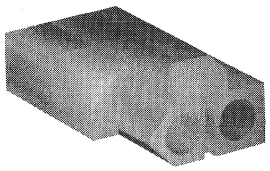
Note: 3 Cir. Housing Dim. (Typ.)— Receptacle, .765 [19.43] L x 1.315 [33.40] W x .500 [12.70] H; Plug, .862 [21.89] L x 1.275 [32.39] W x .500 [12.70] H

No. of Circuits	Receptacle Part Numbers		Plug Part Numbers	
	Panel Mount	Free-Hanging	Panel Mount	Free-Hanging
2	—	770364-1*	—	770365-1*
3	770453-1	770451-1	770452-1	770450-1

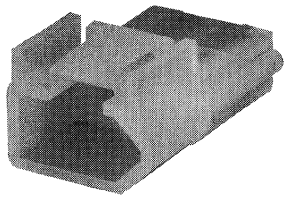
*.248 [6.30] centerline.

Positive Lock Housings

Material—
UL 94V-2 nylon, natural color



Receptacle
Part No. 770424-1



Plug
Part No. 770425-1

Note: 2 Cir. Housing Dim. (Typ.)— Receptacle, .536 [13.61] L x 1.073 [27.25] W x .255 [6.48] H; Plug, .666 [16.92] L x 1.041 [26.44] W x .365 [9.27] H

No. of Circuits	Receptacle Part Numbers	Plug Part Numbers
	Free-Hanging	Free-Hanging
2	770424-1*	770425-1*
3	770785-1	770783-1
4	770784-1	770810-1

*.248 [6.30] centerline.

SOURCE: Catalog 82181

Specifications subject to change.
1-800-522-6752
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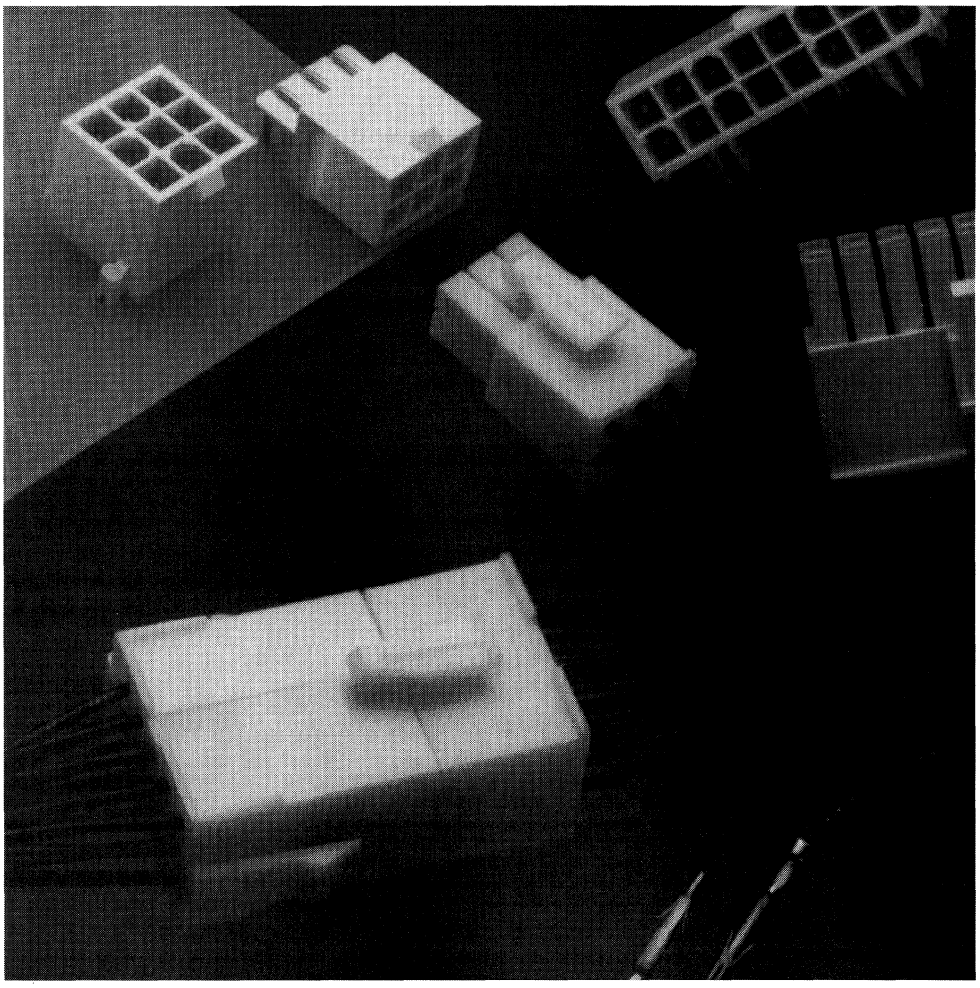
1-800-722-1111
Tooling/Technical Assistance Center

Mini-Universal MATE-N-LOK Connectors



Product Facts

- Compact, durable housings
- Pins and sockets can be accommodated in the same housings
- Contacts fully protected in the housings. Both pins and sockets can be used on the power supply wiring
- Fully polarized to provide proper plug-to-cap mating incorporating a positive locking mechanism to prevent accidental disengagement of mated connectors. Also facilitates panel mounting
- Free-hanging or panel mount
- Housings available in 1, 2, 3, 4, 6, 9, 12 and 15 circuit configuration for wire-to-wire connection
- Connectors can be mounted to .031-.078 [0.79-1.98] thick panels
- Printed circuit board pin headers are available in 2, 3, 4, 6, 9, 10, 12 and 15 circuit vertical configurations and 2, 3, 4, 6, 8, 10, 12, 14, 16, 18, 20, 22 and 24 circuit right-angle configurations
- Hermaphroditic housings available in 2, 3 and 4 circuits for free-hanging applications
- Low insertion/extraction forces required
- Contacts accept wire size range 30-16 AWG [.05-1.2 mm²]
- Test probe contacts available
- .163 [4.14] centerline spacing
- Not for interrupting current
- Recognized under the Component Program of Underwriters Laboratories Inc., File No. E28476
- Certified by Canadian Standards Association, File No. LR 7189
- Passed test by VDE under their Test Report No. 4751-1430-4020/AIG

Wire Size		Termination Resistance		Tensile Force Per Contact (Wire Pullout)	
AWG	mm²	Test Current (amps)	Resistance Milliohms (Max. Init.)	Force (Min.) lbs.	N
30	.05	—	—	—	—
28	.08	—	—	—	—
26	.12	—	—	4	18
24	.2	—	—	7	31
22	.3	—	—	11	49
20	.5	—	—	13	58
18	.8	—	—	15	67
16	1.2	—	—	18	80

Specifications subject to change.
1-800-522-6752 Product Information Center/ AMP FAX Service
1-800-722-1111 Tooling/Technical Assistance Center

Mini-Universal MATE-N-LOK Connectors
(Continued)

Mini-Universal MATE-N-LOK Mating Combinations

Number of Circuits	Flammability Rating	Style	Part Numbers		Plating	Pc Board Part Numbers			
						Vertical Pin Header[1]		Right-Angle Pin Header[1]	
			Plug*	Cap*		Drain Hole	No Drain Hole	Standard Board Lock	Short Board Lock
1	UL 94V-2	In-Line	172335-1	172327-1[3]	—	—	—	—	—
	UL 94V-0	In-Line	172164-1	172156-1[3]	—	—	—	—	—
2	UL 94V-2	In-Line	172336-1	172328-1[1]	—	—	—	—	—
				172343-1[3]	—	—	—	—	—
2	UL 94V-0	In-Line	172165-1	172157-1[1]	Tin	770166-1	770872-1	770605-1	770966-1
					Duplex[4]	770166-2	770872-2	770605-2	770966-2
				172233-1[3]	Tin	770166-1	770872-1	770605-1	770966-1
					Duplex[4]	770166-2	770872-2	770605-2	770966-2
2	UL 94V-2	In-Line	172807-1[2]	—	—	—	—	—	—
2	UL 94V-0	In-Line	173956-1[2]	—	—	—	—	—	—
3	UL 94V-2	In-Line	172337-1	172329-1[1]	—	—	—	—	—
				172344-1[3]	—	—	—	—	—
3	UL 94V-0	In-Line	172166-1	172158-1[1]	Tin	770170-1	770873-1	770606-1	770967-1
					Duplex[4]	770170-2	770873-2	770606-2	770967-2
				172234-1[3]	Tin	770170-1	770873-1	770606-1	770967-1
					Duplex[4]	770170-2	770873-2	770606-2	770967-2
3	UL 94V-2	In-Line	172808-1[2]	—	—	—	—	—	—
3	UL 94V-0	In-Line	173957-1[2]	—	—	—	—	—	—
4	UL 94V-2	Dual Row	172338-1	172330-1	—	—	—	—	—
4	UL 94V-0	Dual Row	172167-1	172159-1	Tin	770174-1	770874-1	770607-1	770968-1
					Duplex[4]	770174-2	770874-2	770607-2	770968-2
4	UL 94V-2	Dual Row	172809-1[2]	—	—	—	—	—	—
4	UL 94V-0	Dual Row	172958-1[2]	—	—	—	—	—	—
6	UL 94V-2	Dual Row	172339-1	172331-1	—	—	—	—	—
6	UL 94V-0	Dual Row	172168-1	172160-1	Tin	770178-1	770875-1	770608-1	770969-1
					Duplex[4]	770178-2	770875-2	770608-2	770969-2
8	UL 94V-0	Dual Row	770579-1	—	Tin	—	—	770609-1	770970-1
					Duplex[4]	—	—	770609-2	770970-2
9	UL 94V-2	Matrix	172340-1	172332-1	—	—	—	—	—
9	UL 94V-0	Matrix	172169-1	172161-1	Tin	770182-1	770876-1	—	—
					Duplex[4]	770182-2	770876-2	—	—
10	UL 94V-0	Dual Row	770580-1	—	Tin	770743-1	770858-1	770610-1	770971-1
					Duplex[4]	770743-2	770858-2	770610-2	770971-2
12	UL 94V-0	Dual Row	770581-1	—	Tin	—	770621-1	770611-1	770972-1
					Duplex[4]	—	770621-2	770611-2	770972-2
12	UL 94V-2	Matrix	172341-1	172333-1	—	—	—	—	—
12	UL 94V-0	Matrix	172170-1	172162-1	Tin	770186-1	—	—	—
					Duplex[4]	770186-2	794040-2	—	—
14	UL 94V-0	Dual Row	770582-1	—	Tin	—	—	770612-1	770973-1
					Duplex[4]	—	—	770612-2	770973-2
15	UL 94V-2	Matrix	172342-1	172334-1	—	—	—	—	—
15	UL 94V-0	Matrix	172171-1	172163-1	Tin	770190-1	770859-1	—	—
					Duplex[4]	770190-2	770859-2	—	—
16	UL 94V-0	Dual Row	770583-1	—	Tin	—	—	770613-1	770974-1
					Duplex[4]	—	—	770613-2	770974-2
18	UL 94V-0	Dual Row	770584-1	—	Tin	—	—	770614-1	—
					Duplex[4]	—	—	770614-2	—
20	UL 94V-0	Dual Row	770585-1	—	Tin	—	—	770615-1	—
					Duplex[4]	—	—	770615-2	—
22	UL 94V-0	Dual Row	770586-1	—	Tin	—	—	770616-1	—
					Duplex[4]	—	—	770616-2	—
24	UL 94V-0	Dual Row	770587-1	—	Tin	—	—	770617-1	—
					Duplex[4]	—	—	770617-2	—

*All plugs are free-hanging and caps are free-hanging or panel mount, unless otherwise noted.
[1]Panel mount only
[2]Hermaphroditic
[3]Free-hanging only

[4]Duplex Finish — Plated with .000030 [.00076] min. gold in mating area and matte tin-lead on solder tail end over .000050 [.00127] min. nickel underplate on entire contact.
[1]Mates with plug housing (socket contact)

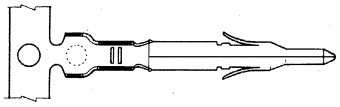
SOURCE: Catalog 82181

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

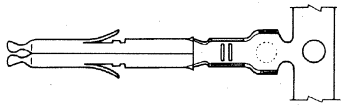
Mini-Universal MATE-N-LOK Connectors
(Continued)

Contacts

Pin Diameter — .039 [0.99]
Stock Thickness — .008 [0.20]



Pin

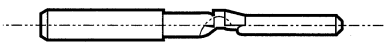


Socket

Wire Size Range AWG [mm²]	Ins. Dia. Range	Finish	Contact Part Numbers				Hand Tool Part No.
			Pin		Socket		
			Strip Form	Loose Form	Strip Form	Loose Form	
30-26 [.05-.12]	**.035-.050** .89-1.27	Pre-tin	770835-1	—	770834-1	—	—
		Duplex[1]	770835-3	—	770834-3	—	
26-22 [.12-.3]	**.047-.069** 1.19-1.75	Pre-tin	770901-1	770985-1	770902-1	770986-1	755330-1 90758-1*
		Duplex[1]	770901-3	770985-3	770902-3	770986-3	
22-18 [.3-.8] or 22 x (2) [.3]	**.059-.094** 1.50-2.39 or **.133** Max. 3.38	Pre-tin	770903-1	770987-1	770904-1	770988-1	755331-1 90759-1*
		Duplex[1]	770903-3	770987-3	770904-3	770988-3	
20-16 [.5-1.2] or 20 x (2) [.5]	**.079-.126** 2.01-3.20 or **.094 x (2)** 2.39	Pre-tin	171636-1	171638-1	171637-1	171639-1	753808-1 90760-1*
		Duplex[1]	—	—	171637-3	—	

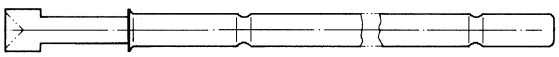
[1]Duplex Finish — Plated with .000030 [.00076] min. gold in mating area and .000100 [.00254] min. tin-lead in crimping area over .000050 [.00127] min. nickel underplate on entire contact.
Note: These contacts are to be used in Mini-Universal MATE-N-LOK plug or cap housings only.
*PRO-CRIMPER II Hand Tool for maintenance and field repair use only.

Keying Plug



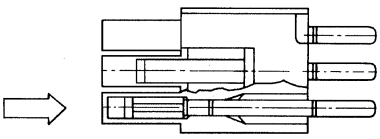
Part Number 174670-1

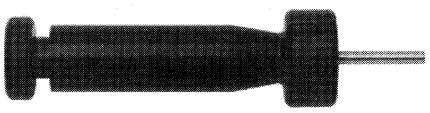
Test Probe Contact



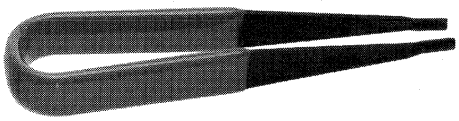
Part Number 172971-1

Notes: 1. The test probe is inserted into the housing in the same direction as indicated by the arrow shown to the right.
2. The test probe can be used in the Cap or Plug Housing.
3. Test probes are supplied unassembled.





Contact Extraction Tool
Part No. 455822-2



Contact Insertion Tool
(for inserting contacts applied to small diameter wire)
Part No. 455830-1

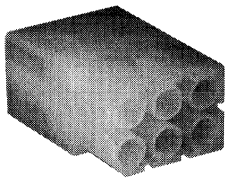
SOURCE: Catalog 82181

Mini-Universal MATE-N-LOK Connectors
(Continued)

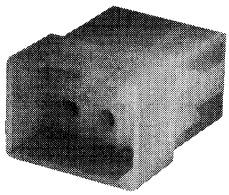
Housings, Free-Hanging or Panel Mount

.163 [4.14] Centerline Spacing

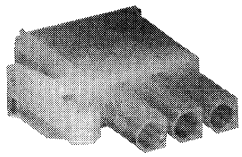
In-Line



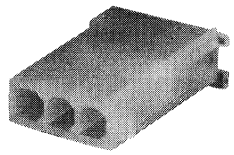
1 Circuit Plug



1 Circuit Cap

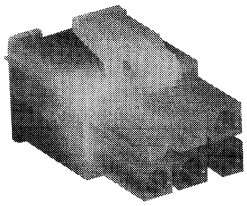


3 Circuit Plug

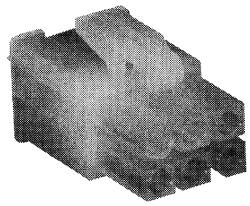


3 Circuit Cap (Free-Hanging)

Dual Row

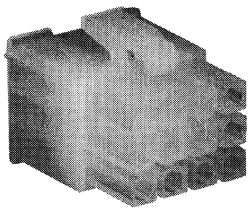


6 Circuit Plug

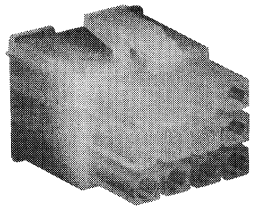


6 Circuit Cap

Matrix



12 Circuit Plug



12 Circuit Cap

Note: 3 Cir. Housing Dim. (Typ.)— Cap, .220 [5.59] L x .933 [23.70] W x .654 [16.00] H; Plug, .220 [5.59] L x .933 [23.70] W x .591 [15.01] H
6 Cir. Housing Dim. (Typ.)— .551 [14.00] L x .933 [23.70] W x .465 [11.81] H
12 Cir. Housing Dim. (Typ.)— .716 [18.19] L x .933 [23.70] W x .630 [16.00] H

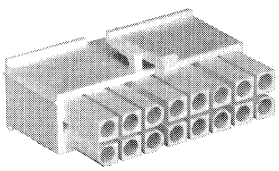
Number of Circuits	Style	Housing Part Numbers[1]					
		Plug	Cap		Plug	Cap	
			Panel Mount	Free-Hanging		Panel Mount	Free-Hanging
		UL 94V-0 Nylon, White			UL 94V-2 Nylon, Natural		
1	—	172164-1	—	172156-1	172335-1	—	172327-1
2	In-Line	172165-1	172157-1	172233-1	172336-1	172328-1	172343-1
3	In-Line	172166-1	172158-1	172234-1	172337-1	172329-1	172344-1

[1]Housing part numbers shown in the tables are all natural color. Other colors, red, green, blue, black, are also available. To order connectors in these colors use the appropriate dash numbers as follows: Red 1-□□□□□□-2, Green 1-□□□□□□-5, Blue 1-□□□□□□-6, Black 1-□□□□□□-9

Number of Circuits	Style	Housing Part Numbers[1]			
		Plug	Cap	Plug	Cap
		UL 94V-0 Nylon, White		UL 94V-2 Nylon, Natural	
4	Dual Row	172167-1	172159-1	172338-1	172330-1
6	Dual Row	172168-1	172160-1	172339-1	172331-1
9	Matrix	172169-1	172161-1	172340-1	172332-1
12	Matrix	172170-1	172162-1	172341-1	172333-1
15	Matrix	172171-1	172163-1	172342-1	172334-1

[1]Housing part numbers shown in the tables are all natural color. Other colors, red, green, blue, black, are also available. To order connectors in these colors use the appropriate dash numbers as follows: Red 1-□□□□□□-2, Green 1-□□□□□□-5, Blue 1-□□□□□□-6, Black 1-□□□□□□-9

Dual Row



Plug

Note: 16 Cir. Housing Dim. (Typ.)— 1.366 [34.70] L x .933 [23.70] W x .598 [15.19] H

Number of Circuits	Plug Part Numbers
	UL 94V-0 Nylon, White
8	770579-1
10	770580-1
12	770581-1
14	770582-1
16	770583-1
18	770584-1
20	770585-1
22	770586-1
24	770587-1

SOURCE: Catalog 82181

Specifications subject to change.
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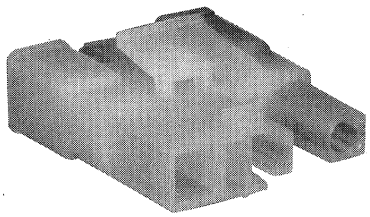
Mini-Universal MATE-N-LOK Connectors
(Continued)

Housings, Hermaphroditic Free-Hanging



3 Circuit
Part No. 172808-1

Note: 3 Cir. Housing Dim. (Typ.)— .827 [21.0] L x .992 [25.19] W x .551 [10.40] H

Number of Circuits	Part Numbers	
	UL 94V-2 Nylon, Natural	UL 94V-0 Nylon, White
2	172807-1	173956-1
3	172808-1	173957-1
4	172809-1	173958-1

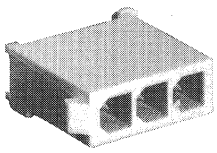
Note: Mates to itself. Two required per wire-to-wire connection.

Vertical Pc Board Pin Headers

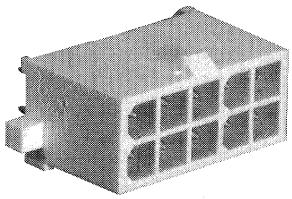
.163 [4.14] Centerline Spacing

Material—
UL 94V-0 Nylon, white

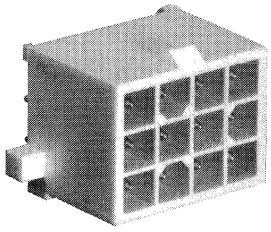
Solder Tail Diameter—
.039 [1.00]



Part No. 770186-1
3 Circuit, In-Line



Part No. 770743-1
10 Circuit, Dual Row



Part No. 770186-1
12 Circuit, Matrix

Note: 10 Cir. Housing Dim. (Typ.)— .877 [22.28] L x .387 [9.83] W x .531 [13.49] H

Number of Circuits	Style	Pin Finish	Pin Header Part Numbers		Mates with Plug Housing Part Number (Using Socket Contacts)
			With Drain Hole	Without Drain Holes	
2	In-Line	Tin-Lead[1]	770166-1	770872-1	172165-1
		Duplex[2]	770166-2	770872-2	
3	In-Line	Tin-Lead[1]	770170-1	770873-1	172166-1
		Duplex[2]	770170-2	770873-2	
4	Dual Row	Tin-Lead[1]	770174-1	770874-1	172167-1
		Duplex[2]	770174-2	770874-2	
6	Dual Row	Tin-Lead[1]	770178-1	770875-1	172168-1
		Duplex[2]	770178-2	770875-2	
9	Matrix	Tin-Lead[1]	770182-1	770876-1	172169-1
		Duplex[2]	770182-2	770876-2	
10	Dual Row	Tin-Lead[1]	770743-1	770858-1	770580-1
		Duplex[2]	770743-2	770858-2	
12	Dual Row	Tin-Lead[1]	—	770621-1	770581-1
		Duplex[2]	—	770621-2	
	Matrix	Tin-Lead[1]	770186-1	794040-1	172170-1
		Duplex[2]	770186-2	794040-2	
15	Matrix	Tin-Lead[1]	770190-1	770859-1	172171-1
		Duplex[2]	770190-2	770859-2	

[1]Tin-Lead Finish — Plated with .000150 [.00381] min. tin-lead over .000050 [.00127] min. nickel underplate on entire contact.
[2]Duplex Finish — Plated with .000030 [.00076] min. gold in mating area and matte tin-lead on solder tail end over .000050 [.00127] min. nickel underplate on entire contact.

SOURCE: Catalog 82181

Specifications subject to change.
1-800-522-6752
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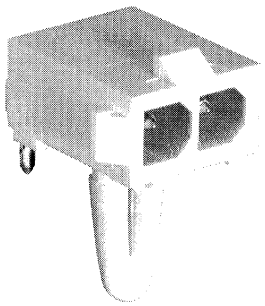
Mini-Universal MATE-N-LOK Connectors
(Continued)

Right-Angle Pc Board Pin Headers

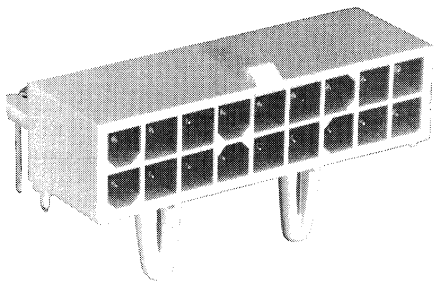
.163 [4.14] Centerline Spacing

Material—
UL 94V-0 nylon, white

Solder Tail Diameter— .039 [1.00]



Part No. 770605-1
2 Circuit, In-Line (with Standard Board Lock)



Part No. 770614-1
18 Circuit, Dual Row (with Standard Board Lock)

Note: 18 Cir. Housing Dim. (Typ.)— 1.529 [38.84] L x .500 [12.70] W x .386 [9.80] H

Number of Circuits	Style	Pin Finish	Pin Header Part Numbers		Mates with Plug Housing Part Number (Using Socket Contacts)
			Standard Board Lock	Short Board Lock	
2	In-Line	Tin-Lead[1]	770605-1	770966-1	172165-1
		Duplex[2]	770605-2	770966-2	
3	In-Line	Tin-Lead[1]	770606-1	770967-1	172166-1
		Duplex[2]	770606-2	770967-2	
4	Dual Row	Tin-Lead[1]	770607-1	770968-1	172167-1
		Duplex[2]	770607-2	770968-2	
6	Dual Row	Tin-Lead[1]	770608-1	770969-1	172168-1
		Duplex[2]	770608-2	770969-2	
8	Dual Row	Tin-Lead[1]	770609-1	770970-1	770579-1
		Duplex[2]	770609-2	770970-2	
10	Dual Row	Tin-Lead[1]	770610-1	770971-1	770580-1
		Duplex[2]	770610-2	770971-2	
12	Dual Row	Tin-Lead[1]	770611-1	770972-1	770581-1
		Duplex[2]	770611-2	770972-2	
14	Dual Row	Tin-Lead[1]	770612-1	770973-1	770582-1
		Duplex[2]	770612-2	770973-2	
16	Dual Row	Tin-Lead[1]	770613-1	770974-1	770583-1
		Duplex[2]	770613-2	770974-2	
18	Dual Row	Tin-Lead[1]	770614-1	—	770584-1
		Duplex[2]	770614-2	—	
20	Dual Row	Tin-Lead[1]	770615-1	—	770585-1
		Duplex[2]	770615-2	—	
22	Dual Row	Tin-Lead[1]	770616-1	—	770586-1
		Duplex[2]	770616-2	—	
24	Dual Row	Tin-Lead[1]	770617-1	—	770587-1
		Duplex[2]	770617-2	—	

[1]Tin-Lead Finish — Plated with .000150 [.00381] min. tin-lead over .000050 [.00127] min. nickel underplate on entire contact.
[2]Duplex Finish — Plated with .000030 [.00076] min. gold in mating area and matte tin-lead on solder tail end over .000050 [.00127] min. nickel underplate on entire contact.

SOURCE: Catalog 82181

Specifications subject to change.
1-800-522-6752
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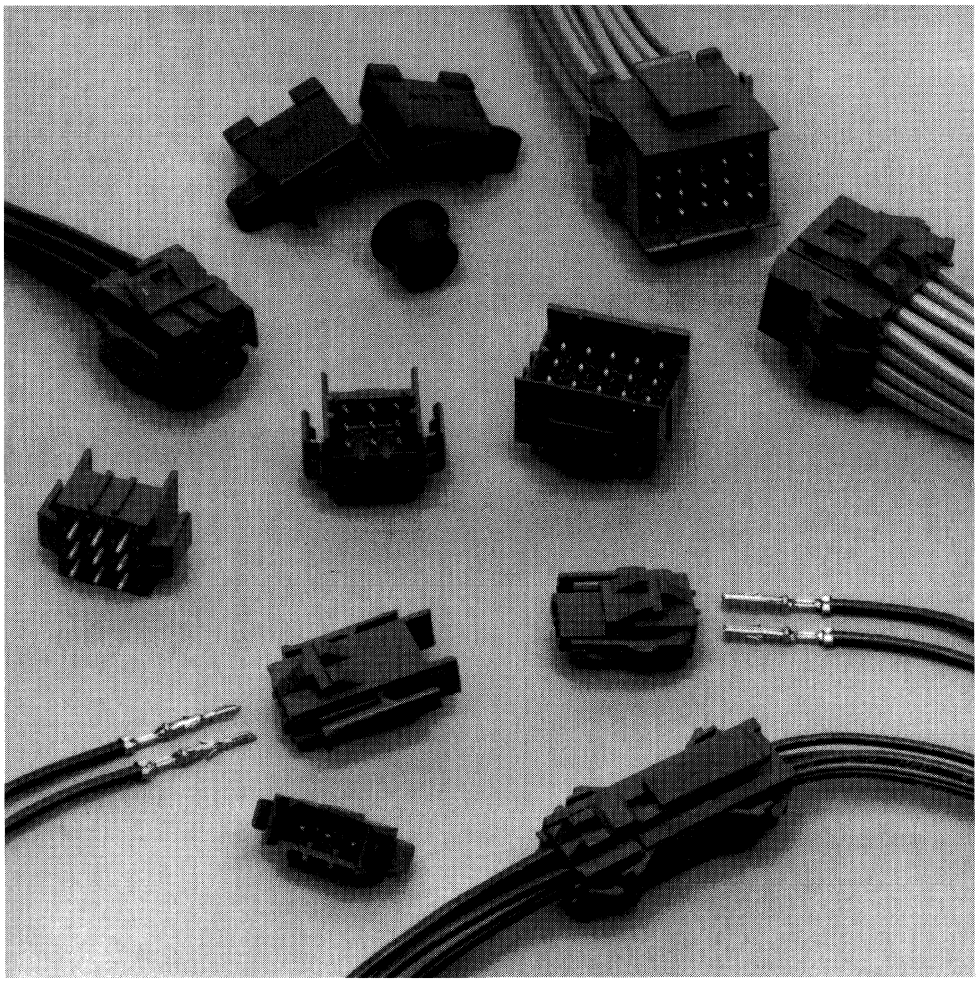
(MR) Miniature Rectangular Connectors



Product Facts

- Housings positively lock to prevent accidental disengagement
- Either cap or plug housing can be mounted in same rectangular panel cutout without additional hardware
- UL 94V-0 housings
- Plug and cap design includes molded-in polarizing feature to assure proper mating
- Numbered cavities for easy circuit identification
- Egg crate design of plug half fully encloses socket contacts, reducing shock hazard
- Molded skirt extension on cap protects pin contacts
- Strain reliefs for 6 through 36 positions are available
- Choice of tin or gold plated contacts
- Not for interrupting current
- Socket solder tail contacts available for hot side pc board mounting
- High density achieved through .165 [4.19] contact centerline spacing
- Extraction tool removes both pins and sockets
- Contacts accept 26-18 AWG [.12-.8 mm²] wire sizes and insulation diameters of .025-.115 [.635-2.92]
- Same applicator crimps pins and sockets
- Vertical pc board pin headers are available
- Pin header standoffs on housings at board interface facilitates gas venting and cooling during soldering
- Recognized under the Component Program of Underwriters Laboratories Inc., File No. E28476
- Certified by Canadian Standards Association, File No. LR 7189

Wire Size		Termination Resistance		Tensile Force Per Contact (Wire Pullout)	
AWG	mm²	Test Current (amps)	Resistance Milliohms (Max. Init.)	Force (Min.) lbs.	Force (Min.) N
26	.12	1	5.00	5	22
24	.2	1.5	5.00	8	36
22	.3	3	4.50	14	62
20	.5	4.5	4.00	14	62
18	.8	6	4.00	30	133

Note: This is the total resistance between wire crimps of a mated pin and socket.

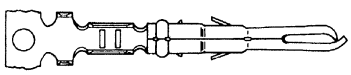
(MR) Miniature Rectangular Connectors
(Continued)

Miniature Rectangular Mating Combinations

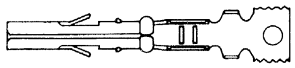
Number of Circuits	Flammability Rating	Style	Part Numbers		Plating	Pc Board Vertical Pin Header Part Nos.*	
			Plug	Cap		.062 [1.57] Board	.120 [3.05] Board
2	UL 94V-0	In-Line	1-640517-0	1-640507-0	Tin	640497-1	640497-3
					Duplex[1]	640497-2	640497-4
3	UL 94V-0	In-Line	1-640518-0	1-640508-0	Tin	640498-1	640498-3
					Duplex[1]	640498-2	640498-4
4	UL 94V-0	Matrix	1-640519-0	1-640509-0	Tin	640499-1	640499-3
					Duplex[1]	640499-2	640499-4
6	UL 94V-0	Matrix	1-640520-0	1-640510-0	Tin	640500-1	640500-3
					Duplex[1]	640500-2	640500-4
9	UL 94V-0	Matrix	1-640521-0	1-640511-0	Tin	640501-1	640501-3
					Duplex[1]	640501-2	640501-4
12	UL 94V-0	Matrix	1-640522-0	1-640512-0	Tin	640502-1	640502-3
					Duplex[1]	640502-2	640502-4
15	UL 94V-0	Matrix	1-640523-0	1-640513-0	Tin	640503-1	640503-3
					Duplex[1]	640503-2	640503-4
20	UL 94V-0	Matrix	1-640524-0	1-640514-0	Tin	640504-1	640504-3
					Duplex[1]	640504-2	640504-4
24	UL 94V-0	Matrix	1-640525-0	1-640515-0	Tin	640505-1	640505-3
					Duplex[1]	640505-2	640505-4
36	UL 94V-0	Matrix	1-640526-0	1-640516-0	Tin	640506-1	640506-3
					Duplex[1]	640506-2	640506-4

[1]Duplex Finish — Plated with .000030 [.00076] min. gold in mating area, matte tin on solder tail end over .000050 [.00127] min. nickel underplate on entire contact.
*Mates with plug housing (socket contact)

Contacts
Pin Diameter — .068 [1.73]
Stock Thickness — .008 [.203]



Live Split Pin



Standard Socket

Wire Size Range AWG [mm²]	Ins. Dia. Range	Finish	Contact Part Numbers				Hand Tool Part No.
			Live Split Pin		Standard Socket		
			Strip Form	Loose Form	Strip Form	Loose Form	
26-24 [.12-.2]	**.025-.050** .635-1.27	Pre-tin	350968-1	640579-1	794000-1	794001-1	90326-1
		Select Gold[1]	350968-2	640579-2	794000-2	794001-2	58514-1*
26-18+ [.12-.8]	**.050-.115** 1.27-2.92	Pre-tin	350967-1	640545-1	641294-1	641300-1	90325-1
		Select Gold[1]	350967-2	640545-2	641294-2	641300-2	58514-1*

[1]Select Gold Finish — Plated with .000030 min. [.00076] gold in mating area over .000050 [.00127] min. nickel underplate on entire contact.
+1650 CMA maximum.
*PRO-CRIMPER II Hand Tool for maintenance and field repair use only.

SOURCE: Catalog 82181

Specifications subject to change.
1-800-522-6752
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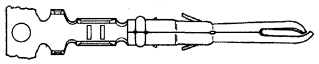
(MR) Miniature Rectangular Connectors
(Continued)

Grounding Pin

Pin Diameter — .068 [1.73]
Stock Thickness — .008 [.203]

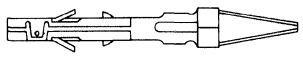


Wire Size Range AWG [mm²]	Ins. Dia. Range	Finish	Pin Part Numbers		Hand Tool Part No.
			Strip Form	Loose Form	
26-18+ [.12-.8]	.050-.115 1.27-2.92	Pre-tin	350969-1	640580-1	90325-1
		Select Gold[1]	350969-2	640580-2	58514-1*

[1]Select Gold Finish — Plated with .000030 [.00076] min. gold in mating area over .000050 [.00127] min. nickel underplate on entire contact.
+1650 CMA maximum.
*PRO-CRIMPER II Hand Tool for maintenance and field repair use only.

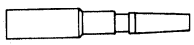
Solder Tail Socket

Stock Thickness — .008 [.203]

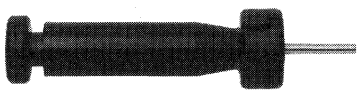


Part Number 350838-1
Note: Recommended for use with MR socket housings.

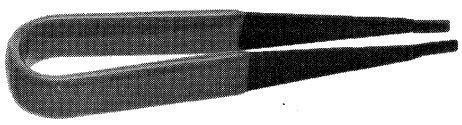
Keying Plug



Part Number 350591-1
UL 94V-0 Nylon material
Note: Use in socket housings only.



Contact Extraction Tool
Part No. 455822-2



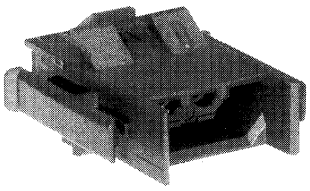
Contact Insertion Tool
(For inserting contacts applied to small diameter wire)
Part No. 455830-1

(MR) Miniature Rectangular Connectors

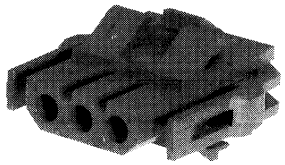
(Continued)

Housings,
Free-Hanging or Panel Mount

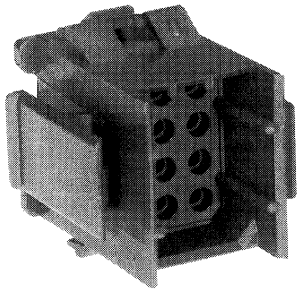
.165 [4.19] Centerline Spacing



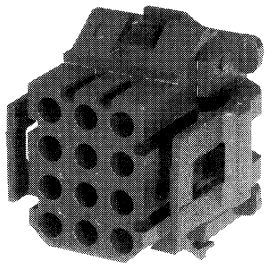
Part No. 1-640508-0
3 Circuit Pin Housing (Cap)



Part No. 1-640518-0
3 Circuit Socket Housing (Plug)



Part No. 1-640512-0
12 Circuit Pin Housing (Cap)



Part No. 1-640522-0
12 Circuit Socket Housing (Plug)

Note: 12 Cir. Housing Dim. (Typ.)— Cap, .920 [23.37] L x 1.060 [26.92] W x .785 [19.94] H;
Plug, .920 [23.37] L x .840 [21.34] W x .785 [19.94] H

Number of Circuits	Style	UL 94V-0 Part Numbers	
		Pin Housing (Cap)	Socket Housing (Plug)
2	In-Line	1-640507-0	1-640517-0
3	In-Line	1-640508-0	1-640518-0
4	Matrix	1-640509-0	1-640519-0
6	Matrix	1-640510-0	1-640520-0
9	Matrix	1-640511-0	1-640521-0
12	Matrix	1-640512-0	1-640522-0
15	Matrix	1-640513-0	1-640523-0
20	Matrix	1-640514-0	1-640524-0
24	Matrix	1-640515-0	1-640525-0
36	Matrix	1-640516-0	1-640526-0

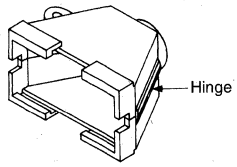
SOURCE: Catalog 82181

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

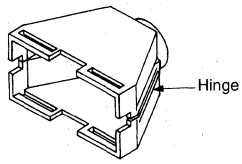
(MR) Miniature Rectangular Connectors
(Continued)

Strain Reliefs
One Piece—Clam Shell

Material—
UL 94V-0 nylon



6, 9, 12, 15 and 20 Circuit (Closed Position)



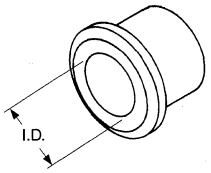
24 and 36 Circuit (Closed Position)

Number of Circuits	Part Numbers
6	350373-1
9	350522-1
12	350374-1
15	350523-1

Number of Circuits	Part Numbers
20	480634-1
24	350524-1
36	480594-1

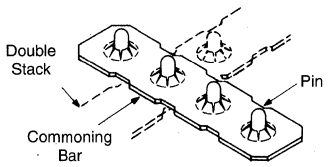
Notes: 1. These strain reliefs can be used with either pin or socket housings.
2. Customer supplied: One No. 6 Panhead Type B self-tapping screw, 3/8 long. Plating is optional to conform to customer requirements.
3. Strain reliefs are also available in UL 94V-2 nylon, black in color. To order strain reliefs in this material use the appropriate dash numbers, 1-□□□□□□-9.

Strain Relief Adapting Grommets



Number of Circuits	Dim. I.D.	Part Numbers
6	**.156** 3.96	1-350377-0
	.218 5.54	1-350376-0
	.296 7.52	1-350375-0
9, 12 & 15	**.218** 5.54	1-350378-1
	.250 6.35	1-350379-1
	.281 7.14	1-350380-1
20, 24 & 36	**.437** 11.10	1-380935-0
	.375 9.53	1-380936-0
	.312 7.92	1-380937-0

Commoning Bars



Finish	Part Numbers		
	2 Circuit	3 Circuit	4 Circuit
Pre-tin	350020-1	350021-1	350022-1
Gold[1]	350020-2	350021-2	350022-2

[1]Gold Finish — Plated with .000030 [.00076] min. gold over .000050 [.00127] min. nickel underplate on entire contact.

Notes: 1. Commoning bars can be used to common adjacent pin contacts in any column or row. Maximum stack per pin is two.
2. The above illustrates the proper insertion of the Commoning Bar.
3. Use the mating socket housing to assemble the Commoning Bar onto the pins.

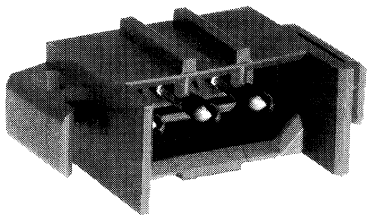
Commoning Bar Extraction Tool Part No. 457306-1

(MR) Miniature Rectangular Connectors
(Continued)

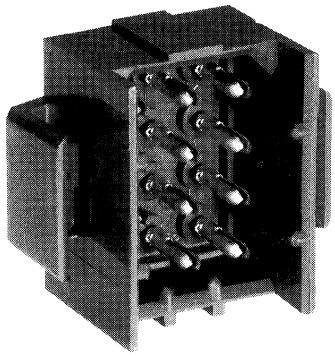
Pc Board Vertical Pin Headers

.165 [4.19] Centerline Spacing

Solder Tail Diameter—.040 [1.02]



Part No. 640498-1
3 Circuit, In-Line



Part No. 640502-3
12 Circuit, Matrix

Note: 12 Cir. Housing Dim. (Typ.)— .785 [19.94] L x .620 [15.75] W x .530 [13.46] H

Number of Circuits	Style	Board Thickness	UL 94V-0 Part Numbers		Mates with Socket Housing Part No.
			Tin Finish Contacts	Duplex Finish Contacts[1]	
2	In-Line	.062 1.57	640497-1	640497-2	1-640517-0
		.120 3.05	640497-3	640497-4	
3	In-Line	.062 1.57	640498-1	640498-2	1-640518-0
		.120 3.05	640498-3	640498-4	
4	Matrix	.062 1.57	640499-1	640499-2	1-640519-0
		.120 3.05	640499-3	640499-4	
6	Matrix	.062 1.57	640500-1	640500-2	1-640520-0
		.120 3.05	640500-3	640500-4	
9	Matrix	.062 1.57	640501-1	640501-2	1-640521-0
		.120 3.05	640501-3	640501-4	
12	Matrix	.062 1.57	640502-1	640502-2	1-640522-0
		.120 3.05	640502-3	640502-4	
15	Matrix	.062 1.57	640503-1	640503-2	1-640523-0
		.120 3.05	640503-3	640503-4	
20	Matrix	.062 1.57	640504-1	640504-2	1-640524-0
		.120 3.05	640504-3	640504-4	
24	Matrix	.062 1.57	640505-1	640505-2	1-640525-0
		.120 3.05	640505-3	640505-4	
36	Matrix	.062 1.57	640506-1	640506-2	1-640526-0
		.120 3.05	640506-3	640506-4	

[1]Duplex Finish—Plated with .000030 [.00076] min. gold in mating area, matte tin on solder tail end over .000050 [.00127] min. nickel underplate on entire contact.

SOURCE: Catalog 82181

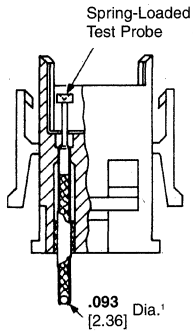
Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

(MR) Miniature Rectangular Connectors
(Continued)

Test Connectors

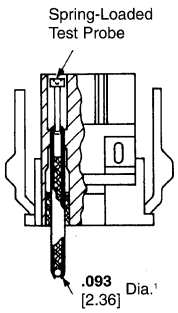
These test connectors are preloaded with spring-loaded contacts. They are available for testing all assembled pin and socket connectors, and pc board pin headers. The test connector housings are of the same configuration as the standard housings.

Pin Housing (Cap) Assembly



Number of Circuits	Test Connector Part No. UL 94V-0 Nylon	Mates with Socket Housing Part No.
2	350844	1-640517-0
3	350844-1	1-640518-0
4	350844-2	1-640519-0
6	350844-3	1-640520-0
9	350844-4	1-640521-0
12	350844-5	1-640522-0
15	350844-6	1-640523-0
20	350844-7	1-640524-0
24	350844-8	1-640525-0
36	350844-9	1-640526-0

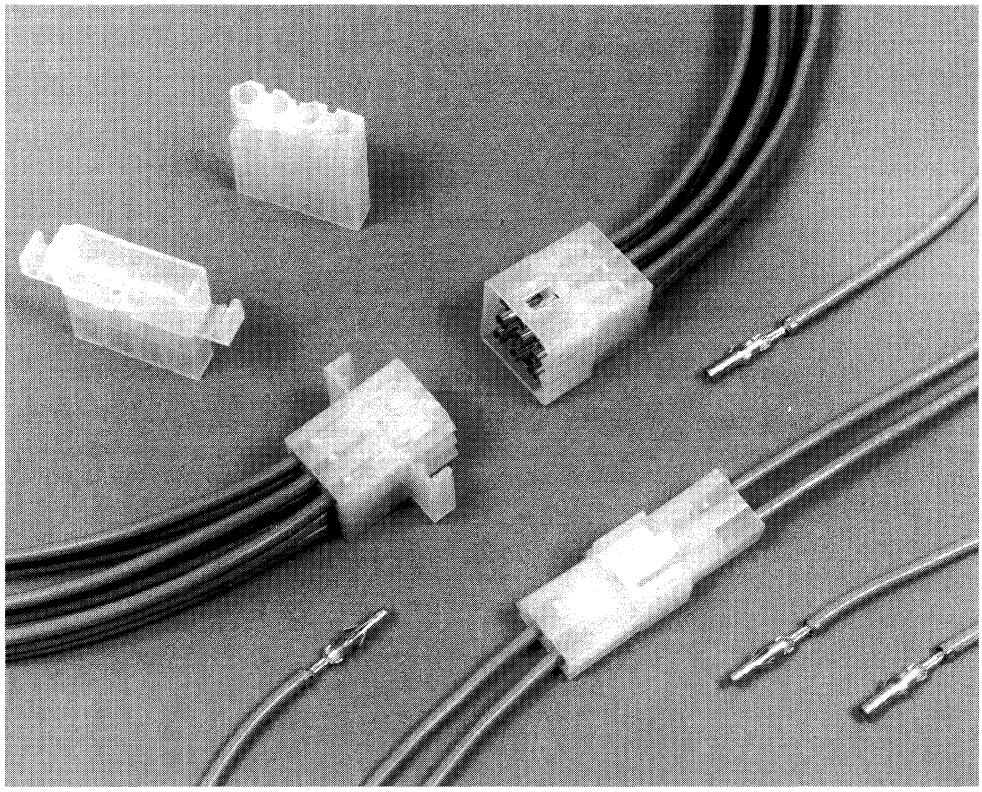
Socket Housing (Plug) Assembly



Number of Circuits	Test Connector Part No. UL 94V-0 Nylon	Mates with Pin Housing Part No.	Mates with Pin Header Base Part No.
2	350843	1-640507-0	640497
3	350843-1	1-640508-0	640498
4	350843-2	1-640509-0	640499
6	350843-3	1-640510-0	640500
9	350843-4	1-640511-0	640501
12	350843-5	1-640512-0	640502
15	350843-6	1-640513-0	640503
20	350843-7	1-640514-0	640504
24	350843-8	1-640515-0	640505
36	350843-9	1-640516-0	640506

¹Mates with .093 [2.36] Soft Shell Commercial Pin and Socket Contact, 24-18 AWG **Part No. 350417-1** or 20-14 AWG **Part No. 350415-1**. For additional information on these sockets refer to page 2238.
Warning: Power must be off when engaging and disengaging connector to eliminate shock hazard.

.062 [1.57] Soft-Shell Commercial Pin and Socket Connectors



Product Facts

- Polarized
- Cavity identification
- Low contact mating force
- Dual locking lances
- Detent and positive locking
- Available in brass and phosphor bronze with tin and gold plating
- Panel mounting and free-hanging styles
- "F" crimping
- Applicator and hand tool available
- Economical commercial grade connectors
- Compatible with high-speed application machinery and competitive soft shells
- Wire range from 30 to 18 AWG [0.05 to 0.9 mm²]
- Accepts wires with insulation diameters as broad as .110 [2.79]
- Housings available in 1 to 9 positions
- Not for interrupting current
- Recognized under the Component Program of Underwriters Laboratories Inc., File No. E28476
- Certified by Canadian Standards Association, File No. LR 7189

Termination Resistance

Wire Size AWG	Wire Size mm²	Test Current (amps)	Resistance Milliohms (Max. Init.)
24	0.2	1.5	3.50
22	0.3–0.4	3.0	3.50
20	0.5–0.6	4.5	3.00
18	0.8–0.9	6.0	3.00

Note: This is the total resistance between wire crimps of a mated pin and socket.

Tensile Force per Contact (Wire Pullout)

Wire Size AWG	Wire Size mm²	Force (Min.) lb.	Force (Min.) N
24	0.2	10	44.5
22	0.3–0.4	10	44.5
20	0.5–0.6	13	57.8
18	0.8–0.9	14	62.3

SOURCE: Catalog 82181

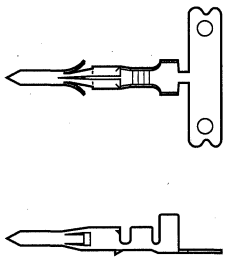
Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

.062 [1.57] Soft-Shell Commercial Pin and Socket Connectors

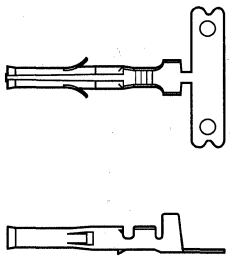
(Continued)

Contacts

Pin Diameter — .062 [1.57]
Stock Thickness —.008 [0.02]



Pin

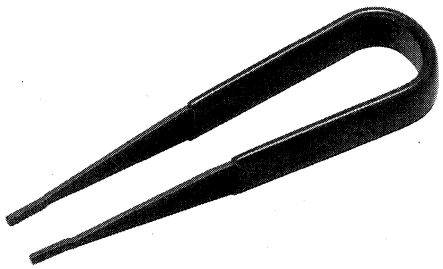


Socket

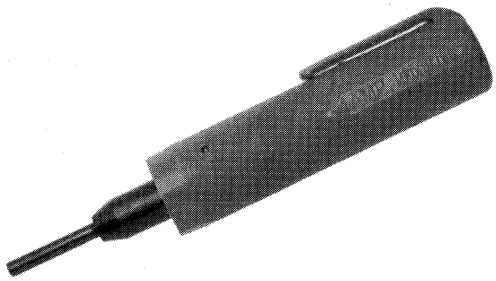
Wire Size AWG	Wire Size mm²	Ins. Dia. Range	Material & Finish	Contact Part Numbers Pin Strip Form	Pin Loose Form	Socket Strip Form	Socket Loose Form	PRO-CRIMPER II Hand Tool Part No.
30–24	0.05–0.2	**.060** Max. 1.52	Brass, Pre-tin	640391-1	794018-1	640392-1	794019-1	90870-1
			Brass, Select Gold	640391-5(A)	—	640392-5(A)	—	
			Phos. Brz., Pre-tin	—	—	640392-2	—	
			Brass, Pre-tin	—	—	794046-1(B)	—	
24–18	0.2–0.9	**.050–.110** 1.27–2.79	Brass, Pre-tin	350629-1	794017-1	350628-1	794016-1	90869-1
			Phos. Brz., Pre-tin	—	—	350628-2	—	
			Brass, Select Gold	350629-5(A)	—	350628-5(A)	—	
			Phos. Brz., Select Gold	—	—	350628-6(A)	—	

(A) Select Gold—.000030 [.00076] min. in mating area over .000050 [.00127] nickel.
(B) Lanceless socket for overmolding.

Notes: 1. Phosphor bronze contacts should be used in high-temperature/humidity cycling applications.
2. Pin and socket contacts can be used in either plug or receptacle housings.



Contact Insertion Tool (for Pins and Sockets) Part No. 91002-1



Contact Extraction Tool Part No. 458994-4

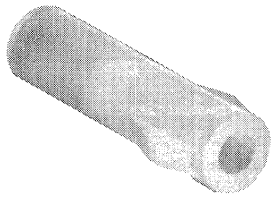
Specifications subject to change.
1-800-522-6752 Product Information Center/ AMP FAX Service
1-800-722-1111 Tooling/Technical Assistance Center

.062 [1.57] Soft-Shell Commercial Pin and Socket Connectors
(Continued)

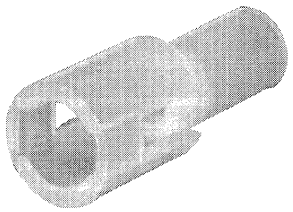
Housings, Free-Hanging or Panel Mount

.145 [3.68] Centerline Spacing

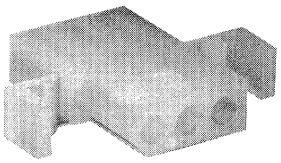
Material—
UL 94V-2 Nylon, natural color



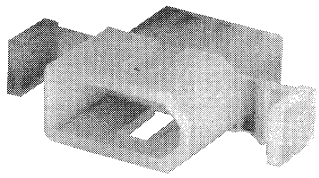
1 Circuit Receptacle



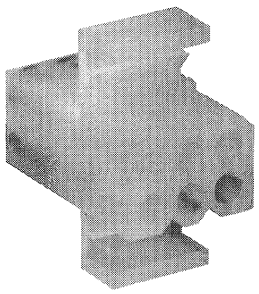
1 Circuit Plug



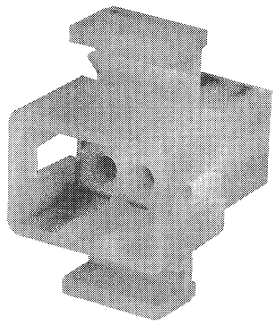
3 Circuit Receptacle, In-Line



3 Circuit Plug, In-Line



6 Circuit Receptacle, Matrix



6 Circuit Plug, Matrix

Note: 6 Cir. Housing Dim. (Typ.)— Receptacle, .345 [8.76] L x .785 [19.94] W x .495 [12.57] H; Plug, .445 [11.30] L x .750 [19.05] W x .600 [15.24] H

No. of Circuits	Style	Receptacle Part Numbers		Plug Part Numbers	
		Panel Mount	Free-Hanging	Panel Mount	Free-Hanging
1	—	—	770277-1	—	770278-1
2	In-Line	770343-1	770342-1	770341-1	770340-1
3	In-Line	770326-1	770333-1	770332-1	770331-1
4	In-Line	770335-1	770274-1	770334-1	770275-1
	Matrix	770441-1	770442-1	770443-1	770433-1
6	Matrix	770354-1	770356-1	770353-1	770355-1
9	Matrix	770427-1	770429-1	770426-1	770428-1

Note: Maximum panel thickness is .060 [1.52].

SOURCE: Catalog 82181

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

(CMPC) Circular Multi-Pin Connectors

Product Facts

- Push-pull connector, with inertia interlock design provides quick, positive mating and avoids problems associated with threaded coupling design
- Multiple housing polarization system
- Advanced contact retention system
- Lanceless contacts for tangle-free handling
- Available in 5, 10, and 13 circuit sizes
- 10 and 13 circuit connectors are for wire-to-wire and wire-to-board applications
- 5 circuit connector is for wire-to-wire applications
- Integral strain relief
- Receptacles designed for panel mounting
- Housings are UL 94V-0 rated thermoplastic
- 10 and 13 circuit connectors use Universal MATE-N-LOK II contacts
- 10 and 13 circuit connectors accept 30-10 AWG [.05-5.0 mm²] with insulation diameter range of .032 [.813] to .200 [5.08]
- 5 circuit connectors use Multimate Type XII contacts
- 5 circuit connectors accept 16-10 AWG [1.2-5.0 mm²] with insulation diameter of .135 [3.43] to .220 [5.59]
- Not for interrupting current
- Recognized under the Component Program of Underwriters Laboratories Inc., File No. E28476
- Certified by Canadian Standards Association, File No. LR 7189A
- Passed test by VDE DIN 0627 Test Report File— 4751-1431-1050/A1C

Wire Size		Termination Resistance		Tensile Force Per Contact (Wire Pullout)	
AWG	mm²	Test Current (amps)	Resistance Milliohms (Max. Init.)	Force (Min.) lbs.	Force (Min.) N
30	.05	—	—	2	9
28	.08	—	—	3	13
26	.12	—	—	6	27
24	.2	1.5	3.50	8	36
22	.3	3	3.50	14	62
20	.5	4.5	3.00	14	62
18	.8	6	3.00	30	133
16	1.2	8	2.75	45	200
14	2.0	10	2.75	50	222
12	3.0	—	—	60	267
10	5.0	—	—	70	311

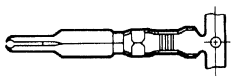
Note: This is the total resistance between wire crimps of a mated pin and socket.

SOURCE: Catalog 82181

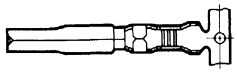
(CMPC) Circular Multi-Pin Connectors
(Continued)

Universal MATE-N-LOK II Contacts

Split Pin Diameter — .086 [2.18]
Stock Thickness — .012 [305]



Pin



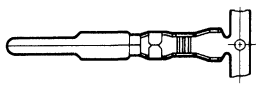
Socket

Wire Size Range AWG [mm²]	Ins. Dia. Range	Material & Finish	Contact Part Numbers				Hand Tool Part No.
			Pin		Socket		
			Strip Form	Loose Form	Strip Form	Loose Form	
30-26 [.05-.12]	**.032-.057** .813-1.45	Phos. Brz., Gold[1]	770011-6	770512-6	770012-6	770416-6	58439-1
24-18 [.2-.8]	**.040-.100** 1.02-2.54	Brass, Pre-tin	770009-1	770252-1	—	—	90300-2 90548-1*
		Brass, Duplex[2]	770009-2	770252-2	—	—	
		Phos. Brz., Pre-tin	—	—	770010-3	770253-3	
		Phos. Brz., Duplex[2]	—	—	770010-4	770253-4	
20-14 [.5-2.0]	**.060-.130** 1.52-3.30	Brass, Pre-tin	770007-1	770250-1	—	—	90296-2 90546-1*
		Brass, Duplex[2]	770007-2	770250-2	—	—	
		Phos. Brz., Pre-tin	—	—	770008-3	770251-3	
		Phos. Brz., Duplex[2]	—	—	770008-4	770251-4	
20-14 [.5-2.0]	**.130-.200** 3.30-5.08	Brass, Pre-tin	770005-1	770248-1	—	—	90298-2[4] 90299-2[4] 90547-1*
		Brass, Duplex[2]	770005-2	770248-2	—	—	
		Phos. Brz., Pre-tin	—	—	770006-3	770249-3	
		Phos. Brz., Duplex[2]	770005-4	—	770006-4	770249-4	
12-10 [3.0-5.0]	**.200** max.[3] 5.08	Phos. Brz., Pre-tin	770003-3	770246-3	770004-3	770247-3	69710-1[5] 58530-1*
		Phos. Brz., Duplex[2]	770003-4	770246-4	770004-4	770247-4	

[1]Gold Finish — Plated with .000030 [.00076] min. gold in mating area and inside wire barrel over .000050 [.00127] min. nickel underplate on entire contact.
[2]Duplex Finish — Plated with .000030 [.00076] min. gold on pin end and .000050 [.00127] min. tin-lead in crimp area over .000050 [.00127] min. nickel underplate on entire contact.
[3]There is no insulation barrel on this contact. Insulation maximum diameter is limited by the housing.
[4]Use Hand Tool **Part No. 90298-2** for 20-18 AWG and **Part No. 90299-2** for 16-14 AWG.
[5]Hand Tool **Part No. 69710-1** uses die set **Part No. 58380-1** for 12 AWG and **Part No. 58380-2** for 10 AWG.
Note: These contacts are to be used in 10 and 13 circuit Circular Multi-Pin plug or receptacle housings and Universal MATE-N-LOK II plug or cap housings.
*PRO-CRIMPER II Hand Tool for maintenance and field repair use only.

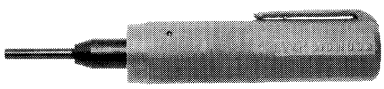
Grounding Pins

Solid Pin Diameter — .084 [2.13]
Stock Thickness — .012 [305]

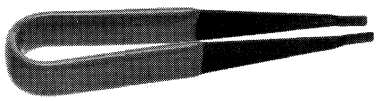


Wire Size Range AWG [mm²]	Ins. Dia. Range	Material & Finish	Contact Part Numbers		Hand Tool Part No.
			Strip Form	Loose Form	
20-14 [.5-2.0]	**.060-.130** 1.52-3.30	Brass, Pre-tin	770193-1	770254-1	90296-2 90546-1*
		Brass, Duplex[1]	770193-2	770254-2	
	.130-.200 3.30-5.08	Brass, Pre-tin	770194-1	770255-1	90298-2[2] 90299-2[2] 90547-1*
		Brass, Duplex[1]	770194-2	770255-2	

[1]Duplex Finish — Plated with .000030 [.00076] min. gold on pin end and .000050 [.00127] min. tin-lead in crimp area over .000050 [.00127] min. nickel underplate on entire contact.
[2]Use Hand Tool **Part No. 90298-2** for 20-18 AWG and **Part No. 90299-2** for 16-14 AWG.
Note: These contacts are to be used in 10 and 13 circuit Circular Multi-Pin plug or receptacle housings and Universal MATE-N-LOK II plug or cap housings.
*PRO-CRIMPER II Hand Tool for maintenance and field repair use only.



Contact Extraction Tool
Part No. 458994-2



Contact Insertion Tool
(for inserting contacts applied to small diameter wire)
Part No. 455830-1

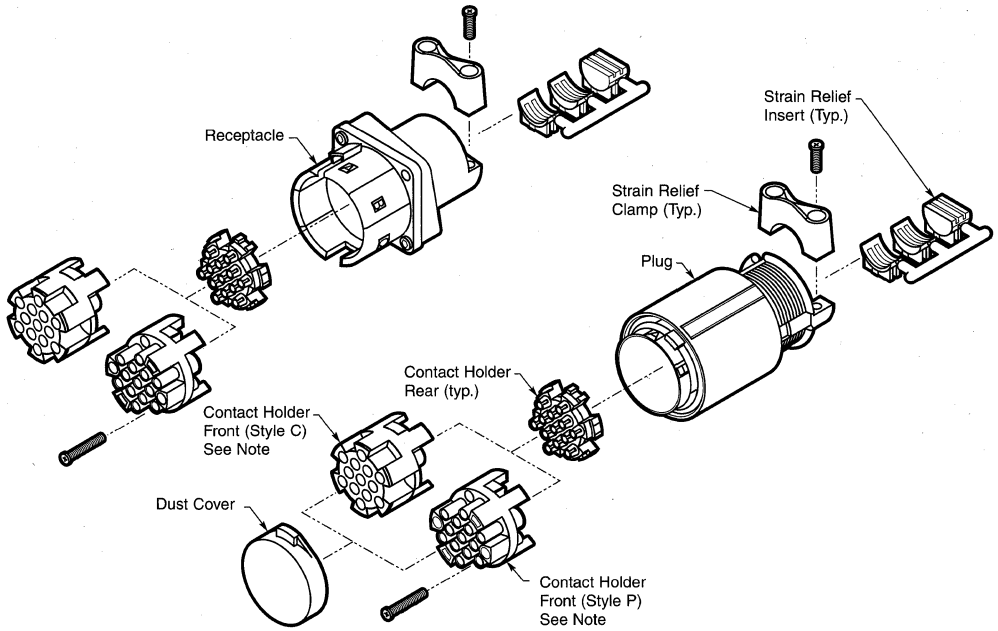
SOURCE: Catalog 82181

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

(CMPC) Circular Multi-Pin Connectors
(Continued)

Housings, Free-Hanging or Panel Mount

Material—
UL 94V-0 Thermoplastic



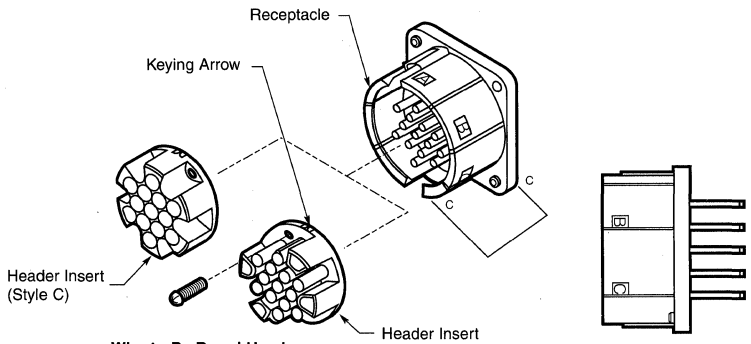
Number of Circuits	Part Numbers	
	Plug Assembly	Receptacle Assembly
10	770280-1 (Style P)	770281-2[3] (Style C)
	770280-2 (Style C)	770281-1[3] (Style P)
13	770300-1 (Style P)	770301-2 (Style C)
	770300-2 (Style C)	770301-1 (Style P)

[3] Strain relief not available for 10 circuit receptacle assembly.

Notes: 1. Style "P" plug assembly (-1) mates with Style "C" receptacle assembly (-2) or Style "C" receptacle header assembly (-2). Also Style "C" plug assembly (-2) mates with Style "P" receptacle assembly (-1) or Style "P" receptacle header assembly (-1).
2. All assembly hardware supplied, panel mount hardware not supplied.

Pc Board Receptacle Socket Header Assembly

Material—
UL 94V-0 Thermoplastic



Wire-to-Pc Board Header Receptacle Assembly

View C-C

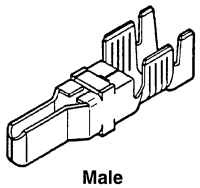
Number of Circuits	Material and Finish	Receptacle Socket Header Assembly Part Numbers	Mates with Plug Assembly Part Numbers (Using Pin Contacts)
10	Phos. Brz., Duplex	770282-1 (Style P)	770280-2 (Style C)
		770282-2 (Style C)	770280-1 (Style P)
13	Phos. Brz., Duplex	770302-1[2] (Style P)	770300-2 (Style C)
		770302-3 (Style P)	
		770302-2[2] (Style C)	770300-1 (Style P)
		770302-4 (Style C)	

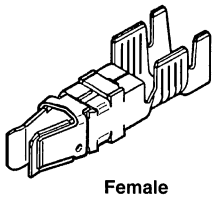
[2]No center contact

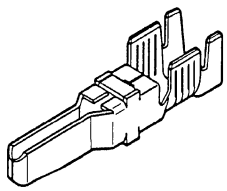
Notes: 1. Style "P" plug assembly (-1) mates with Style "C" receptacle assembly (-2) or Style "C" receptacle header assembly (-2). Also Style "C" plug assembly (-2) mates with Style "P" receptacle assembly (-1) or Style "P" receptacle header assembly (-1).
2. All assembly hardware supplied, panel mount hardware not supplied.

(CMPC) Circular Multi-Pin Connectors
(Continued)

Multimate Type XII Contacts
Stock Thickness — .027 [0.69]


Male


Female


Grounding Male

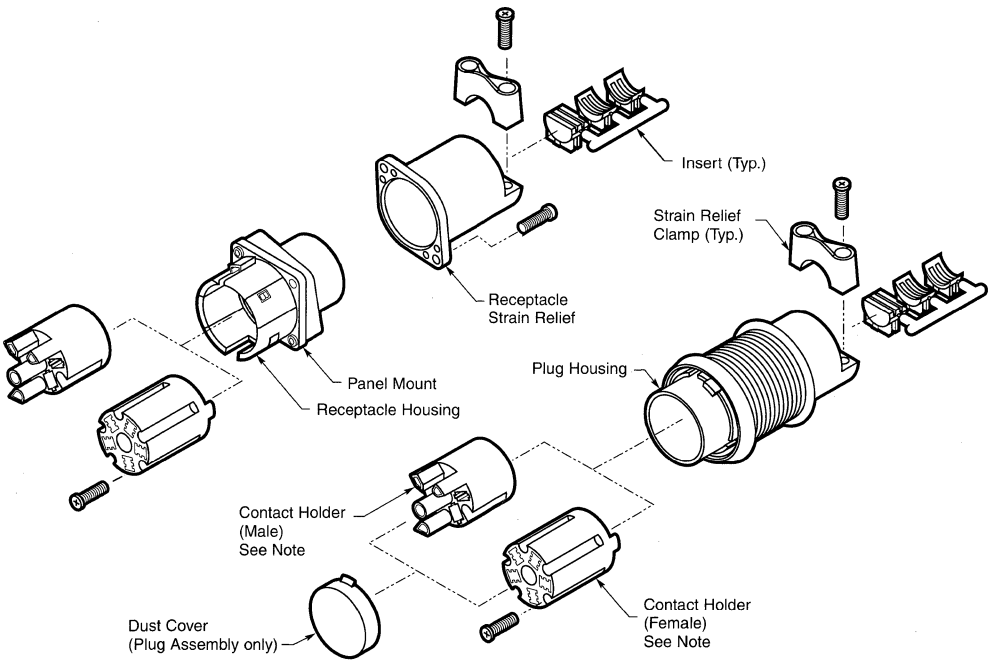
Wire Size Range AWG [mm²]	Ins. Dia. Range	Finish	Contact Part Numbers						Die Insert Nos. For Hand Tool 69710-1 or Pneumatic Tool 69365
			Male		Female		Grounding Male		
			Strip Form	Loose Form	Strip Form	Loose Form	Strip Form	Loose Form	
16-12 [1.2-3.0]	.135-.160 [3.43-4.06]	Tin Lead	66255-5	66261-1	1-66740-2	66740-8	66256-5	66262-1	90145-1[3]
		Gold[1]	66255-6	66261-2	1-66740-1	66740-6	66256-4	66262-2	90145-2[3]
		Silver[2]	66255-8	66261-4	66740-9	66740-2	66256-7	66262-4	
10 [5.0]	.190-.220 [4.83-5.59]	Tin Lead	66253-5	66259-1	1-66741-2	66741-8	—	66260-1	90140-1
		Gold[1]	66253-6	66259-2	1-66741-1	66741-6	—	66260-2	
		Silver[2]	66253-8	66259-4	66741-9	66741-2	—	66260-4	

[1]Gold Finish — Plated with .000030 [.00076] gold in mating area over .000030 [.00076] min. nickel underplate on entire contact and gold flash over entire contact.
[2]Silver Finish — Plated with .000200 [.00508] silver on entire contact with lubricant added to contact after plating. Recommended for high current/vibration applications where fretting, corrosion is a problem.
[3]Hand Tool **Part No. 69710-1** and Pneumatic Tool **Part No. 69365** uses Die Insert **Part No. 90145-2** for 16 AWG wire and Die Insert **Part No. 90145-1** for 14-12 AWG wire.
Note: These contacts are to be used in 5 circuit Circular Multi-Pin plug or receptacle housings.

Contact Extraction Tool
Part No. 91019-3

Housings, Free-Hanging or Panel Mount

Material—
UL 94V-0 Thermoplastic



Number of Circuits	Part Numbers		
	Plug Assembly	Receptacle Assembly	Receptacle Strain Relief Assembly
5	770496-1	770497-2	770498-1
	770496-2	770497-1	

Note: The plug assembly with male contact holder (-1) mates with the receptacle assembly with female contact holder (-2) and the plug assembly with female contact holder (-2) mates with the receptacle assembly with male contact holder (-1).

SOURCE: Catalog 82181

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

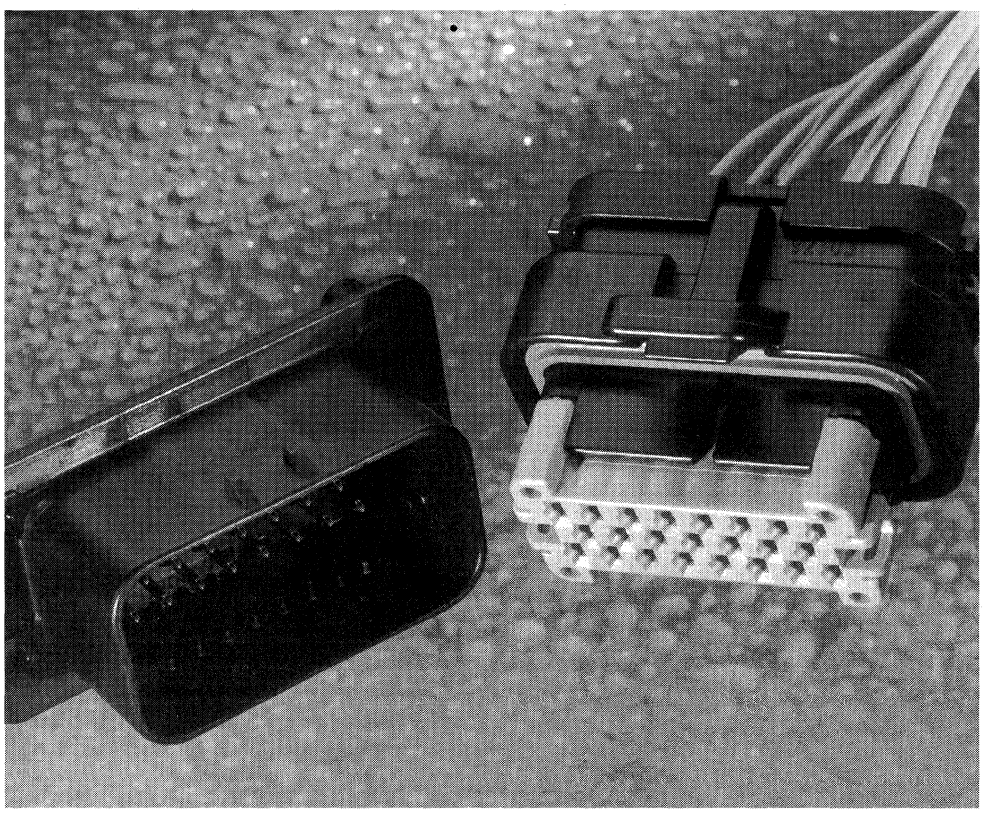
METRIC

AMPSEAL Automotive Plug Connector and Header Assembly (Wire-to-Board)

4 mm [0.16] Centerline Spacing

Product Facts

- Sealing of both interface and wires provides for environmental integrity
- Secondary contact locking and lanceless contacts ensure positive contact seating, without backout
- High-temperature materials withstand underhood environment
- Lanceless receptacle contacts eliminate tangling during storage and handling
- Integral latches firmly hold mated connector halves together without additional hardware
- Contacts accept 0.5 -1.4 mm² [20 to 16 AWG] wire with insulation diameter of 1.7 [.067] to 2.7 [.106]
- Designed to comply to ISO-8092-2 Test Standard
- Keying and color coding optional
- Gold contacts (125°C [257°F]) optional
- Recognized under the Component Program of Underwriters Laboratories Inc., File No. E28476



AMPSEAL automotive connectors provide rugged reliability, easy use, and superior environmental sealing. They are available in cable plugs and pc board-mounting right-angle headers that are designed to stand up to high-temperature underhood applications.

The preassembled plug connector features built-in contact sealing to eliminate individual wire-sealing grommets, while an integral interfacial seal protects mated connectors. All circuits are sealed by a diaphragm in the rubber wire seal. When the connector is assembled, the diaphragm is pierced as the contact passes through it. Unused circuit cavities remain sealed.

The housing uses a two-piece contact-holding design that provides terminal-position assurance against contact backout. After contacts are inserted into the housing, the housing snaps shut to firmly position all contacts. The connector will not shut unless all contacts are properly inserted.

The connectors use a three-row contact grid on 4 mm [0.16] centerlines. Plastic pins can be used to plug empty cavities in applications requiring selective loading.

The pc board-mounting header is designed to be panel mounted. Maximum panel thickness is 2.0 [.079].

Type	Contact Plating	Part Numbers			
		Black	Natural	Gray	Blue
23-Pos. Header Assy. (Right-Angle)	Tin	770669-1	770669-2	770669-4	770669-5
	Gold	1-770669-1	1-770669-2	1-770669-4	1-770669-5
23-Pos. Plug Assy.	—	770680-1	770680-2	770680-4	770680-5

Wire Size Range		Ins. Dia Range	Plating	Receptacle Contact Part Numbers	
mm²	AWG			Loose Piece	Strip
0.5-1.4	20-16	1.7-2.7 .067-.106	Tin	770854-1	770520-1
			Gold	770854-3	770520-3

Accessories (for Plug Assy.)

Description	Part Numbers
Seal Plug	770678-1
Gasket	770670-1

SOURCE: Catalog 65481

Audio/Instrument Connectors (DIN Type)

Product Facts

- Easy to assemble—two-piece plug, one-piece receptacle
- Precision-formed contacts with F-crimp barrels produce terminations with high conductivity and high tensile strength
- Crimp, snap-in contacts can be machine applied for lowest installed cost
- Positive, integral cable clamp
- Simple connector assembly
- No socket contact sleeving is required
- Polarized housings
- Quick connect/disconnect

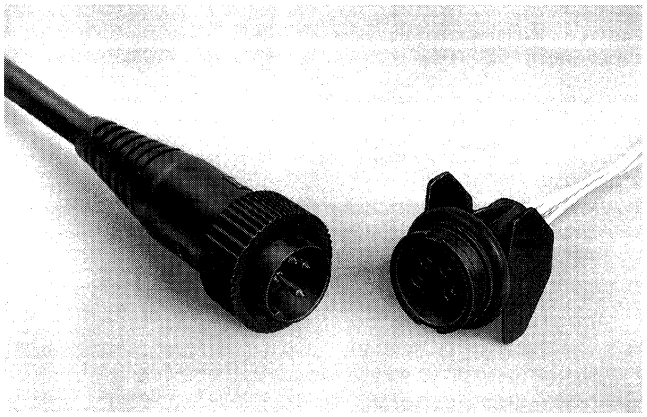
Plug Assemblies*

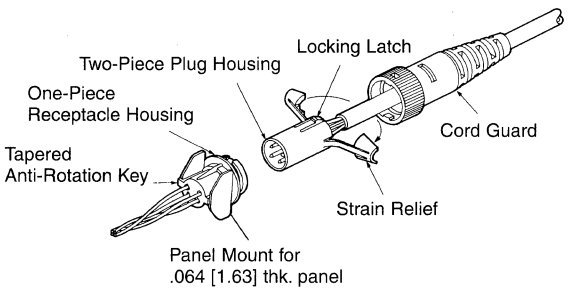
No. of Pos.	Plug Housing Part No.	Cord Guard Part No.
4	207313-1	207314-1
5	207488-1	207314-1
6	207332-1	207314-1

*Assembled length—2.50 [63.5]

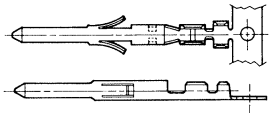
Receptacles

No. of Pos.	Receptacle Housing Part No.
4	207316-1
5	207487-1
6	207333-1

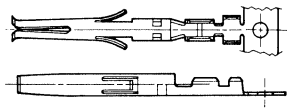




Contacts (28-22 AWG [0.08-0.4 mm²])



Pin Contact
Part Numbers
207438-2 (strip)
207438-3 (loose piece)



Socket Contact
Part Numbers
207437-2 (strip)
207437-3 (loose piece)

Hand Crimp Tool **Part No. 90363-1**
Contact Extraction Tool **Part No. 91136-1**

SOURCE: Catalog 82053

Specifications subject to change.

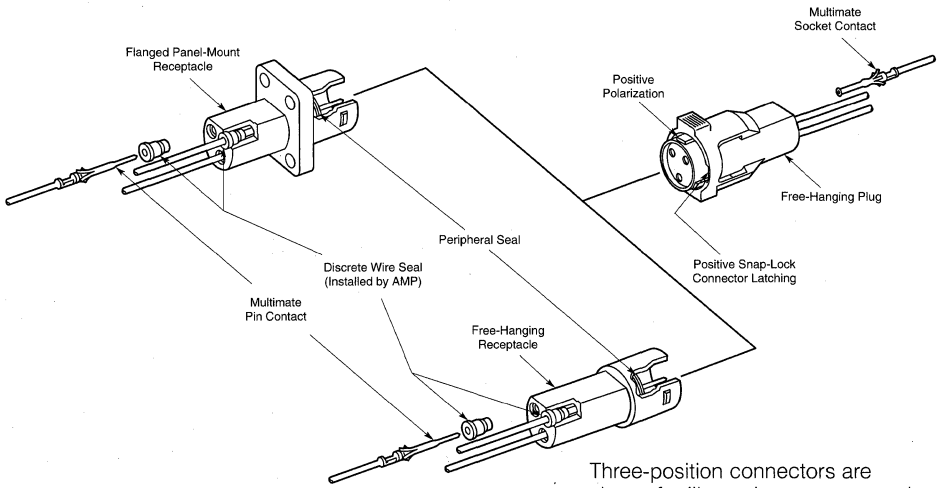
1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

Econoseal Sealed Pin and Socket Connectors

Product Facts

- Low cost
- Available in popular 1- through 9-position sizes; in free-hanging and panel-mount versions
- Accepts all AMP Multimate contacts with .062 [1.57] pin diameter; Type III+ and Type VI and subminiature coaxial contacts
- No mating hardware required
- Housings provide positive latching and polarization
- Discrete wire seals are factory installed, but replaceable
- Square flange design permits bulkhead mounting
- Easy contact insertion and extraction; no special fixturing required
- Rigid thermoplastic material is resistant to most hydrocarbons and will not flex or overstress contacts, UL 94V-2 rated
- Accommodates 18-14 AWG [0.8-2 mm²] wires; .080 to .135 [2.03 to 3.43] insulation diameters
- Machine applied terminations assure highest production rates at lowest applied costs
- Recognized under the Component Program of Underwriters Laboratories Inc., File No. E28476



Three-position connectors are shown for illustration purposes only.

Free-Hanging and Flanged Panel Mount Connectors

Note: 4 Pos. Housing O.D. Dim. (Typ.)—Free-Hanging Plug, .567 [14.41]; Free-Hanging Receptacle, .663 [16.84]; Flanged Receptacle, .730 [18.54]

No. of Positions	Part Numbers		
	Free-Hanging Plug	Free-Hanging Receptacle	Flanged Panel Mount Receptacle
1	207901-1	207902-1	207982-1
2	207845-1	207846-1	207853-1
3	207567-1	207563-1	207807-1
4	207571-1	207569-1	207808-1
5	207847-1	207848-1	—
6	207849-1	207850-1	—
7	207575-1	207573-1	—
8	208678-1	211068-1	208677-1
9	208530-1	208538-1	208546-1

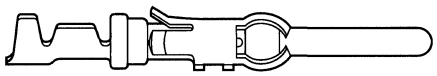
Notes: 1. Plugs mate with Free-Hanging or Flanged Receptacles.
2. Plugs accept socket contacts; receptacles accept pin contacts. All contacts must be purchased separately.
3. Discrete wire seals are factory installed, but can be replaced. Use **Part No. 207565-2** when ordering individual discrete wire seals.

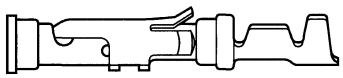
SOURCE: Catalog 82057

Multimate Contacts

Type III+ Contacts

Contact Size—16
Pin Diameter—.062 [1.57]
Test Current—13 amperes*


Pin


Socket

***Note:** Total current capacity of each contact in any given connector is dependent on the heat rise resulting from the combination of electrical loads of all contacts in the connector arrangement and the maximum ambient temperature in which the connector will be operating.

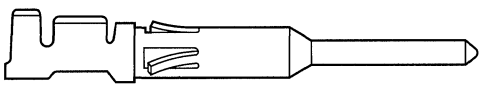
Type III+ contacts are crimp snap-in, precision formed contacts for high-volume, low-cost application. They feature bell-mouthed sockets to give closed entry, external retention springs for quick, firm seating in the connector block, and a cantilever engagement spring to provide controlled contact pressures for optimum conductivity and minimum surface wear. Type III+ contacts are available in strip form for high-speed application with automatic machines and in loose piece form for hand tool crimping.

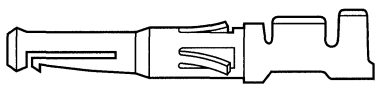
Wire Size Range[1] AWG	Wire Size Range[1] mm²	Ins. Dia. Range	Contact Finish	Strip Form Contact Part No. Pin[2]	Strip Form Contact Part No. Socket[2]	Loose Piece Contact Part No. Pin[2]	Loose Piece Contact Part No. Socket[2]	Tooling Part No. Strip Form Quick-Change Applicator	Tooling Part No. Loose Piece Hand Tool
18-16	0.8–1.4	**.080–.100** 2.03–2.54	Gold/Nickel	66098-6	66100-6	66099-1	66101-1	466325-5[3] 466906-1[4]	58495-1[5] 90067-5
			Tin	66098-7	66100-7	66099-2	66101-2		
			Sel. Gold/Nickel	66098-9	66100-9	66099-4	66101-4		
18-14	0.8–2	**.110–.130** 2.79–3.3	Tin	66597-1	66598-1	66602-1	66601-1	466752-4[3] 466958-1[4]	90310-2
			Gold/Nickel	66597-2	66598-2	66602-2	66601-2		

[1]Wire strip length—.156 [3.96] for all wire sizes.
[2]Plastic sheath **Part No. 208337-1** must be used when inserting Type III+ pins into sealed connectors, and plastic sheath **Part No. 208338-1** must be used when inserting Type III+ sockets into sealed connectors.
[3]Applicator for use in AMP-O-LECTRIC Machine **Part No. 354500-1**.
[4]Applicator for use in Stripper/Crimper Machine **Part No. 854040-3**.
[5]PRO-CRIMPER II Hand Tool for field installations and maintenance work.
Notes: 1. Contact AMP for applicators to be used in AMPOMATOR machines.
2. Extraction Tool **Part No. 305183.**

Type VI Contacts

Contact Size—16
Pin Diameter—.062 [1.57]
Test Current—13 amperes*


Pin


Socket

***Note:** Total current capacity of each contact in any given connector is dependent on the heat rise resulting from the combination of electrical loads of all contacts in the connector arrangement and the maximum ambient teperature in which the connector will be operating.

Type VI contacts are precision formed contacts designed for maximum economy. They feature the same insulation support as the Type III+ contacts, and also have the bell-mouth entry with the cantilever engagement spring built into the socket contact. Type VI contacts are exceedingly versatile, permitting the intermixing of two types of precision formed contacts (Type VI and III+) with only one set of tooling required.

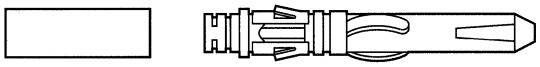
Wire Size Range[1] AWG	Wire Size Range[1] mm²	Ins. Dia. Range	Contact Material	Contact Finish	Strip Form Contact Part No. Pin	Strip Form Contact Part No. Socket	Loose Piece Contact Part No. Pin	Loose Piece Contact Part No. Socket	Tooling No. Strip Form Quick-Change Applicator	Tooling No. Loose Piece Hand Tool
18-16	0.8–1.4	**.080–.100** 2.03–2.54	Brass	Tin	66579-2	66580-2	66589-1	66590-1	466325-5[2]	58495-1[4]
				Sel. Gold/Nickel	66579-4	66580-4	66589-2	66590-2	466906-1[3]	90067-5
18-14	0.8–2	**.080–.135** 2.03–3.43	Brass	Tin	66577-2	66578-2	66587-1	66588-1	—	90310-1
				Sel. Gold/Nickel	66577-4	66578-4	66587-2	66588-2		

[1]Wire strip length—.156 [3.96] for all wire sizes.
[2]Applicator for use in AMP-O-LECTRIC Machine **Part No. 354500-1.**
[3]Applicator for use in Stripper/Crimper Machine **Part No. 854040-3.**
[4]PRO-CRIMPER II Hand Tool for field installations and maintenance work.
Notes: 1. Contact AMP for applicators to be used in AMPOMATOR machines.
2. Extraction Tool **Part No. 305183**.

SOURCE: Catalog 82057

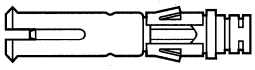
Specifications subject to change.
1-800-522-6752 Product Information Center/ AMP FAX Service
1-800-722-1111 Tooling/Technical Assistance Center

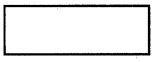
Multimate Contacts
(Continued)


Ferrule

Multimate Pin

Subminiature COAXICON Contacts


Socket


Ferrule

Finish:

Center Contacts, Outer Shells—.000030 [0.00076] gold over .000050 [0.00127] nickel

Ferrules—Tin plated

The AMP subminiature COAXICON contact is a crimp, snap-in contact, designed for high-density and multiple circuit connector applications. A single crimp terminates inner conductor, braid and cable support. Its design includes complete contact assembly with built-in retention spring and separate ferrule.

Cable Size			Loose Piece Contact No.		Ferrule No.	Hand Tool No.	Die Insert Nos. for Hand Tool 69710-1 or Pneumatic Tool 69365-3[1]
RG or AWG		mm²	Pin	Socket			
RG-178, 196		—	226537-2	51565-2	1-332057-0	69656-2	69690-2
RG-196 Double Braid		—	226537-2	51565-2	225088-1	69656-9	—
RG-174, 188, 316		—	226537-1	51565-1	1-332056-0	69656	69690
RG-174 Double Braid		—	226537-1	51565-1	225088-3	69656-7	—
RG-179, 187		—	226537-1	51565-1	1-332056-0	69656-1	69690-1
RG-187 Double Braid		—	226537-1	51565-1	225088-1	69656-8	—
RG-161		—	226537-1	51565-1	1-332056-0	69656-5	—
26 AWG	Twisted Pair Solid or Stranded (7 str.) .0063 [0.16] Dia.	0.12–0.15	226537-3	51565-3	1-332057-0	69656	69690
28 AWG	Twisted Pair Solid	0.08–0.09	226537-3	51565-3	1-332057-0	69656	69690
28 AWG	Twisted Pair Stranded (7 str.) .005 [0.13] Dia.	0.08–0.09	226537-3	51565-3	1-332057-0	69656-1 or 69656-2	69690-1 or 69690-2
30 AWG	Twisted Pair Solid	0.05	226537-3	51565-3	1-332057-0	69656-2	69690-2

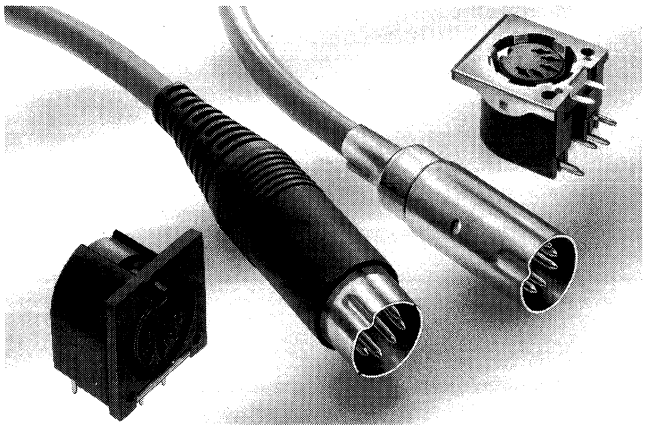
[1]Includes bench mount and foot control.
Note: Extraction Tool **Part No. 305183.**

Shielded Circular DIN Connectors

Product Facts

- Plugs feature crimp, snap-in contacts
- Plugs designed for ease of post molding
- Pre-molded cord guard
- Contacts tin plated
- Ferrule crimped onto the shield for reliable termination

- Meets or exceeds DIN specification 41524 for 3 and 5 position plugs, and DIN 45322 for 6 position plug
- Recognized under the Component Program of Underwriters Laboratories Inc., File No. E28476
- Certified by Canadian Standards Association, File No. LR 7189



Circular DIN Receptacles

No. of Positions	Part Numbers					
	Standard	Standard Shielded	Standard with 4 Mounting Holes	Shielded with 2 Mounting Holes	Shielded with 4 Mounting Holes	Shielded with Grounding Fingers
4	211508-1	212043-1	—	212032-1	—	—
5	211450-1	212044-1	212476-1	520842-1	520904-1	750477-1
6	211509-1	212045-1	786290-1	—	—	786676-1
7	211510-1	212046-1	786165-1	520843-1	—	—
8	211511-1	212047-1	—	212034-1	—	787013-1

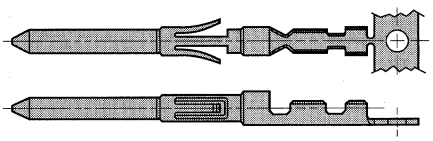
Notes: 1. For applications requiring a 3-position connector, use a 5-position connector (contact positions 4 and 5 not used).
2. For receptacles with alternate mating face layouts or pc board hole patterns, consult AMP.

Circular DIN Plug Kit

No. of Positions	Part Numbers					
	.150-.200 [3.81-5.08] Cable Diameter Range		.200-.250 [5.08-6.35] Cable Diameter Range		.250-.300 [6.35-7.62] Cable Diameter Range	
	Shield/ Housing	Ferrule	Shield/ Housing	Ferrule	Shield/ Housing	Ferrule
4	212437-2	212435-7	212437-2	212435-8	212437-2	212435-9
5	212437-3	212435-7	212437-3	212435-8	212437-3	212435-9
6	212437-4	212435-7	212437-4	212435-8	212437-4	212435-9
7	212437-5	212435-7	212437-5	212435-8	212437-5	212435-9
8	212437-6	212435-7	212437-6	212435-8	212437-6	212435-9

Notes: 1. A complete assembly requires shield/housing, ferrule and contacts.
2. For applications requiring a 3-position connector, use a 5-position connector (contact positions 4 and 5 not used).
3. Order Cord Guards separately: **Part No. 212800-1** for Cable Diameter .150-.250 [3.81-6.35]; **Part No. 212800-3** for Cable Diameter .250-.300 [6.35-7.62].

Pin Contacts



Wire Size Range	Contact Style	Part Numbers				
		Contact Plating		Tooling		
		Tin	Silver	Applicator No. for AMP-O-LECTRIC Machine No. 354500-1	Applicator No. for AMP-O-MATIC Stripper-Crimper Machine No. 854040-3	Hand Tool
28-22 AWG [0.08-0.4 mm²]	Strip	66728-2	66728-3	466644-4	466966-1	—
	Loose Form	66728-5	—	—	—	90407-1
24-20 AWG [0.2-0.6 mm²]	Strip	66735-2	66735-6	—	466970-1	—
	Loose Form	66735-4	—	—	—	90413-1

Ferrule Clinching Dies

For Hand Tool
Part No. 69710-1

Cable Dia. Range	Die Set Part No.	Cable Dia. Range	Die Set Part No.
.150-.175 3.81-4.45	58215-1	**.225-.250** 5.72-6.35	58215-4
.175-.200 4.45-5.08	58215-2	**.250-.275** 6.35-6.99	58215-5
.200-.225 5.08-5.72	58215-3	**.275-.300** 6.99-7.62	58215-6

Contact Extraction Tool

Part No. 91144-1

Contact Insertion Tool

Part No. 91002-1

SOURCE: Catalog 82103

Specifications subject to change.

1-800-522-6752
Product Information Center/ AMP FAX Service

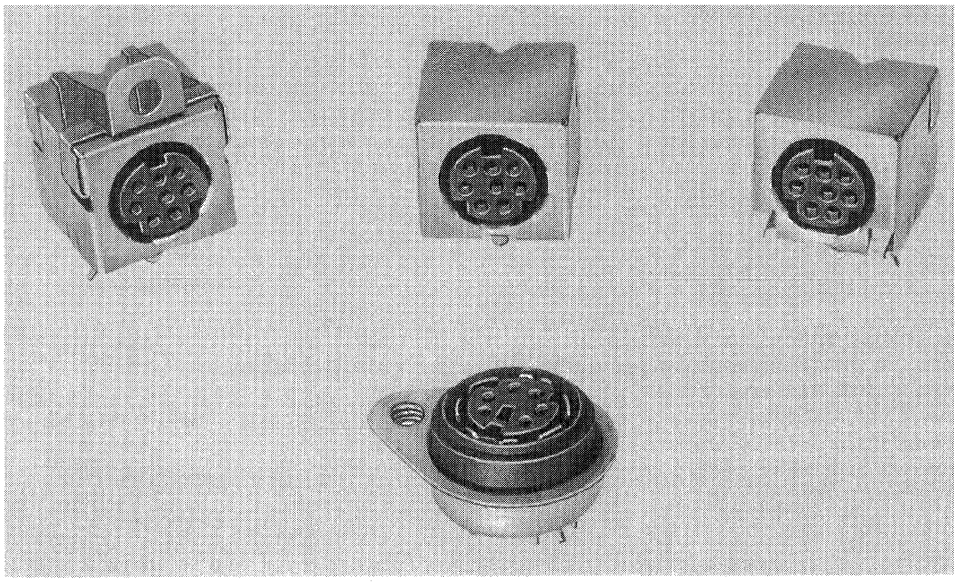
1-800-722-1111
Tooling/Technical Assistance Center

Shielded Miniature Circular DIN Connectors

Product Facts

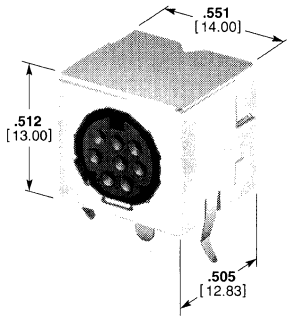
- Compact size, same envelope dimension for all sizes—3 through 8
- Right-angle and vertical receptacles incorporate one-piece shield for excellent shielding effectiveness
- Polarized and keyed to prevent mismating
- Housings made of 94V-0 rated thermoplastic, SMT compatible
- Right-angle receptacles compatible with robotic pick-and-place assembly
- Receptacles with fully formed socket contacts with proven retention system
- Receptacles accept plug connectors with or without latches
- Recognized under the Component Program of Underwriters Laboratories Inc., File No. E28476
- Certified by Canadian Standards Association, File No. LR 7189
- Produced under a Quality Management System certified to ISO 9001

A copy of the certificate is available upon request.

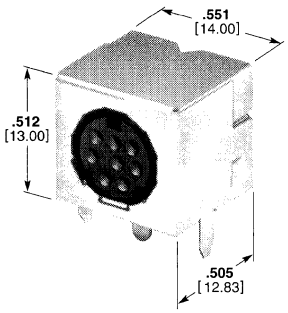


SOURCE: Catalog 82212

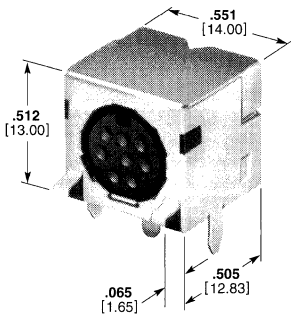
Receptacles, Through-Hole Right-Angle Board-Mount



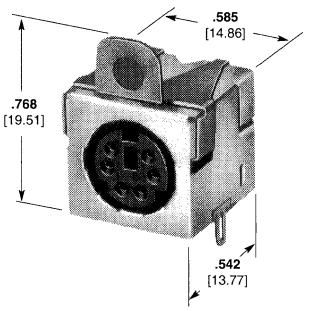
With Hold-Down



Without Hold-Down



Without Hold-Down
With Front Panel Grounding
Finger Option (See Note 2)



With Hold-Down
With Grounding Clip*

No. of Positions	Contact Finish	Part Numbers			
		With Hold-Down	Without Hold-Down	With Front Panel Grounding Fingers	With Hold-Down With Grounding Clip
3	Gold Flash	—	749283-1	—	—
	Gold	—	749280-1	750068-1	—
4	Gold Flash	749230-1	749263-1	—	—
	Gold	749181-1	749264-1	750069-1	—
5	Gold Flash	—	749278-1	—	—
	Gold	749274-1	749275-1	750070-1	—
6	Gold Flash	749231-1	749265-1	—	—
	Gold	749180-1	749266-1	750071-1	750725-1
7	Gold Flash	—	749273-1	—	—
	Gold	—	749270-1	750072-1	—
8	Gold Flash	749232-1	749268-1	—	—
	Gold	749179-1	749267-1	750073-1	—

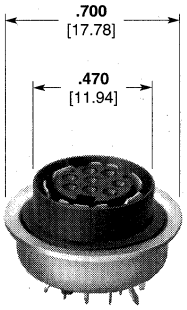
*Optional threaded grounding clips are available; contact AMP.
Notes: 1. Recommended pc board thickness is .062 [1.57].
2. This connector ensures grounding to the front panel when the gap between the pc board edge and the panel is no greater than .060 [1.52].

SOURCE: Catalog 82212

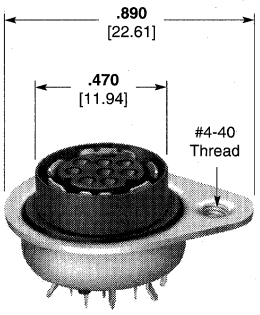
Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

Receptacles, Through-Hole
(Continued)

Vertical Mount



Shielded



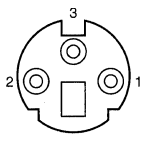
Shielded With Front Panel Screw-Down

Duplex Plating Code—
B—.000030 [0.00076] Gold
C—.000015 [0.00038] Gold

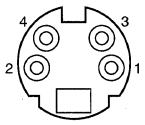
No. of Positions	Duplex Plating Code	Part Numbers	
		Shielded	Shielded With Front Panel Screw-Down
3	C	—	750313-1
	B	750311-2	750313-2
4	C	750317-1	750319-1
	B	750317-2	750319-2
5	C	—	750325-1
	B	750323-2	750325-2
6	C	—	750131-1
	B	750329-2	750131-2
7	C	—	750132-1
	B	—	750132-2
8	C	750338-1	750340-1
	B	—	750340-2

Note: Recommended pc board thickness is .062 [1.57]

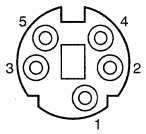
PCB Receptacles Mating Faces, Right-Angle and Vertical



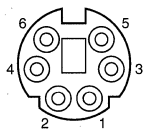
3-Position



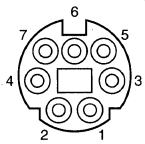
4-Position



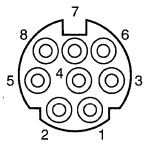
5-Position



6-Position



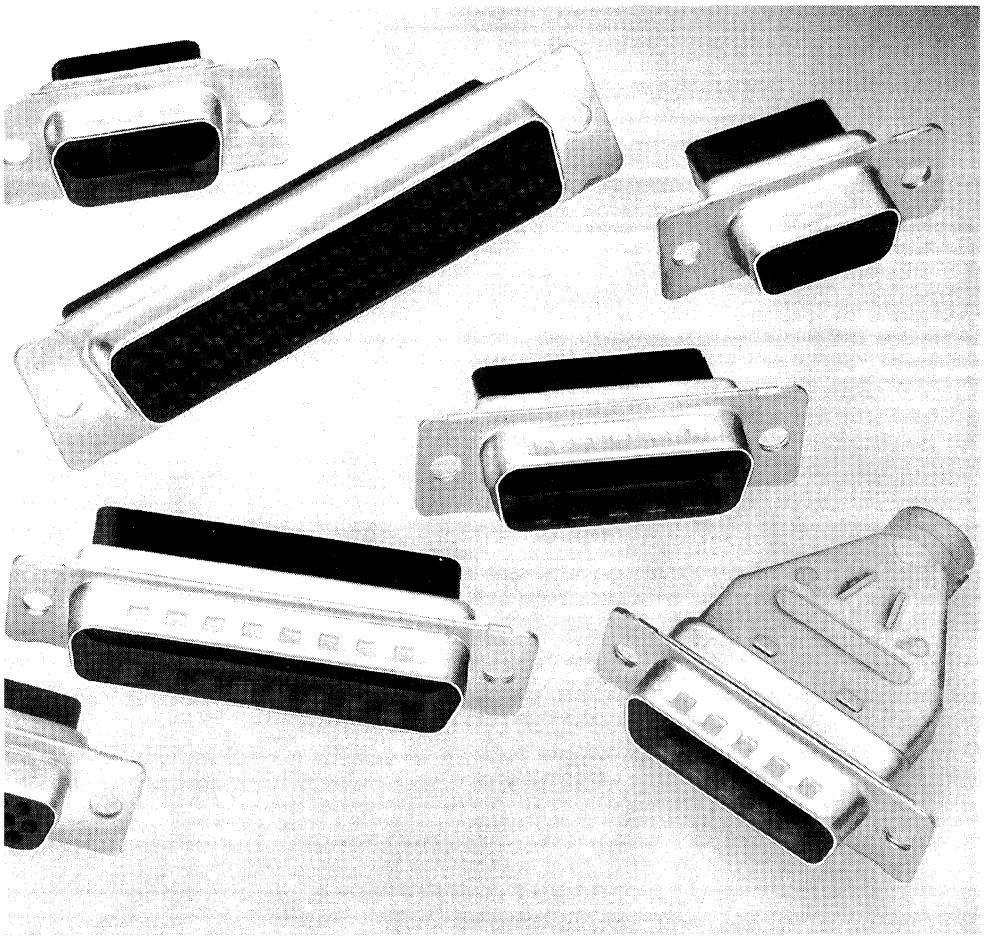
7-Position



8-Position

Subminiature D Connectors (AMPLIMITE)

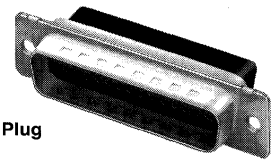
HDP-22 Crimp Snap-In Contact Connectors



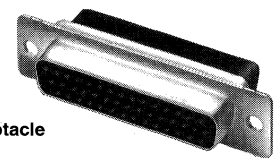
Product Facts

- Approximately 65% higher density than HD-20 connectors
- Lower cost, commercial version of the military approved Series 90 family
- Available with shielding overmold hardware and shielding enclosure kits
- Capable of using numerous standard HD-20 cable clamps and mating hardware
- Low cost, high performance, precision-formed crimp contacts
- Intermateable with any size 22 Subminiature D connector dimensionally complying with MIL-C-24308
- Recognized under the Component Program of Underwriters Laboratories Inc., File No. E28476
- Listed under Underwriters Laboratories Inc., Standard 1863, Communication Circuit Accessories, File No. E81956
- Certified by Canadian Standards Association, File No. LR 7189

Plugs and Receptacles



Plug



Receptacle

Mates with—HD-22 Front Metal-Shell Posted Connectors, page 2303.

Note: 44 Pos. Housing Dim. (Typ.)—2.088 [53.84] L x .432 [10.97] W x .494 [12.55] H

Shell Size	No. of Contact Positions	Part Numbers			
		With Grounding Indents		With Clinch Nuts	
		Plug	Receptacle	Plug	Receptacle
1	15	748364-1	748565-1	—	748696-1
2	26	748365-1	748566-1	749717-1	786583-1
3	44	748366-1	748567-1	—	—
4	62	748367-1	748568-1	—	750108-1
5	78	748368-1	748569-1	—	—

Note: Plugs accept size 22 DF pin contacts and receptacles accept size 22 DF socket contacts.

SOURCE: Catalog 82068

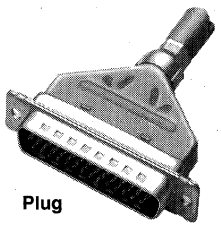
Specifications subject to change.

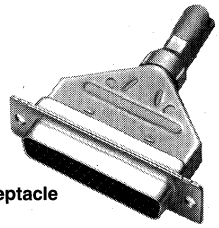
1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

HDP-22 Crimp Snap-In Contact Connectors
(Continued)

Basic Shielding Hardware Kits


Plug

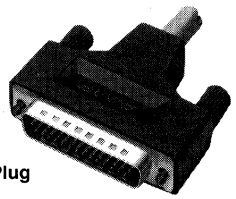

Receptacle

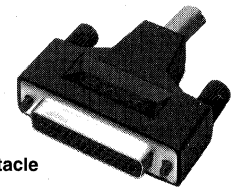
Mates with—HDP-22 Crimp Snap-In Contact Connectors, page 2271; and HD-22 Front Metal-Shell Posted Connectors, page 2303.

Shell Size	No. of Contact Positions	Kit Numbers		
		Plug	Receptacle	Receptacle with Clinch Nut
1	15	748468-1	748634-1	—
2	26	748469-1	748635-1	—
3	44	748470-1	748636-1	—
4	62	748471-1	748637-1	750727-1
5	78	748472-1	748638-1	—

Notes: 1. Kit contains connector, inner shield, outer shield. Contacts and ferrules must be ordered separately.
2. Plugs accept size 22 DF pin contacts and receptacles accept size 22 DF socket contacts.
3. Components of the kits are shipped unassembled and bulk-packaged in quantities of 100 pieces.

Shielding Hardware Enclosure Kits


Plug


Receptacle

Mates with—HDP-22 Crimp Snap-In Contact Connectors, page 2271.

Shell Size	No. of Contact Positions	Kit Numbers		Shielding Enclosure Expansion Tool	
		Plug	Receptacle	Cable O.D (Max.)	Part No.
1	15	748473-1	748639-1	**.355** 9.02	58241-1
2	26	748474-1	748640-1		
3	44	748475-1	748641-1	**.455** 11.56	58241-1
4	62	748476-1	748642-1	**.562** 14.28	58241-2
5	78	748477-1	748643-1		

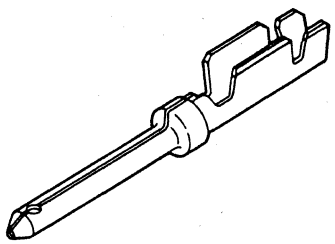
Notes: 1. Kit contains connector, inner shield, outer shield, enclosure and two jackscrews. Contacts and ferrules must be purchased separately.
2. Plugs accept size 22 DF pin contacts and receptacles accept size 22 DF socket contacts.
3. Components of the kits are shipped unassembled and bulk-packaged in quantities of 100 pieces.

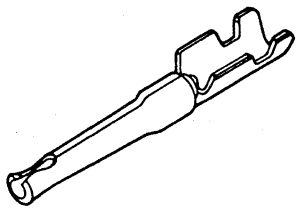
Precision Formed Crimp Snap-In Contacts, Size 22 DF

Contact Finish:

A—Duplex plated .000030 [0.00076] gold on mating end, tin-lead on crimp barrel, with entire contact nickel underplated

B—Duplex plated gold flash on mating end, tin-lead on crimp barrel, entire contact nickel underplated


Pin


Socket

Wire Size AWG mm²	Insulation Diameter Max.	Contact Finish (Plating Code)	Contact Part Numbers				Hand Tools for Loose Form Contacts	
			Pin		Socket			
			Strip Form	Loose Form	Strip Form	Loose Form	PRO-CRIMPER II Hand Tool	CERTI-CRIMP Hand Tool
28-22 0.4-0.08	**.040** 1.02	A	748333-2	748333-4	748610-2	748610-4	90900-1	90430-1
		B	748333-5	748333-7	748610-5	748610-7		

Notes: 1. Strip form contacts shipped 20,000 pieces/reel.
2. Loose form contacts shipped in unit quantities of 1,000 pieces.
3. Insertion/Extraction Tool **Part No. 91285-1**. This tool contains interchangeable tips to Insert/Extract Size 22, 28-22 AWG [0.08-0.4 mm²] Crimp Contacts, Size 20, 28-20 AWG [0.08-0.4 mm²] Crimp Contacts, Size 20, Posted Contacts.

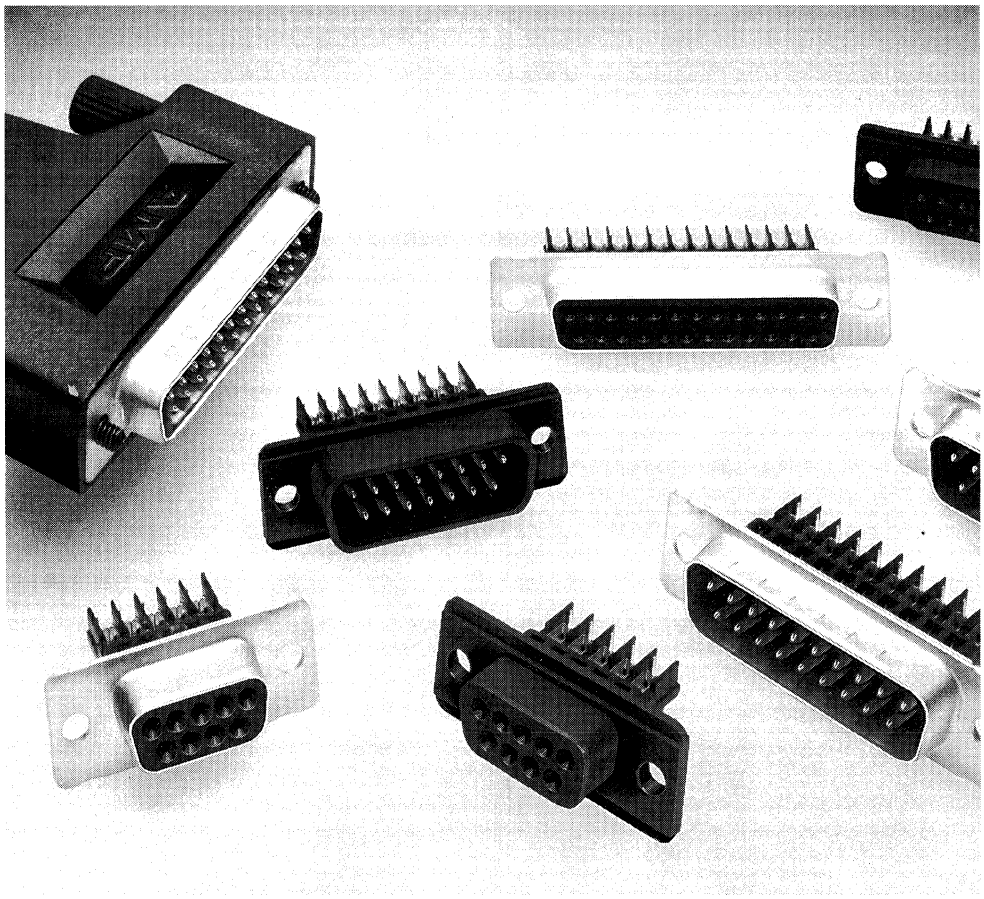
SOURCE: Catalog 82068

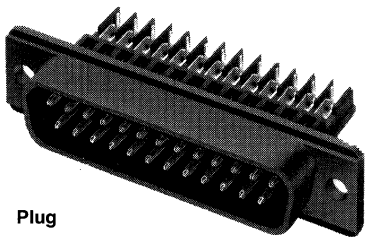
Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

HDE-20 IDC Connectors for Discrete Wire and Jacketed Cable

Product Facts

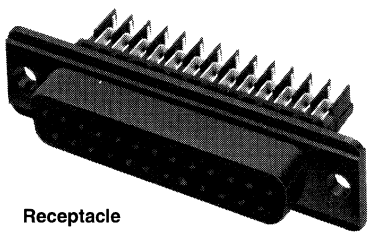
- Insulation displacement contacts preloaded in housings
- No wire stripping
- Post plated contacts with no bare edges
- Duplex plated contacts—gold on mating end and tin on crimp end
- Patented contact ensures reliable termination of a wide range of wire sizes and insulation diameters
- Removable contacts for replacement and repair
- Selective loading of contacts available
- Crimp snap-in contacts available for making jumpers between circuits
- Recognized under the Component Program of Underwriters Laboratories Inc., File No. E28476
- Listed under Underwriters Laboratories Inc., Standard 1863, Communication Circuit Accessories, File No. E81956
- Certified by Canadian Standards Association, File No. LR 7189





Plug

Note: 25 Pos. Housing Dim. (Typ.) — 2.090 [53.09] L x .604 [15.34] W x .494 [12.55] H



Receptacle

Note: 25 Pos. Housing Dim. (Typ.) — 2.090 [53.09] L x .567 [14.40] W x .494 [12.55] H

HDE-20 All-Plastic IDC Connectors

Mates with—HD-20 All-Plastic Right-Angle Posted Connectors, pages 2309-2311; and HDF-20 Low-Profile All-Plastic Connectors.

Shell Size	No. of Contact Positions	Contact Finish (Plating Code)	Connector Part Numbers: Contact Identification No. 1 for 30-26 AWG [0.05-0.15 mm²] Wire		Contact Identification No. 2 for 26-22 AWG [0.15-0.4 mm²] Wire		Contact Identification No. 3 for 22-20 AWG [0.4-0.6 mm²] Wire	
			Plug	Receptacle	Plug	Receptacle	Plug	Receptacle
1	9	A	745203-1	745201-1	745203-2	745201-2	745203-3	745201-3
		B	745203-4	745201-4	745203-5	745201-5	745203-6	745201-6
2	15	A	745207-1	745205-1	745207-2	745205-2	745207-3	745205-3
		B	745207-4	—	745207-5	745205-5	745207-6	745205-6
3	25	A	745211-1	745209-1	745211-2	745209-2	745211-3	745209-3
		B	745211-4	745209-4	745211-5	745209-5	745211-6	745209-6
4	37	A	745215-1	745213-1	745215-2	745213-2	745215-3	745213-3
		B	—	—	745215-5	745213-5	745215-6	745213-6

Notes: 1. All connectors are preloaded with insulation displacement crimp contacts. Pins in plug connectors and sockets in receptacle connectors. Contacts accept a max. wire insulation thickness of .015 [0.38] and a max. wire insulation dia. of .060 [1.52].
2. HDE connectors are designed for terminating solid or stranded (7-strand max.) wire.
3. Individual conductor strands should be larger than .005 inch [0.127] diameter.
4. Extraction Tool **Part No. 91232-1** is used to remove pin or socket contacts.
5. For terminating more than one wire, or a drain wire, use crimp contacts on page 2275.

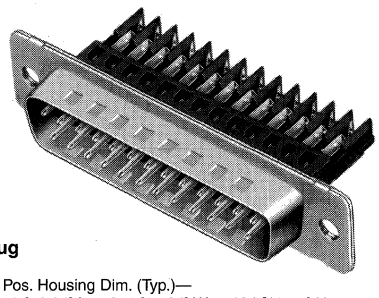
Contact Finish—Duplex plated:
A—.000030 [0.00076] gold on mating end, tin-lead on termination end, with entire contact nickel underplated
B—Gold flash on mating end, tin-lead on termination end, with entire contact nickel underplated

SOURCE: Catalog 82068

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

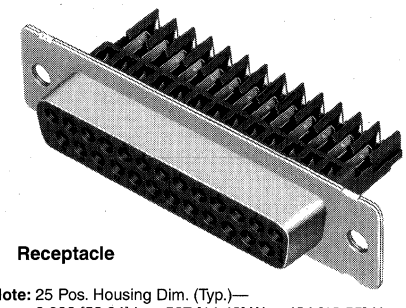
HDE-20 IDC Connectors for Discrete Wire and Jacketed Cable
(Continued)

HDE-20 Metal-Shell IDC Connectors



Plug

Note: 25 Pos. Housing Dim. (Typ.)—
2.088 [53.04] L x .604 [15.34] W x .494 [12.55] H



Receptacle

Note: 25 Pos. Housing Dim. (Typ.)—
2.088 [53.04] L x .567 [14.40] W x .494 [12.55] H

Mates with—HDE-20 Shielding Hardware Kits, page 2275, HDF-20 Low-Profile Metal-Shell Connectors, page 5019; HDP-20 Crimp Snap-In Contact Connectors, pages 2277-2279; and HD-20 Front Metal-Shell Connectors, pages 2306-2308; HD-20 Right-Angle Metal-Shell Connectors, page 2313; HD-20 Front Metal-Shell Stacked Connectors, pages 2315-2319; HD-20 Front Metal-Shell Surface Mount Connectors, pages 2331 and 2332.

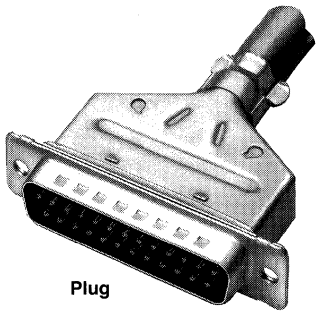
Shell Size	No. of Contact Positions	Contact Finish (Plating Code)	Connector Part Numbers: Contact Identification No. 1 for 30-26 AWG [0.05-0.15 mm²] Wire		Contact Identification No. 2 for 26-22 AWG [0.15-0.4 mm²] Wire		Contact Identification No. 3 for 22-20 AWG [0.4-0.6 mm²] Wire	
			Plug	Receptacle	Plug	Receptacle	Plug	Receptacle
1	9	A	745492-1	745491-1	745492-2	745491-2	745492-3	745491-3
		B	745492-4	745491-4	745492-5	745491-5	745492-6	745491-6
2	15	A	745494-1	745493-1	745494-2	745493-2	745494-3	745493-3
		B	745494-4	745493-4	745494-5	745493-5	745494-6	745493-6
3*	25	A	745496-1	745495-1	745496-2	745495-2	745496-3	745495-3
		B	745496-4	745495-4	745496-5	745495-5	745496-6	745495-6
4	37	A	745498-1	745497-1	745498-2	745497-2	745498-3	745497-3
		B	745498-4	745497-4	745498-5	745497-5	745498-6	745497-6

*RS-232, size 3 connector, for 26-22 [0.15-0.4 mm²] AWG wire select loaded circuits 1-8,15,17, 20 and 22, Plug **Part No. 747740-1**, Receptacle **Part No. 747741-1**, gold flash contacts, and Plug **Part No. 747740-2,** Receptacle **Part No. 747741-2** .000030 [0.00076] gold contacts.

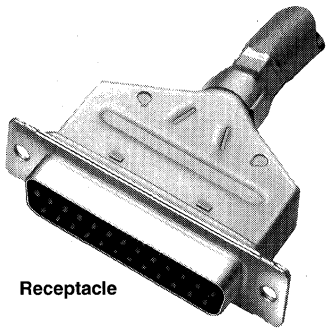
Notes: 1. All connectors are preloaded with insulation displacement crimp contacts. Pins in plug connectors and sockets in receptacle connectors. Contacts accept a max. wire insulation thickness of .015 [0.38] and a max. wire insulation dia. of .060 [1.52].
2. HDE connectors are designed for terminating solid or stranded (7-strand max.) wire.
3. Individual conductor strands should be larger than .005 inch [0.127] diameter.
4. Extraction Tool **Part No. 91232-1** is used to remove pin or socket contacts.
5. For terminating more than one wire, or a drain wire, use crimp contacts on page 2275.

Contact Finish—Duplex plated:
A—.000030 [0.00076] gold on mating end, tin-lead on termination end, with entire contact nickel underplated
B—Gold flash on mating end, tin-lead on termination end, with entire contact nickel underplated

HDE-20 Basic Shielding Hardware Kits



Plug



Receptacle

Mates with—HDE-20 Metal-Shell Connectors, page 2274; HDF-20 Low-Profile Metal-Shell Connectors, page 5019; HDP-20 Crimp Snap-In Contact Connectors, pages 2277-2279; HD-20 Full and Front Metal-Shell Connectors, pages 2306-2308, page 2313, pages 2315-2319 and pages 2331 and 2332.

Shell Size	No. of Contact Positions	Contact Finish (Plating Code)	Connector Part Numbers: Contact Identification No. 1 for 30-26 AWG [0.05-0.15 mm²] Wire		Contact Identification No. 2 for 26-22 AWG [0.15-0.4 mm²] Wire		Contact Identification No. 3 for 22-20 AWG [0.4-0.6 mm²] Wire	
			Plug	Receptacle	Plug	Receptacle	Plug	Receptacle
1	9	A	747515-1	747516-1	747515-2	747516-2	747515-3	747516-3
		B	747515-4	747516-4	747515-5	747516-5	747515-6	747516-6
2	15	A	747531-1	747532-1	747531-2	747532-2	747531-3	747532-3
		B	747531-4	747532-4	747531-5	747532-5	747531-6	747532-6
3	25	A	747547-1	747548-1	747547-2	747548-2	747547-3	747548-3
		B	747547-4	747548-4	747547-5	747548-5	747547-6	747548-6
4	37	A	747563-1	747564-1	747563-2	747564-2	747563-3	747564-3
		B	747563-4	747564-4	747563-5	747564-5	747563-6	747564-6

Note: 1. Components of the kits are shipped unassembled and bulk-packaged in quantities of 100 pieces.
2. Kit contains connector, inner shield, outer shield. Ferrules must be purchased separately.

Contact Finish—Duplex plated:
A—.000030 [0.00076] gold on mating end, tin-lead on termination end, with entire contact nickel underplated
B—Gold flash on mating end, tin-lead on termination end, with entire contact nickel underplated

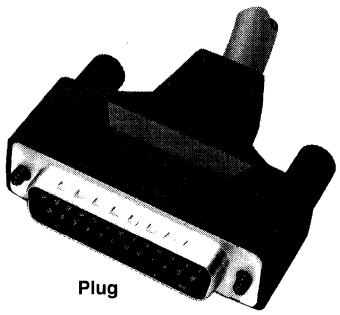
SOURCE: Catalog 82068

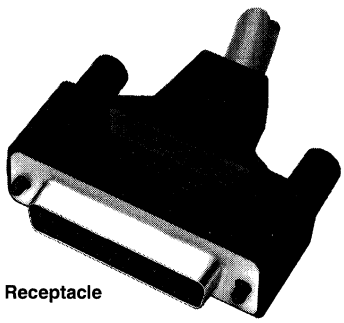
Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

HDE-20 IDC Connectors for Discrete Wire and Jacketed Cable
(Continued)

HDE-20 Shielding Hardware Enclosure Kits

Mates with—HDE-20 Metal-Shell Connectors, pages 2274; HDF-20 Low-Profile Metal-Shell Connectors, page 5019; HDP-20 Crimp Snap-In Contact Connectors, pages 2277-2279; HD-20 Full and Front Metal-Shell Connectors, pages 2306-2308, page 2313, pages 2315-2319 and page 2331 and 2332.


Plug


Receptacle

Shell Size	No. of Contact Positions	Contact Finish (Plating Code)	Kit Part Numbers: Contact Identification No. 1 for 30-26 AWG [0.05-0.15 mm²] Wire Plug	Kit Part Numbers: Contact Identification No. 1 for 30-26 AWG [0.05-0.15 mm²] Wire Receptacle	Kit Part Numbers: Contact Identification No. 2 for 26-22 AWG [0.15-0.4 mm²] Wire Plug	Kit Part Numbers: Contact Identification No. 2 for 26-22 AWG [0.15-0.4 mm²] Wire Receptacle	Kit Part Numbers: Contact Identification No. 3 for 22-20 AWG [0.4-0.6 mm²] Wire Plug	Kit Part Numbers: Contact Identification No. 3 for 22-20 AWG [0.4-0.6 mm²] Wire Receptacle	Shielding Enclosure Expansion Tool: Cable O.D (max.)	Shielding Enclosure Expansion Tool: Part No.
1	9	A	747944-1	747943-1	747944-2	747943-2	747944-3	747943-3	.355 9.02	58241-4
		B	747944-4	747943-4	747944-5	747943-5	747944-6	747943-6		
2	15	A	747946-1	747945-1	747946-2	747945-2	747946-3	747945-3		
		B	747946-4	747945-4	747946-5	747945-5	747946-6	747945-6		
3	25	A	747948-1	747947-1	747948-2	747947-2	747948-3	747947-3	.455 11.56	58241-1
		B	747948-4	747947-4	747948-5	747947-5	747948-6	747947-6		
4	37	A	747950-1	747949-1	747950-2	747949-2	747950-3	747949-3	.562 14.27	58241-2
		B	747950-4	747949-4	747950-5	747949-5	747950-6	747949-6		

Contact Finish—Duplex plated:
A—.000030 [0.00076] gold on mating end, tin-lead on termination end, with entire contact nickel underplated
B—Gold flash on mating end, tin-lead on termination end, with entire contact nickel underplated

Note: Kit contains connector, inner shield, outer shield, enclosure and two jackscrews. Ferrules must be purchased separately.

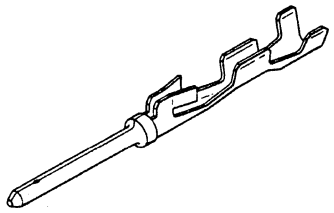
HDE-20 Contacts, Precision Formed

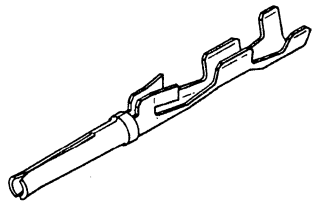
Interchangeable Contacts, Crimp Snap-In

Contact Finish

A—Duplex plated .000030 [0.00076] gold on mating end, tin-lead on termination end, with entire contact nickel underplated

B—Gold flash on mating end, tin-lead on termination end, with entire contact nickel underplated


Pin


Socket

Wire Size Range AWG / mm²	Code*	Insulation Diameter: Single Wire	Insulation Diameter: Two Wire	Contact Finish (Plating Code)	Contact Part Numbers: Pin: Strip Form	Contact Part Numbers: Pin: Loose Form	Contact Part Numbers: Socket: Strip Form	Contact Part Numbers: Socket: Loose Form	Hand Tool Number
26-22	4	.054	.039	A	745266-2	745266-3	745269-2	745269-3	90398-1
0.15-0.4		1.37	0.99	B	745266-6	745266-7	745269-6	745269-7	
22-18	3	.075	.054	A	745267-2	745267-3	745270-2	745270-3	90399-1
0.4-0.8		1.91	1.37	B	745267-6	745267-7	745270-6	745270-7	

*A Code indicating accepted wire size range is stamped inside insulation crimp barrel of each contact.
Notes: 1. Extraction Tool **Part No. 91232-1** is used to remove pin and socket contacts.
2. Strip form contacts shipped 10,000 pieces/reel.
3. Loose form contacts shipped in unit quantities of 1,000 pieces.

SOURCE: Catalog 82068

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

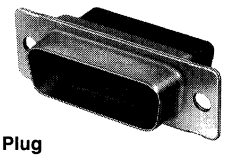
HDP-20 Crimp Snap-In Contact Connectors

Product Facts

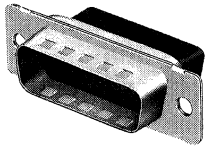
- Shell sizes offer wide choice of contact positions—9, 15, 25, 37 and 50
- Lower cost, commercial version of the military approved series
- Tin or zinc plated shells, with or without grounding indents
- Crimp snap-in contacts allows loading of only the number of contacts being used
- Available with shielding hardware and shielding enclosure kits
- Numerous cable clamps and mating hardware options
- Low cost, high performance, precision-formed crimp contacts
- Machine applied terminations assure highest production rates at lowest applied cost
- Intermateable with any size 20 Subminiature D connector dimensionally complying with MIL-C-24308
- Recognized under the Component Program of Underwriters Laboratories Inc., File No. E28476
- Listed under Underwriters Laboratories Inc., Standard 1863, Communication Circuit Accessories, File No. E81956
- Certified by Canadian Standards Association, File No. LR 7189

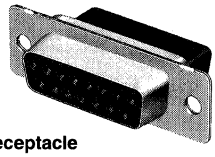
SOURCE: Catalog 82068

HDP-20
Crimp Snap-In
Contact Connectors
Plugs and Receptacles



Plug





Receptacle

Without Grounding Indents

With Grounding Indents

Mates with—HDE-20 Metal-Shell Connectors, page 2274; HDF-20 Low-Profile Metal-Shell Connectors, page 5019; HDP-20 Shielding Hardware Kits, pages 2277-2279; and HD-20 Full and Front Metal-Shell Connectors, pages 2306-2308, 2313, 2315-2319 and page 2331 and 2332.

Note: 25 Pos. Housing Dim. (Typ.)—2.088 [53.04] L x .432 [10.97] W x .494 [12.55] H

Shell Size	No. of Contact Positions	Mounting Method	Plug Part Numbers			Receptacle Part Numbers	
				Tin Plated Shell			
			Zinc Plated Shell	Without Grounding Indents	With Grounding Indents	Zinc Plated Shell	Tin Plated Shell
1	9	Standard	205204-1	205204-3	205204-4	205203-1	205203-3
		Clinch Nut	—	745906-1	745906-2	—	745907-1
							745907-2*
		Floating Bushing	205434-1	—	750451-1	205439-1	—
2	15	Standard	205206-1	205206-2	205206-3	205205-1	205205-2
		Clinch Nut	—	745908-1	745908-2	—	745909-1
							745909-2*
		Floating Bushing	205435-1	—	748509-1	205440-1	—
3	25	Standard	205208-1	207464-1	207464-2	205207-1	207463-1
		Clinch Nut	745036-1	745036-3	745036-2	207516-1	207516-3
							207516-4*
		Floating Bushing	205436-1	—	—	205441-1	—
4	37	Standard	205210-1	205210-2	205210-3	205209-1	205209-2
		Clinch Nut	—	—	745135-2	—	207661-3
							207661-4*
		Floating Bushing	205437-1	—	—	205442-1	—
5	50	Standard	205212-1	205212-2	205212-3	205211-1	205211-2
		Clinch Nut	—	—	—	—	745884-1
		Floating Bushing	205438-1	—	—	205443-1	—

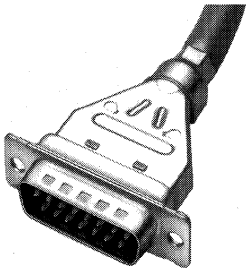
*Clinch nut mounting with M3 threads.
Note: Plugs accept size 20 DF pin contacts and receptacles accept size 20 DF socket contacts.

SOURCE: Catalog 82068

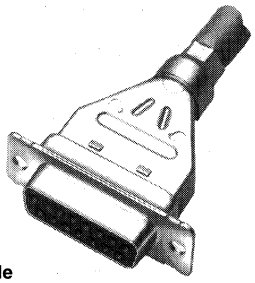
Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

HDP-20
Basic Shielding Hardware Kits
Plugs and Receptacles

Mates with—HDE-20 Metal-Shell Connectors, page 2274; HDF-20 Low-Profile Metal-Shell Connectors, page 5019; HDP-20 Crimp Snap-In Contact Connectors page 2277; and HD-20 Full and Front Metal-Shell Connectors, pages 2306-2308, 2313, 2315-2319 and page 2331 and 2332.



Plug



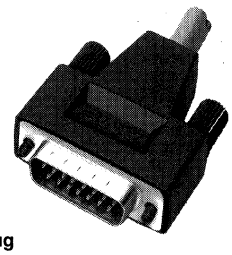
Receptacle

Shell Size	No. of Contact Positions	Mounting Method	Kit Numbers	
			Plug	Receptacle
1	9	Standard	747522-1	747523-1
		Clinch nut	748526-1	—
2	15	Standard	747538-1	747539-1
		Clinch nut	750636-1	—
3	25	Standard	747554-1	747555-1
		Clinch nut	—	749763-1
4	37	Standard	747570-1	747571-1
		Clinch nut	750763-1*	—
			786929-1	—

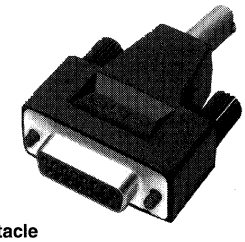
*Clinch nut mounting with M3 thread.

Notes: 1. Kit contains connector, inner shield, outer shield, enclosure and two jackscrews. Contacts and ferrules must be purchased separately.
2. Plugs accept size 20 DF pin contacts and receptacles accept size 20 DF socket contacts.
3. Components of the kits are shipped unassembled and bulk-packaged in quantities of 100 pieces.

HDP-20
Shielding Hardware Enclosure Kits
Plugs and Receptacles



Plug



Receptacle

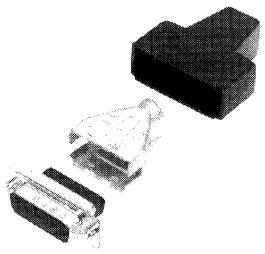
Shell Size	No. of Contact Positions	Kit Numbers		Shielding Enclosure Expansion Tool	
		Plug	Receptacle	Cable O.D. (Max.)	Part Number
1	9	747952-1	747951-1	**.355** 9.02	58241-4
2	15	747954-1	747953-1		
3	25	747956-1	747955-1	**.455** 11.56	58241-1
4	37	747958-1	747957-1	**.562** 14.28	58241-2
5	50	747960-1	747959-1		

Notes: 1. Kit contains connector, inner shield, outer shield, enclosure and two jackscrews. Contacts and ferrules must be purchased separately.
2. Plugs accept size 20 DF pin contacts and receptacles accept size 20 DF socket contacts.
3. Components of the kits are shipped unassembled and bulk-packaged in quantities of 100 pieces.

Specifications subject to change.
1-800-522-6752 Product Information Center/ AMP FAX Service
1-800-722-1111 Tooling/Technical Assistance Center

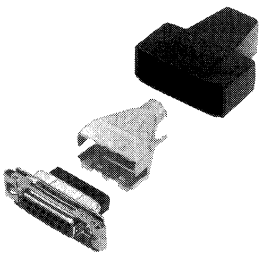
Shielded Connector, Preassembled Kits

Preassembled connector kits are available in 15-position configuration, shell size 2 and accept crimp, snap-in HD-20 contacts. Contacts are available separately and allow for selective positioning.



Plug
Part No. 749245-1: .190-.375 [4.83-9.53] Neck Expansion
Part No. 749245-2: .250-.425 [6.35-10.80] Neck Expansion

Mates with—HDE-20 Metal-Shell Connectors, page 2274; HDF-20 Low-Profile Metal-Shell Connectors, page 5019; HDP-20 Crimp Snap-In Contact Connectors, page 2277; and HD-20 Full and Front Metal-Shell Connectors, pages 2306-2308, 2313, 2315-2319 and page 2331 and 2332.



Receptacle
Part No. 749246-1

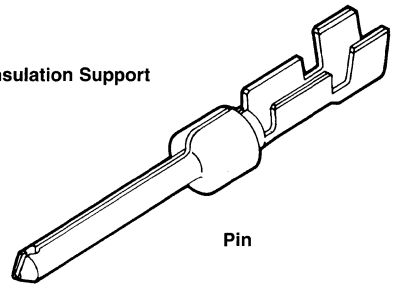
Notes: 1. Kit contains connector, shield, slide latch, locking post and enclosure. Ferrules must be purchased separately.
2. Other sizes and styles can be made available, consult AMP.

HDP-20 Connector Contacts, Precision Formed

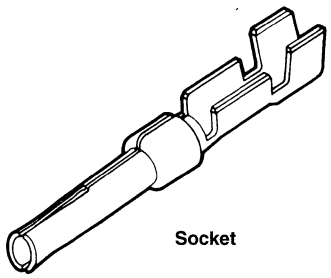
Crimp Snap-In Contacts

Contact Size 20 DF
Pin Diameter .040 [1.02]

With Insulation Support



Pin



Socket

Contact Plating

A—Select, gold flash over nickel on entire contact, with additional .000030 [0.00076] gold on mating end

B—Duplex, .000030 [0.00076] gold on mating end, tin-lead on termination end, with entire contact nickel underplated

C—Gold flash over nickel on entire contact

D—Duplex, gold flash on mating end, tin-lead on termination end, with entire contact nickel underplated

Wire Size Range AWG [mm²]	Ins. Dia. Max.	Contact Finish (Plating Code)	Contact Part Numbers				Hand Tools for Loose Form Contacts		
			Pin		Socket				
			Strip Form	Loose Form	Strip Form	Loose Form	PRO-CRIMPER II Hand Tool	CERTI-CRIMP Hand Tool	CERTI-CRIMP Hand Tool Color Code
28-24 0.08-0.2	**.040** 1.02	A	66507-3	66507-9	66505-3	66505-9	58448-2	90302-1	Blue Dot
		B	3-66507-0	5-66507-7	6-66505-0	6-66505-2			
		C	66507-4	1-66507-0	66505-4	1-66505-0			
		D	3-66507-1	5-66507-9	5-66505-7	5-66505-9			
	.060 1.52	A	66682-2	66682-4	66683-2	66683-4	—	90374-1	Black Dot
		B	66682-9	1-66682-1	1-66683-0	—			
		D	66682-6	—	66683-7	—			
26-22 0.15-0.4	**.050** 1.27	A	745254-2	745254-6	745253-2	745253-6	—	90406-1	Yellow Dot
		B	1-745254-4	1-745254-6	1-745253-4	1-745253-6			
		C	745254-3	745254-7	745253-3	745253-7			
		D	1-745254-1	1-745254-3	1-745253-1	1-745253-3			
24-20 0.2-0.6	**.060** 1.52	A	66506-3	66506-9	66504-3	66504-9	58448-2	90302-1	Red Dot
		B	2-66506-4	5-66506-7	5-66504-9	6-66504-0			
		C	66506-4	1-66506-0	66504-4	1-66504-0			
		D	2-66506-5	5-66506-9	5-66504-6	5-66504-7			

Note: Insertion/Extraction tool **Part No. 91285-1**. This tool includes interchangeable tips to insert/extract: Size 22, 28-22 AWG [0.4, 0.08-0.04 mm²] crimp contacts.

SOURCE: Catalog 82068

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

HDP-20 Connector Contacts, Precision Formed
(Continued)

Crimp Snap-In Contacts

Contact Size 20 DF
Pin Diameter .040 [1.02]

Contact Plating

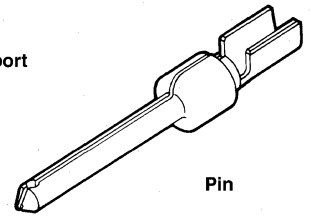
A—Select, gold flash over nickel on entire contact, with additional .000030 [0.00076] gold on mating end

B—Duplex, .000030 [0.00076] gold on mating end, tin-lead on termination end, with entire contact nickel underplated

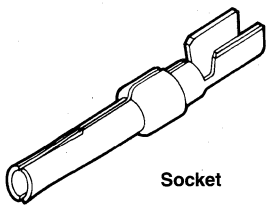
C—Gold flash over nickel on entire contact

D—Duplex, gold flash on mating end, tin-lead on termination end, with entire contact nickel underplated

Without Insulation Support



Pin



Socket

Wire Size Range AWG [mm²]	Ins. Dia. Max.	Contact Finish (Plating Code)	Contact Part Numbers				Hand Tools for Loose Form Contacts	
			Pin		Socket			
			Strip Form	Loose Form	Strip Form	Loose Form	CERTI-CRIMP Hand Tool	CERTI-CRIMP Hand Tool Color Code
28-24 0.08-0.2	**.068** 1.73	A	205310-2	205310-8	205311-3	205311-9	90265-1	Blue Dot
		B	2-205310-5	—	2-205311-1	—		
		C	205310-4	1-205310-0	205311-4	1-205311-0		
		D	2-205310-2	—	1-205311-8	—		
24-20 0.2-0.6	**.068** 1.73	A	205202-2	205202-4	205201-3	205201-5	90265-1	Red Dot
		B	2-205202-5	2-205202-7	2-205201-5	—		
		C	205202-6	205202-7	205201-6	205201-7		
		D	2-205202-2	2-205202-4	2-205201-2	—		
22-18 0.4-0.8	**.068** 1.73	A	745229-2	745229-4	745230-2	745230-4	90405-1	Green Dot
		B	1-745229-1	—	1-745230-1	1-745230-3		
		C	745229-5	745229-7	745230-5	745230-7		
		D	745229-8	—	745230-8	1-745230-0		

Note: 1. Wire insulation diameter is limited by the connector housing cavity and clearance for the insertion/extraction tool.
2. Insertion/Extraction tool **Part No. 91285-1**. This tool includes interchangeable tips to insert/extract: Size 22, 28-22 AWG [0.4, 0.08-0.04 mm²] crimp contacts.

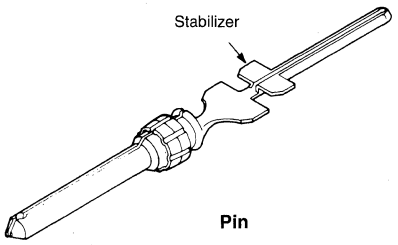
.025 [0.64] Square Posted Contacts, Snap-In

Contact Size 20 DF
Pin Diameter .040 [1.02]

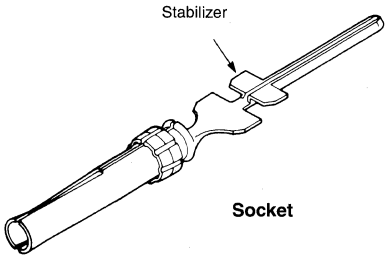
Contact Plating

A—Duplex plated .000030 [0.00076] gold on mating end, with entire contact .000050 [0.00127] min. nickel underplated

B—Duplex plated gold flash on mating end with entire contact .000050 [0.00127] min. nickel underplated



Pin



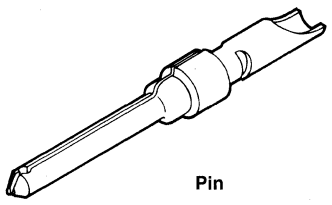
Socket

Contact Finish (Plating Code)	Loose Form Contact Numbers							
	.125 [3.18] Post Length*		.188 [4.78] Post Length*		.427 [10.85] Post Length*		.651 [16.54] Post Length*	
	Pin	Socket	Pin	Socket	Pin	Socket	Pin	Socket
A	745287-4	745288-4	2-745287-0	2-745288-0	745287-8	745288-8	1-745287-2	1-745288-2
B	745287-2	745288-2	1-745287-8	1-745288-8	745287-6	745288-6	1-745287-0	1-745288-0

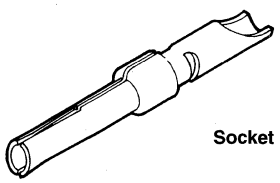
*Length of post extending from rear of HDP-20 metal-shell connector.

Solder Cup Contacts, Snap-In

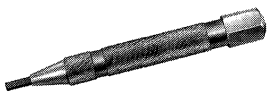
Contact Size 20 DF
Pin Diameter .040 [1.02]



Pin



Socket



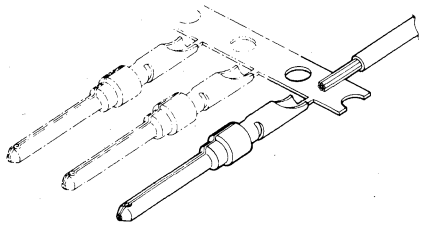
Insertion/Extraction Tool No. 91285-1

Note: This tool includes interchangeable tips for insert/extract: Size 22, 28-22 AWG [0.4, 0.08-0.04 mm²]; Size 20, Posted Contacts.

18 AWG Max. Wire

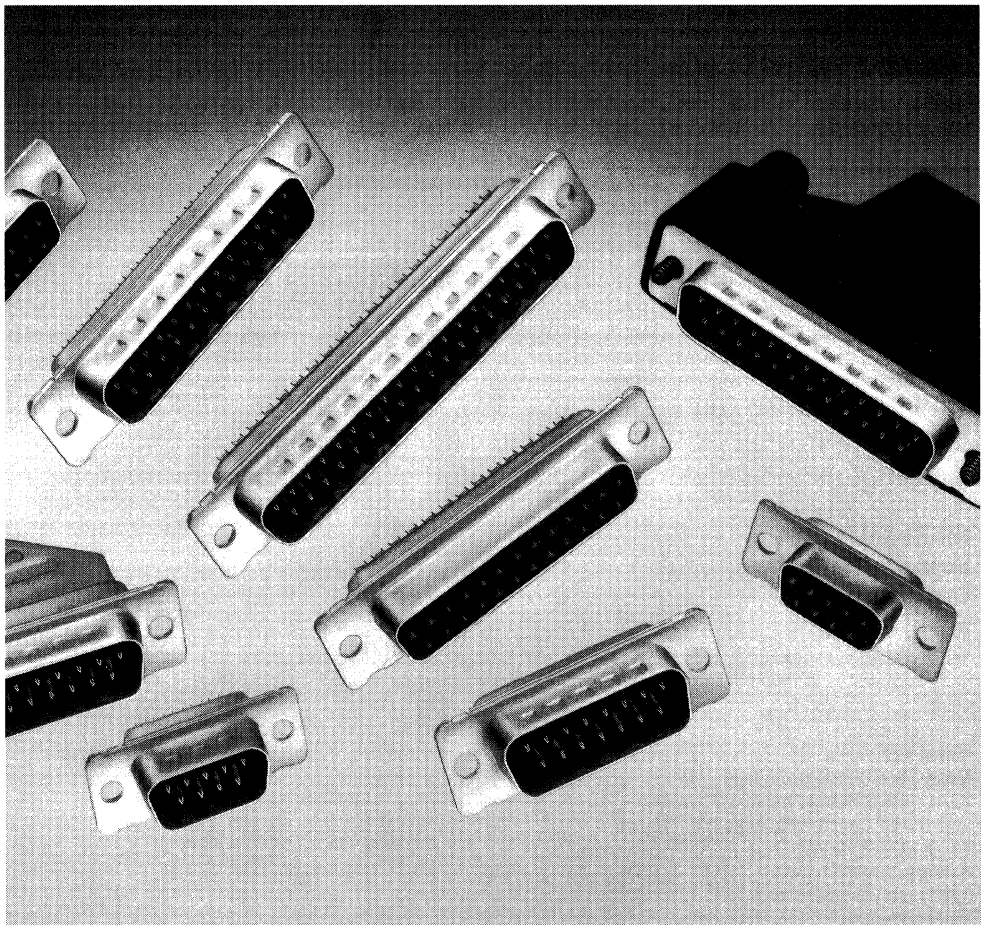
Strip Form Contact Number		Loose Form Contact Number	
Pin	Socket	Pin	Socket
66570-2	66569-2	66570-3	66569-3

Contacts to be soldered to wire before being inserted into housing



SOURCE: Catalog 82068

HD-20 Solder Cup Connectors

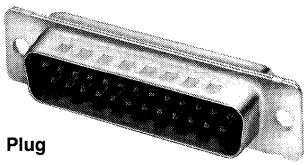


Product Facts

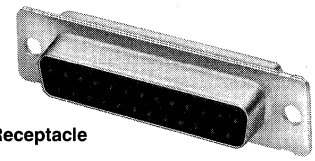
- Preloaded duplex-plated solder cup contacts
- Shell finish in choice of standard zinc chromate or tin
- One-piece 94V-0 rated plastic insert
- Anti-solderwicking contact design
- Intermateable with other subminiature D connectors
- Available in 9, 15, 25 and 37 position (shell sizes 1-4) plugs and receptacles
- Easy application without special application tools
- Shields offer full EMI shielding and ESD insulation
- Crimped shield termination for low impedance
- Variety of ferrules for all cable sizes
- Ferrule-to-shield crimp provides strain relief
- Shields may be post molded or covered with enclosures
- Recognized under the Component Program of Underwriters Laboratories Inc., File No. E28476
- Listed under Underwriters Laboratories Inc., Standard 1863, Communication Circuit Accessories, File No. E81956
- Certified by Canadian Standards Association, File No. LR 7189

HD-20 Solder Cup Connectors

Plugs and Receptacles



Plug



Receptacle

Mates with—HDE-20 Metal-Shell Connectors, page 2274; HDF-20 Low-Profile Metal-Shell Connectors, page 5019; HDP-20 Crimp Snap-In Contact Connectors, page 2277; and HD-20 Full and Front Metal-Shell Connectors, pages 2306-2308, 2313, 2315-2319 and page 2331 and 2332.

Note: 25 Pos. Housing Dim. (Typ.)—2.088 [53.04] L x .227 [5.77] W x .494 [12.55] H

Shell Size	No. of Contact Positions	Plug Part Numbers		Receptacle Part Numbers	
		Tin Plated Shell	Zinc Plated Shell	Tin Plated Shell	Zinc Plated Shell
1	9	747904-2	747904-4	747905-2	747905-4
2	15	747908-2	747908-4	747909-2	747909-4
3	25	747912-2	747912-4	747913-2	747913-4
4	37	747916-2	747916-4	747917-2	747917-4

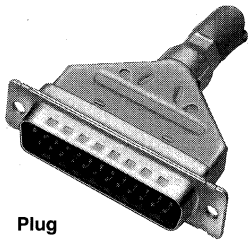
Note: Accepts 20 AWG [0.6 mm²] or smaller solid or stranded wire.

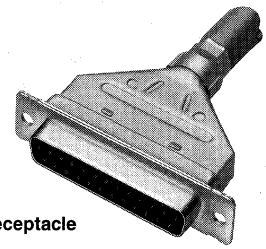
SOURCE: Catalog 82068

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

HD-20 Solder Cup Basic Shielding Hardware Kits

Plugs and Receptacles


Plug


Receptacle

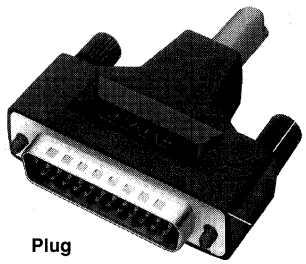
Mates with—HDE-20 Metal-Shell Connectors, page 2274; HDF-20 Low-Profile Metal-Shell Connectors, page 5019; HDP-20 Crimp Snap-In Contact Connectors, page 2277; and HD-20 Full and Front Metal-Shell Connectors, pages 2306-2308, 2313, 2315-2319 and page 2331 and 2332.

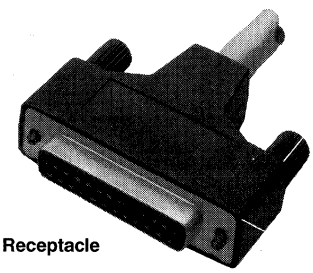
Shell Size	No. of Contact Positions	Kit Numbers	
		Plug	Receptacle
1	9	748038-1	—
2	15	748040-1	—
3	25	—	748043-1
4	37	748044-1	748045-1

Notes: 1. Kit contains connector with preloaded, nonremovable contacts, inner shield and outer shield. Ferrules must be purchased separately.
2. Components of the kits are shipped unassembled and bulk-packaged in quantities of 100 pieces.

HD-20 Solder Cup Shielding Hardware Enclosure Kits

Plugs and Receptacles


Plug


Receptacle

Mates with—HDE-20 Metal-Shell Connectors, page 2274; HDF-20 Low-Profile Metal-Shell Connectors, page 5019; HDP-20 Crimp Snap-In Contact Connectors, page 2277; and HD-20 Full and Front Metal-Shell Connectors, pages 2306-2308, 2313, 2315-2319 and page 2331 and 2332.

Shell Size	No. of Contact Positions	Kit Numbers		Shielding Enclosure Expansion Tool	
		Plug	Receptacle	Cable O.D. (max.)	Part No.
1	9	748046-1	748047-1	.355 9.02	58241-1
2	15	748048-1	748049-1		
3	25	748050-1	748051-1	.465 11.56	58241-1
4	37	748052-1	748053-1	.562 14.28	58241-2

Notes: 1. Kit contains connectors with preloaded, nonremovable contacts, inner shield, outer shield, enclosure and two jackscrews. Ferrules must be purchased separately.
2. Components of the kits are shipped unassembled and bulk-packaged in quantities of 100 pieces.

Accessories

Ferrules for Shielding Hardware Kits

Stepped

Straight

Shell Sizes	Style	Cable Diameter	Part Numbers	
			Ferrule	Die Sets*
1-3	Stepped	.165-.190 4.19-4.83	747579-8	543424-3
		.190-.217 4.83-5.51	747579-8	543424-2
		.217-.246 5.51-6.25	747579-8	543424-8
		.246-.284 6.25-7.21	1-747579-0	543424-1
		.284-.324 7.21-8.23	1-747579-0	543424-7
		.324-.375 8.23-9.53	1-747579-1	543424-6
1-3	Straight	.375-.435 9.53-11.05	1-747579-2	543424-5
		.400-.455 10.16-11.56	1-747579-4	543424-4

Shell Sizes	Style	Cable Diameter	Part Numbers	
			Ferrule	Die Sets*
4-5	Stepped	.230-.265 5.84-6.73	1-747580-0	543425-2
		.338-.385 8.59-9.78	747580-8	543425-1
		.375-.432 9.53-10.97	747580-4	58238-1
		.422-.490 10.72-12.45	747580-5	58237-2
4-5	Straight	.480-.562 12.19-14.28	747580-6	58237-1

*Die sets used with Hand Crimping Tool **Part No. 543344-1** or Pneumatic Bench Tool **Part No. 312522-3** equipped with Die Set Holder **Part No. 58449-1**.

SOURCE: Catalog 82068

Accessories
(Continued)

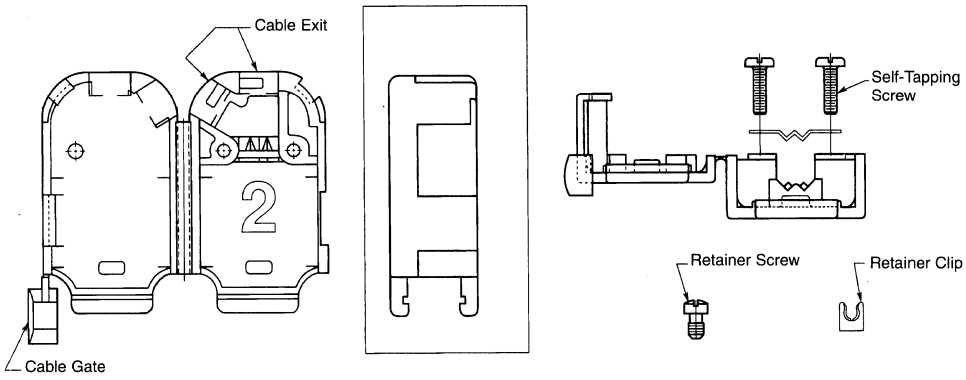
Unshielded Cable Clamps

One-Piece, All-Plastic Cable Clamp for Jacketed Cable, 180°/120° Exit (HDP and HDE) (Quik-Snap)

Each kit contains:

- **1-Hinged, plastic clamp**
- **2-Self-tapping screws**
- **1-Strain relief clip**
- **1-Cable exit gate plug (Used to close unused exit)**

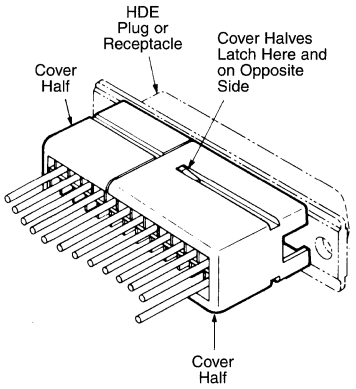
(For metal-shell connector applications an optional kit with 2 retainer clips and screws is available.)

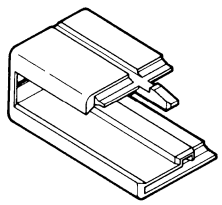


Shell Size	Cable Dia. Range (Ref.)	Kit Number* with Screws and Retainer Clips	Kit Number without Screws and Retainer Clips	Packaging
1	**.075-.250** 1.91-6.35	749914-1	750100-2	Bulk Pkg.
		749914-2	750100-1	Unit Kit
2	**.170-.380** 4.32-9.65	749915-1	750101-2	Bulk Pkg.
		749915-2	750101-1	Unit Kit
3	**.180-.460** 4.57-11.68	749626-1	750078-2	Bulk Pkg.
		749626-2	750078-1	Unit Kit
4	**.250-.550** 6.35-13.97	749916-1	750987-2	Bulk Pkg.
		749916-2	750987-1	Unit Kit

*For metal-shell connectors only.

Slide-On Back Covers





Back Cover Half
(See Note 2.)

Note: Shell Size 2 Dim. (Typ.)— .934 [23.72] L x .565 [14.35] W x .436 [11.07] H

Shell Size	Back Cover Kit No.	
	Individual	Bulk Packaged*
1	745530-1	745530-5
2	745530-2	745530-6
3	745530-3	745530-7
4	745530-4	745530-8

*Each part is individually bulk packed for multiple kit orders.
Notes: 1. All parts are packaged unassembled.
2. Each slide-on back cover kit includes two identical cover halves which snap together over the connector.

SOURCE: Catalog 82068

Specifications subject to change.
1-800-522-6752
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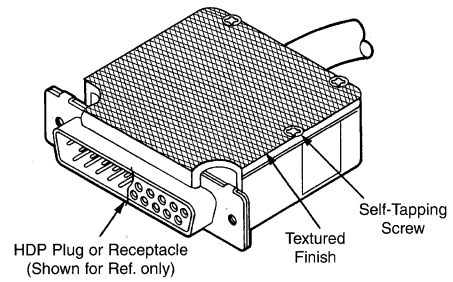
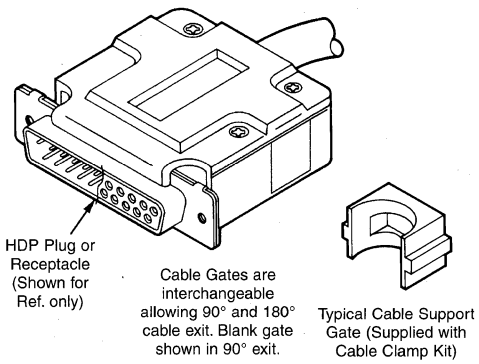
Accessories
(Continued)

Unshielded Cable Clamps
(Continued)

Box and Lid
Straight/90° Exit



Shell Size 1 & 2



Shell Size 3, 4 & 5

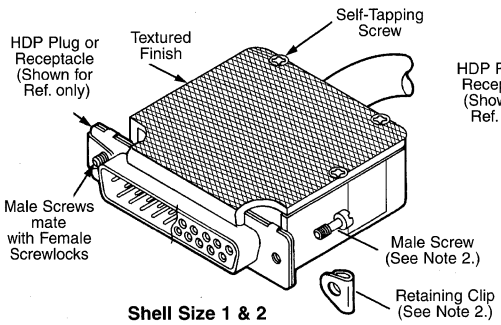
Note: Shell Size 3 Dim. (Typ.)—1.620 [41.15] L x 1.70 [43.18] W x .770 [19.56] H

Shell Size	Cable Dia. Max. (Ref.)		Cable Clamp Kit No.	
	Straight Cable Exit	90° Cable Exit	Individual	Bulk Packed*
1	**.160** 4.06	**.160** 4.06	207467-1	207467-2
2	**.320** 8.13	**.320** 8.13	207470-1	207470-2
3	**.390** 9.91	**.390** 9.91	207345-1	207345-2
4	**.640** 16.26	**.405** 10.29	207473-1	207473-2
5	**.490** 12.45	**.490** 12.45	207476-1	207476-2

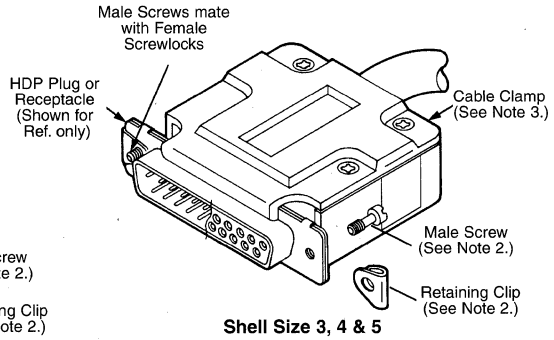
*Each part is individually bulk packed for multiple kit orders.

Notes: 1. All parts are packaged unassembled.
2. Cable diameter is adjustable by changing cable support gates. Use the flat side of cable support gates for discrete wire, and the semicircle side for jacketed cable.
3. Cable clamp assemblies are available in kits with male screw retainers, see below.

Box and Lid Straight/90° Exit
Cable Clamp Kits
with Male Screw Retainers



Shell Size 1 & 2



Shell Size 3, 4 & 5

Shell Size	Cable Clamp Kit No.	
	Individual	Bulk Packed*
1	207908-1	207908-2
2	207908-4	207908-5
3	207908-7	207908-8
4	1-207908-0	1-207908-1
5	1-207908-3	1-207908-4

*Each part is individually bulk packed for multiple kit orders.

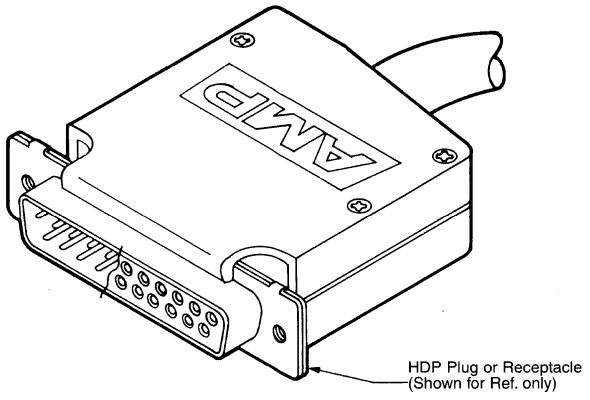
Notes: 1. All parts are packaged unassembled.
2. Each kit is comprised of a cable clamp and male screw retainer hardware (2 each). Male screw retainers are also available in kit form, see page 2290.
3. For ordering cable clamps separately, see above.

SOURCE: Catalog 82068

Accessories
(Continued)

Unshielded Cable Clamps
(Continued)

Clam Shell Straight/45° Exit



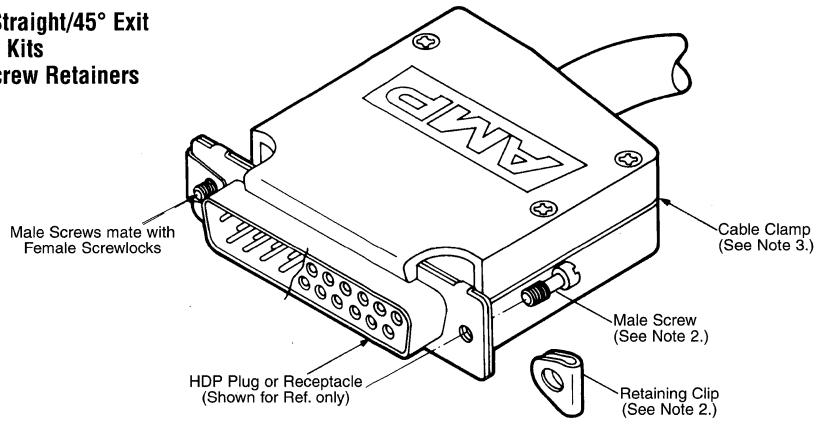
Note: Shell Size 3 Dim. (Typ.)—1.615 [41.02] L x 1.250 [31.75] W x .580 [14.73] H

Shell Size	Cable Dia. (Max.)	Short Cable Clamp Part No.		Standard Cable Clamp Part No.	
		Individual	Bulk Packed*	Individual	Bulk Packed*
1	**.256** 6.30	—	—	205729-1	205729-3
2	**.320** 8.13	206393-1	206393-3	—	—
	.320 8.13	—	—	205730-1	205730-3
3	**.420** 10.67	206390-1	206390-3	—	—
	.420 10.67	—	—	205718-1	205718-4
4	**.490** 12.45	—	—	205731-1	205731-3
5	**.600** 15.24	—	—	205732-1	205732-3

*Each part is individually bulk packed for multiple assembly orders.

Notes: 1. All parts are packed unassembled.
2. Quantity of pan head screws supplied with cable clamp assembly varies with shell size.
3. Cable clamps are available in kits with male screw retainers, see below.
4. All pan head screws have combination cross-recessed and slotted heads.

Clam Shell Straight/45° Exit Cable Clamp Kits with Male Screw Retainers



Shell Size	Short Cable Clamp Kit No.		Standard Cable Clamp Kit No.	
	Individual	Bulk Packed*	Individual	Bulk Packed*
1	—	—	206478-1	2-206478-0
2	1-206478-1	2-206478-5	206478-2	2-206478-1
3	1-206478-2	2-206478-6	206478-3	2-206478-2
4	—	—	206478-4	2-206478-3
5	—	—	206478-5	2-206478-4

*Each part is individually bulk packed for multiple assembly orders.

Notes: 1. All parts are packaged unassembled.
2. Each kit is comprised of a cable clamp and male screw retainer hardware (2 each). Male screw retainers are also available in kit form, see page 2290.
3. For ordering cable clamps separately, see above.

SOURCE: Catalog 82068

Specifications subject to change.
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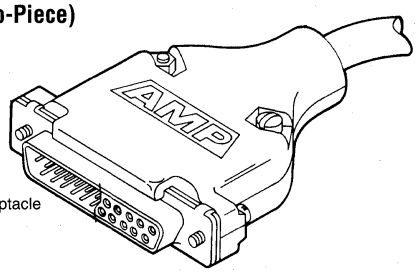
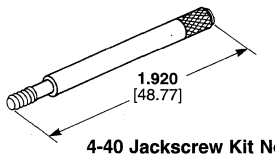
Accessories
(Continued)
Shielded Cable Clamps

Straight Exit RFI/EMI Shields for Jacketed Cable (Two-Piece)



HDE or HDP Plug or Receptacle
(Shown for Ref. only)



4-40 Jackscrew Kit Nos.:
747784-3 (2 per package)
747784-4 (bulk packed)*
*Each part is individually bulk packed for multiple kit orders.

Note: Shell Size 3 Dim. (Typ.)—2.090 [53.09] L x 1.920 [48.77] W x .680 [17.27] H

Shell Size	Cable O.D. (Max.)	Die Cast Shield Kit Numbers	Metal-Plated Plastic Shield Kit Numbers	Grommet Sets		
				Cable O.D. Range	No. of Grommets Per Set	Part Number
1	**.200** 5.08	745171-2	745854-5	—	—	—
	.250 6.35	745171-1	745854-3	—	—	—
	.370 9.40	745171-5	745854-1	**.185-.320** 4.70-8.13	4	747746-1
2	**.225** 5.72	745172-3	747099-7	—	—	—
	.300 7.62	745172-2	747099-5	—	—	—
	.375 9.53	745172-1	747099-3	**.185-.320** 4.70-8.13	4	747746-1
	.430 10.92	1-745172-3	747099-1	—	—	—
3	**.280** 7.11	745173-5	745833-9	—	—	—
	.350 8.89	745173-4	745833-7	—	—	—
	.430 10.92	745173-3	745833-5	—	—	—
	.480 12.19	745173-2	745833-3	—	—	—
	.530 13.46	745173-1	745833-1	**.255-.470** 6.48-11.94	6	747973-1
4	**.350** 8.89	745174-5	747100-9	—	—	—
	.425 10.80	745174-4	747100-7	—	—	—
	.500 12.70	745174-3	747100-5	—	—	—
	.530 13.46	2-745174-7	1-747100-1	**.255-.470** 6.48-11.94	6	747973-1
	.575 14.61	745174-2	747100-3	—	—	—
	.650 16.51	745174-1	747100-1	—	—	—
5	**.375** 9.53	745175-6	1-747098-1	—	—	—
	.450 11.43	745175-5	747098-9	—	—	—
	.525 13.34	745175-4	747098-7	**.255-.470** 6.48-11.94	6	747973-1
	.600 15.24	745175-3	747098-5	—	—	—
	.675 17.15	745175-2	747098-3	—	—	—
	.750 19.05	745175-1	747098-1	—	—	—

Cable Clamp Kits with Grommets

Shell Size	Cable O.D. Range	No. of Grommets Per Set	Kit Numbers	
			Die Cast Shield With Grommets	Metal-Plated Plastic Shield With Grommets
1	**.185-.320** 4.70-8.13	4	748676-1	748677-1
2	**.185-.320** 4.70-8.13	4	748676-2	748677-2
3	**.255-.470** 6.48-11.94	6	748676-3	748677-3
4	**.255-.470** 6.48-11.94	6	748676-4	748677-4
5	**.255-.470** 6.48-11.94	6	748676-5	748677-5

Notes: 1. All parts are packaged unassembled.
2. Jackscrews must be purchased separately.
3. Split-ring and crimp ferrules are shown on pages 2288 and 2289.

SOURCE: Catalog 82068

Specifications subject to change.
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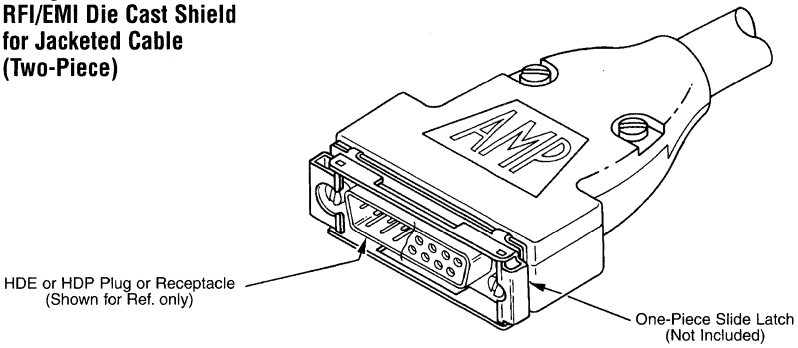
Accessories
(Continued)

Shielded Cable Clamps
(Continued)

Straight Exit RFI/EMI Die Cast Shield for Jacketed Cable (Two-Piece)

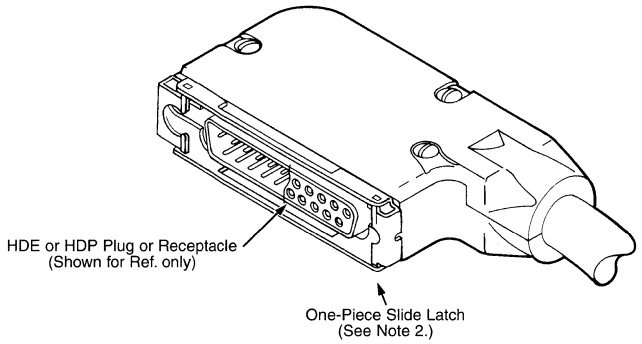


Note: Shell Size 2 Dim. (Typ.)—1.545 [39.24] L x 1.805 [45.85] W x .620 [15.75] H

Shell Size	No. of Positions	ID Letter	Max. Cable Dia.	Part Number
2	15	B	.225 5.72	745919-4
		E	.300 7.72	745919-3
		H	.375 9.53	745919-2
		K	.430 10.92	745919-1

Notes: 1. All parts packaged unassembled.
2. Each kit comprised of a two-piece shield with 2 pan head screws.
3. Split-ring and crimp ferrules are shown on pages 2288 and 2289.

90° Exit RFI/EMI Die Cast Shields for Jacketed Cable (Two-Piece)



Note: Shell Size 3 Dim. (Typ.)—2.850 [72.39] L x 1.285 [32.64] W x .629 [15.98] H

Shell Size	Cable Dia. (Max.)	Shield with Slide Latch Kit Numbers (See Note 2)	Shield without Slide Latch Kit Numbers (See Note 3)
2	.225 6.48	745652-4	745918-4
	.300 7.62	745652-3	745918-3
	.375 9.53	745652-2	745918-2
	.430 10.92	745652-1	745918-1
3	.280 7.11	745653-5	—
	.355 9.02	745653-4	—
	.430 10.92	745653-3	747194-3
	.480 12.19	745653-2	—
	.530 13.46	745653-1	—

Notes: 1. All parts are packaged unassembled.
2. Each kit is comprised of a two-piece shield with three pan head screws and a slide latch with two 4-40 slide latch screws.
3. Each kit is comprised of a two-piece shield with three pan head screws.
4. Split-ring and crimp ferrules are shown on pages 2288 and 2289.

SOURCE: Catalog 82068

Specifications subject to change.
1-800-522-6752
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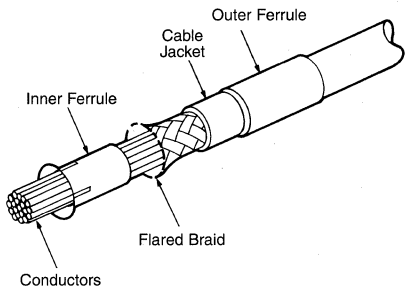
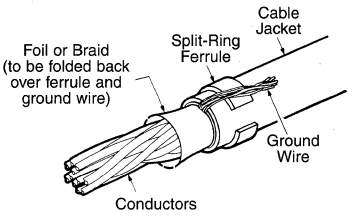
Accessories
(Continued)

Shielded Cable Clamps
(Continued)

Crimp Ferrules for Braided Cable Shield



Split-Ring Ferrules for Foil or Braided Cable Shield



Crimp and Split-Ring Ferrules

Shell Size	Cable Dia. (Max.)	When using these Shield Kits: Straight Exit Shield Kit No. Die Cast	Straight Exit Shield Kit No. Metal-Plated Plastic	90° Exit Die Cast Shield Kit No. With Slide Latch	90° Exit Die Cast Shield Kit No. Without Slide Latch	Use these Ferrules: Split-Ring* Ferrule No.	Crimp Ferrule No. and Tooling No.**: Inner	Outer	Hand Tool Die Set	Applicator Die Set
1	.200 5.08	745171-2	745854-5	—	—	745508-2	—	—	—	—
	.240 6.10	745171-5	745854-1	—	—	—	1-745129-8	745130-8	543013-2	813809-1
	.240 6.10	745171-1	745854-3	—	—	745508-3	1-745129-6	745130-8	543013-1	813809-1
	.280 7.11	745171-5	745854-1	—	—	—	3-745129-4	1-745130-6	1-543013-7	813809-7
	.370 9.40	745171-5	745854-1	—	—	745508-6	1-745129-7	1-745130-0	543013-6	813809-5
2	.225 5.72	745172-3	747099-7	745652-4	745918-4	745508-3	—	—	—	—
	.240 6.10	745172-1	747099-3	745652-2	745918-2	—	1-745129-8	745130-8	543013-2	813809-1
	.240 6.10	1-747172-3	747099-1	745652-1	745918-1	—	2-745129-1	745130-8	543013-3	813809-1
	.280 7.11	1-745172-3	747099-1	745652-1	745918-1	—	3-745129-2	1-745130-6	1-543013-6	813809-7
	.300 7.62	745172-2	747099-5	745652-3	745918-3	745508-4	—	—	—	—
	.350 8.90	1-745172-3	747099-1	745652-1	745918-1	—	2-745129-0	745130-9	543013-4	813809-2
	.365 9.27	745172-1	747099-3	745652-2	745918-2	—	1-745129-7	1-745130-0	543013-6	813809-5
	.375 9.53	745172-1	747099-3	745652-2	745918-2	745508-6	—	—	—	—
	.430 10.92	1-745172-3	747099-1	745652-1	745918-1	745508-1	1-745129-9	1-745130-1	543013-7	813809-3
3	.240 6.10	745173-3	745833-5	745653-3	747194-3	—	2-745129-1	745130-8	543013-3	813809-1
	.280 7.11	745173-5	745833-9	745653-5	—	745508-4	—	—	—	—
	.280 7.11	745173-3	745833-5	745653-3	747194-3	—	3-745129-2	1-745130-6	1-543013-6	813809-7
	.350 8.90	745173-4	745833-7	745653-4	—	745508-5	—	—	—	—
	.350 8.90	745173-3	745833-5	745653-3	747194-3	—	2-745129-0	745130-9	543013-4	813809-2
	.350 8.90	745173-1	745833-1	745653-1	—	—	2-745129-4	745130-9	543013-5	813809-2
	.430 10.92	745173-3	745833-5	745653-3	747194-3	745508-1	1-745129-9	1-745130-1	543013-7	813809-3
	.430 10.92	745173-1	745833-1	745653-1	—	—	2-745129-3	1-745130-1	543013-8	813809-3
	.480 12.19	745173-2	745833-3	745653-2	—	745508-8	—	—	—	—
	.530 13.46	745173-1	745833-1	745653-1	—	745508-9	2-745129-2	1-745130-2	1-543013-0	813809-4

*For split-ring ferrules, Min. O.D. is .040 [1.02] smaller than Max. O.D.
**For inner and outer ferrules, Min. O.D. is .050 [1.27] smaller than Max. O.D. At the Max. cable O.D. the Min. insulation thickness is .060 [1.52].

Continued on next page.

SOURCE: Catalog 82068

Specifications subject to change.
1-800-522-6752
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Accessories
(Continued)

Shielded Cable Clamps
(Continued)

Crimp and Split-Ring Ferrules (Cont.)

Shell Size	Cable Dia. (Max.)	When using these Shield Kits: Straight Exit Shield Kit No. Die Cast	When using these Shield Kits: Straight Exit Shield Kit No. Metal-Plated Plastic	Use these Ferrules: Split-Ring* Ferrule No.	Use these Ferrules: Crimp Ferrule No. and Tooling No.** Inner	Outer	Hand Tool Die Set	Applicator Die Set
4	.240 6.10	745174-4	747100-7	—	2-745129-1	745130-8	543013-3	813809-1
	.280 7.11	745174-4	747100-7	—	3-745129-2	1-745130-6	1-543013-6	813809-7
	.350 8.90	745174-5	747100-9	745508-5	—	—	—	—
	.350 8.90	745174-4	747100-7	—	2-745129-0	745130-9	543013-4	813809-2
	.430 10.92	745174-4	747100-7	745508-1	1-745129-9	1-745130-1	543013-7	813809-3
	.430 10.92	745174-1	747100-1	—	2-745129-7	1-745130-1	543013-9	813809-3
	.500 12.70	745174-3	747100-5	745508-8	—	—	—	—
	.525 13.34	745174-1	747100-1	—	2-745129-6	1-745130-2	1-543013-1	813809-4
	.575 14.61	745174-2	747100-3	1-745508-0	—	—	—	—
	.650 16.51	745174-1	747100-1	1-745508-1	2-745129-5	1-745130-3	1-543013-3	813809-6
5	.240 6.10	745175-6	1-747098-1	—	1-745129-8	745130-8	543013-2	813809-1
	.350 8.90	745175-4	747098-7	—	2-745129-4	745130-9	543013-5	813809-2
	.365 9.27	745175-6	1-747098-1	—	1-745129-7	1-745130-0	543013-6	813809-5
	.375 9.53	745175-6	1-747098-1	745508-6	—	—	—	—
	.430 10.92	745175-4	747098-7	—	2-745129-3	1-745130-1	543013-8	813809-3
	.450 11.43	745175-5	747098-9	745508-7	—	—	—	—
	.525 13.34	745175-4	747098-7	745508-9	—	—	—	—
	.530 13.46	745175-4	747098-7	—	2-745129-2	1-745130-2	1-543013-0	813809-4
	.530 13.46	745175-1	747098-1	—	3-745129-0	1-745130-2	1-543013-2	813809-4
	.600 15.24	745175-3	747098-5	1-745508-0	—	—	—	—
	.650 16.51	745175-1	747098-1	—	2-745129-9	1-745130-3	1-543013-4	813809-6
	.675 17.15	745175-2	747098-3	1-745508-1	—	—	—	—
	.750 19.05	745175-1	747098-1	1-745508-2	2-745129-8	1-745130-4	1-543013-5	813809-8

*For split-ring ferrules, Min. O.D. is .040 [1.02] smaller than Max. O.D.
**For inner and outer ferrules, Min. O.D. is .050 [1.27] smaller than Max. O.D. At the Max. cable O.D. the Min. insulation thickness is .060 [1.52].

SOURCE: Catalog 82068

Specifications subject to change.
1-800-522-6752
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1-800-722-1111
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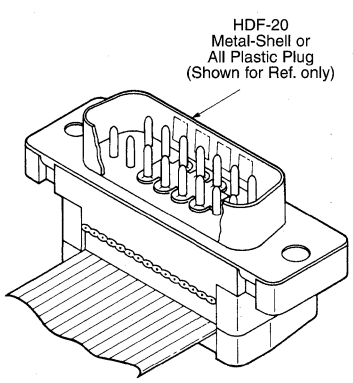
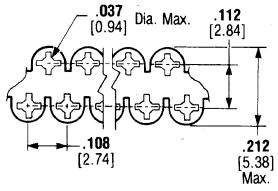
Hardware

Commoning Strip (for HDF-20 Plugs, Size 20 Pin Contacts)

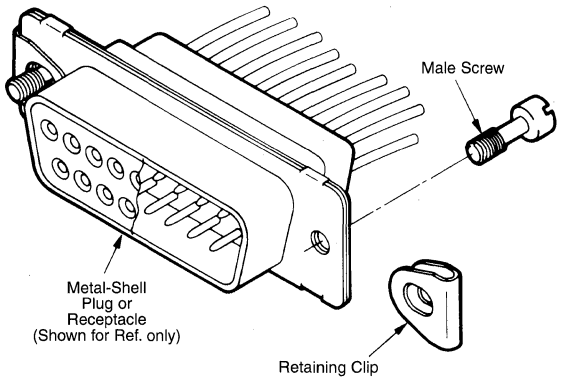
Part No. 206918-2
(Continuous Strip)

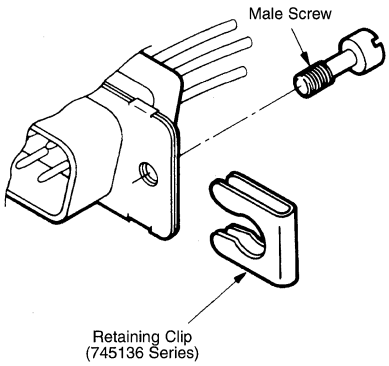




Notes: 1. Use punching tool to remove undesired pin commoning locations on commoning strip. Use mating receptacle to seat strip over pins in plug. Punching tool is not supplied by AMP.
2. Sold in strip form, strip contains 10,000 commoning locations.

Male Screw Retainers for Metal-Shell Connectors (HDE and HDP)





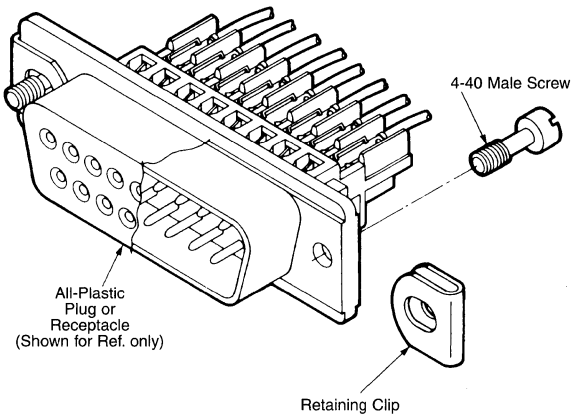
Male Screw Finish	Thread Size	Male Screw Retainer Kit No.	
		Individual	Bulk Packed*
Yellow Chromate	4-40	205980-1	205980-3
		745136-1	745136-2
	M3 (Metric)	207871-1	207871-2
Clear Chromate	4-40	205980-4	205980-5
		745136-3	745136-4

*Each part is individually bulk packed for multiple kit orders.

Notes: 1. All parts are packaged unassembled.
2. Each kit is comprised of two male screws and two retaining clips. Male screw retainers are also furnished as part of cable clamp kits (pages 2284 and 2285).
3. Male screw retainers mate with female screwlocks, with HDF metal-shell connectors featuring 4-40 threaded inserts and with HD metal-shell board mount connectors featuring 4-40 threaded inserts or female screwlocks.
4. Retaining clip must be assembled onto connector flanges with threaded hole toward wire side of connector.

Hardware
(Continued)

Male Screw Retainers for All-Plastic Connectors (HDE)

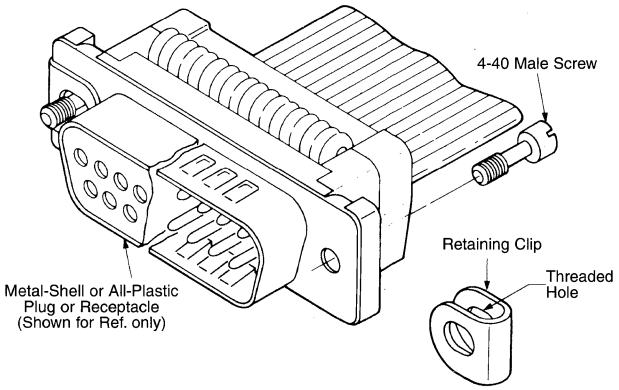


Kit Numbers:
745647-1 (Individually packaged, see Note 2)
745647-2 (Bulk packed)*

*Each part is individually bulk packed for multiple kit orders.

Notes: 1. All parts are packaged unassembled.
2. Each kit is comprised of two 4-40 male screws and two retaining clips.
3. Male screw retainers mate with female screwlocks, with HDF All-Plastic connectors featuring 4-40 threaded inserts, with HD All-Plastic board mount connectors featuring integral standoffs with 4-40 threaded inserts and female screwlocks.
4. Retaining clips must be assembled onto connector flanges with threaded hole toward wire side of connector.

Male Screw Retainers for Metal-Shell and All-Plastic Connectors (HDF)



Kit Numbers:
746881-1 (Individually packaged, see Note 2)
746881-2 (Bulk packed)*

*Each part is individually bulk packed for multiple kit orders.

Notes: 1. All parts are packaged unassembled.
2. Each kit is comprised of two male screws and two retaining clips.
3. Male screw retainers mate with female screwlocks, and with HD board mount connectors featuring female screwlocks.
4. Retaining clips must be assembled onto connector flanges with threaded hole toward wire side of connector.

SOURCE: Catalog 82068

Specifications subject to change.
1-800-522-6752
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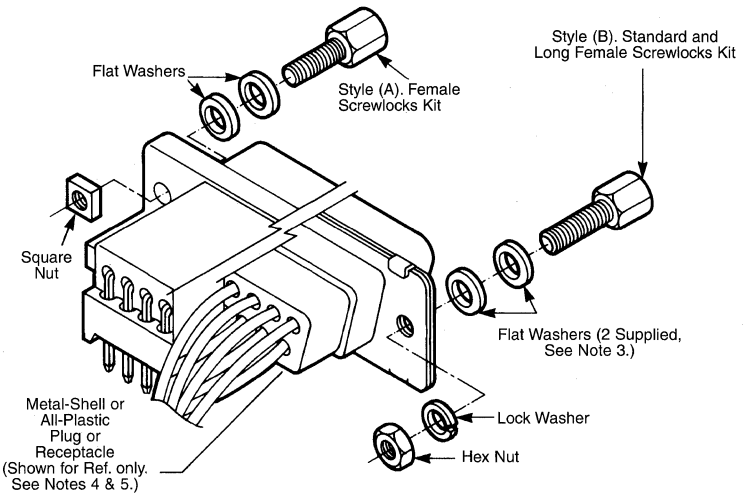
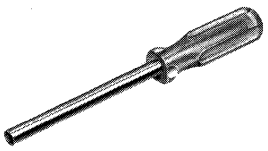
Hardware
(Continued)

Female Screwlocks for Metal-Shell and All-Plastic Connectors (HDE, HDF, HDP)





Nut Driver, Part No. 811262-1
(Used for assembling female screwlocks to connector flange)

Connector Used with	Style	Thread Size	Finish	Kit Number	
				Individual	Bulk Packed*
HD All-Plastic Right-Angle Plugs and Receptacles	(A)	4-40	Yellow Chromate	207952-1	—
			Clear Chromate	207952-3	—
HDE Metal-Shell or All-Plastic Plugs and Receptacles	(B)	4-40	Yellow Chromate	745563-1	745563-2
			Clear Chromate	745563-3	745563-4
HDP or HDF Metal-Shell or All-Plastic Plugs and Receptacles	(B)	4-40	Yellow Chromate	205817-1	205817-2
			Clear Chromate	205817-3	205817-4
				—	748558-4**
		M3 (Metric)	Yellow Chromate	207872-1	—
			Clear Chromate	207872-3	—
HD or HDF All-Plastic Plugs and Receptacles with Integral Standoffs	(B)	4-40	Yellow Chromate	207719-1	207719-2
			Clear Chromate	207719-3	207719-4
		2-56*	Clear Chromate	747223-3	747223-4

*Each part is individually bulk packed for multiple kit orders. **With captivated star number. No additional hardware included.

Notes:
1. All parts are packaged unassembled.
2. Each female screwlock kit is comprised of two assemblies as illustrated above.
3. One or two flat washers may be required for panel thicknesses less than .060 [1.52]. Female screwlocks are not recommended for panel thicknesses greater than .060 [1.52].
4. Female screwlocks with 2-56 thread size are to be used with cable clamps with mounting flanges. Female screwlocks with 4-40 and M3 (Metric) thread sizes can be used with all other cable clamps.
5. Female screwlocks mate with male screw retainers.
6. Short female screwlocks cannot be used with HDF connectors.
7. For .090 [2.29] panel thickness order **Part No. 748271-1** (individual pack without flat washers), **Part No. 748271-3** (individual pack with flat washers).

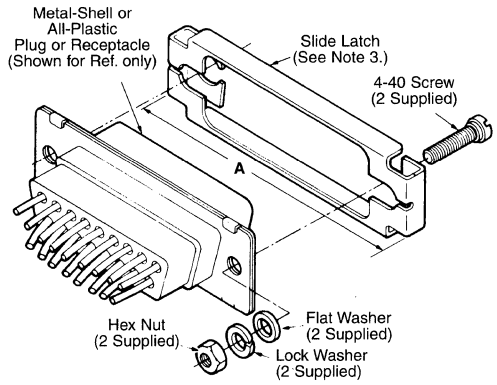
* 2-56 is the male thread size. The female thread size is 4-40.

SOURCE: Catalog 82068

Hardware
(Continued)

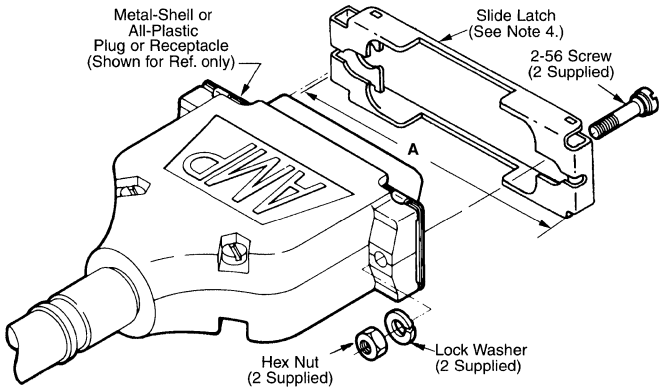
Slide Latches

Style I



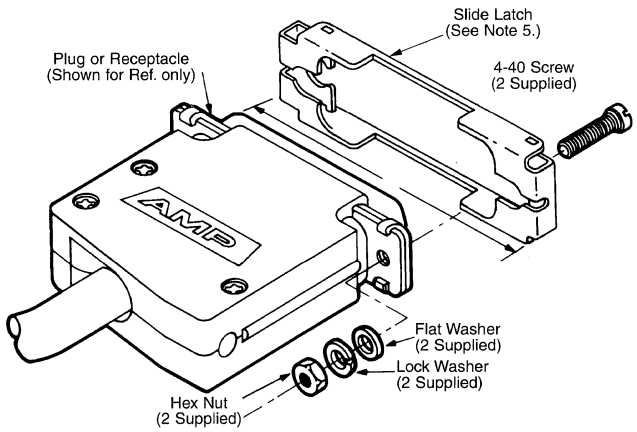
For Shell Sizes 1 and 4

Style II

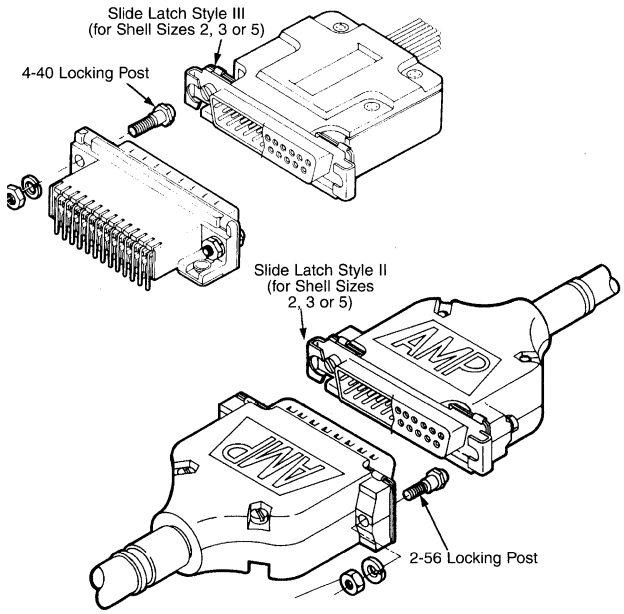


For Shell Sizes 2, 3 and 5

Style III



For Shell Sizes 2, 3 and 5



Typical Applications of Locking Posts and Slide Latches

Shell Size	Style	Slide Latch Kit Numbers	
		Individual	Bulk Packed*
1	I	745404-1	—
2	II	745583-1	745583-2
	III	745583-5	745583-6
3	II	745584-1	—
	III	745584-3	745584-4
4	I	745407-1	745407-2
5	II	745578-1	—
	III	745578-3	—

*Each part is individually bulk packed for multiple kit orders.

Notes: 1. All parts are packaged unassembled.
2. Each kit is comprised of a slide latch and two screws, flat washers (if required), lock washers and hex nuts. Style I slide latches are also furnished as part of cable clamp kits (page 2287).
3. Style I slide latches can be used with cable clamps that do not extend beyond the front flange of the connector or on connectors without cable clamps.
4. Style II slide latches can be used with any cable clamp that has the mounting ear configuration as shown above.
5. Style III slide latches can be used on connectors without cable clamps or with cable clamps that do not have the mounting ear configuration shown with Style II above.
6. Slide latches mate with locking posts (page 2294).

SOURCE: Catalog 82068

Specifications subject to change.
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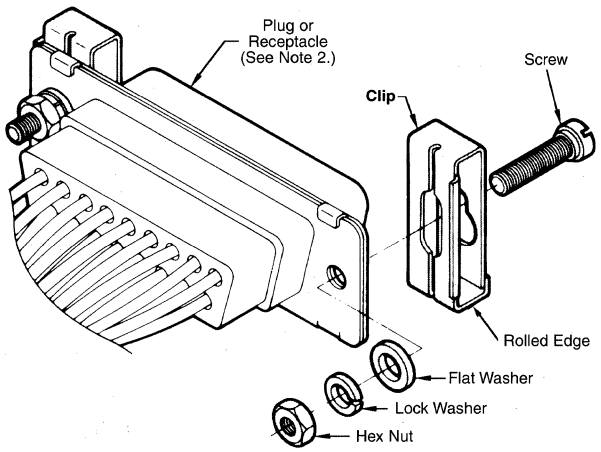
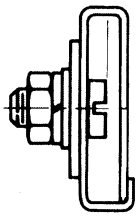
Tooling/Technical Assistance Center

Hardware
(Continued)

Slide Latch Clip Assembly for Unfiltered Mating Half





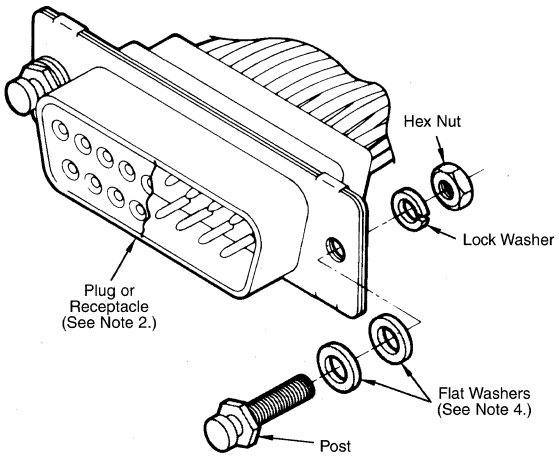
Notes:
1. All parts are packaged unassembled.
2. Slide Latch Clip Assemblies can be used on any Subminiature D AMPLIMITE HD-20 metal-shell plug or receptacle.
3. Slide Latch Clip Assemblies mate with Locking Post Assemblies shown below.

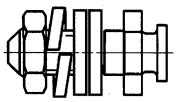
Kit Part Numbers:

Part No.	Thread Size	Screw Length	Pkg.
206942-1	4-40	.415 10.54	Unit†
206942-3			Bulk*
—	2-56	.547 13.89	—
748078-3			Bulk*

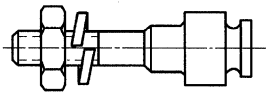
†Two assemblies per package.
*Each part is individually bulk packed for multiple kit orders.

Locking Post Assembly





Part No. 206514-1



Part No. 747242-1

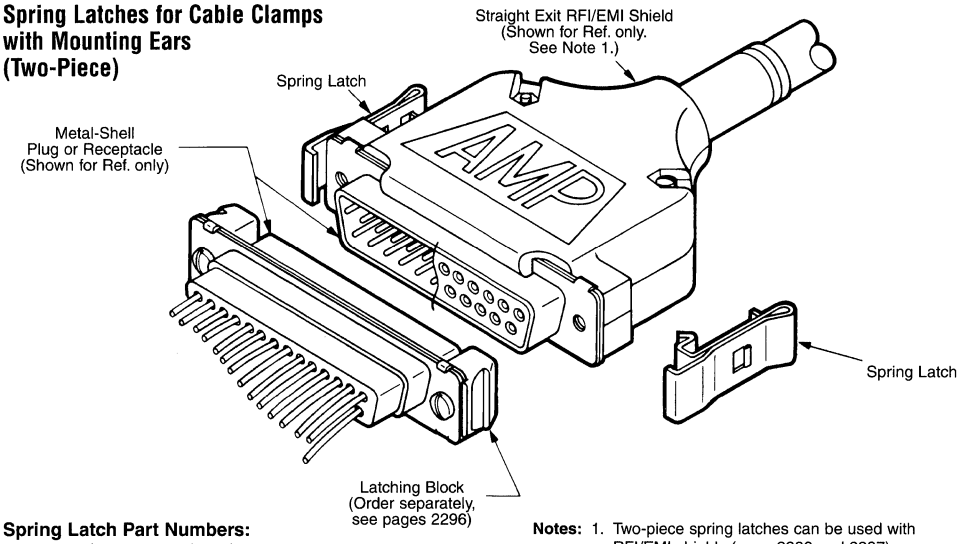
Thread Size	Locking Post Finish	Locking Post Kit Number (See Note 4)	
		Individual	Bulk Packed*
4-40	Yellow Chromate	206514-1	206514-3
		206514-6	206514-7
2-56	Yellow Chromate	747242-1	747242-2
	Clear Chromate	747242-3	747242-4

*Each part is individually bulk packed for multiple kit orders.

Notes: 1. All parts are packaged unassembled.
2. Each kit is comprised of two complete assemblies, as illustrated above.
3. For panel mounting, it is recommended that a shim be used between the connector flange and panel to prevent bowing of the flange.
4. Locking posts with 2-56 thread size are to be used with cable clamps with mounting flanges. Locking posts with 4-40 thread size can be used with all other cable clamps.
5. Locking posts mate with slide latches (page 2293).

Hardware
(Continued)

Spring Latches for Cable Clamps with Mounting Ears (Two-Piece)

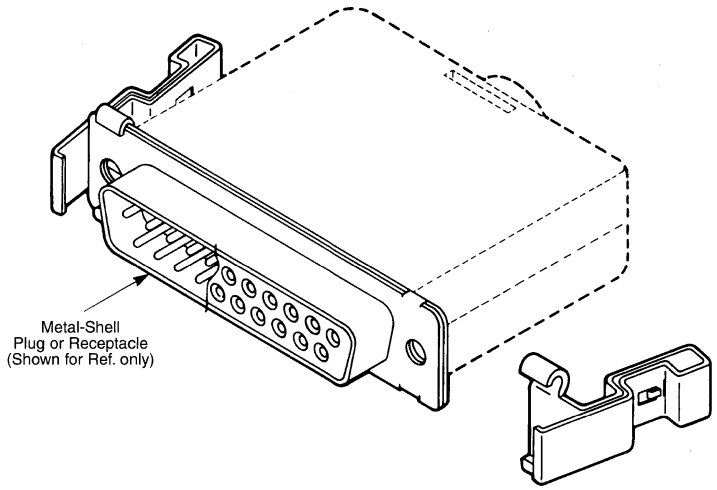


Spring Latch Part Numbers:
745255-2 (two per package)
745255-3 (bulk packed)*
*Two-piece spring latches are individually bulk packed for multiple part orders.

Notes: 1. Two-piece spring latches can be used with RFI/EMI shields (page 2286 and 2287).
2. Two-piece spring latches mate with latching blocks (pages 2296).

Typical Application of Two-Piece Spring Latches with Straight Exit RFI/EMI Shield

Spring Latches (Two-Piece)



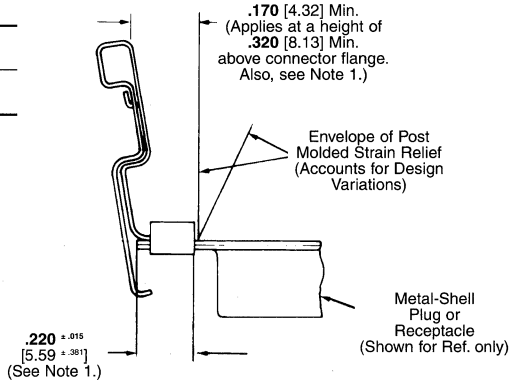
Spring Latch Part Numbers

Size	Two Per Package	Bulk Packed*
1-4	745779-2	745779-3
5	745779-5	—

*Two-piece spring latches are individually bulk packed for multiple part orders.

Notes: 1. These dimensions must be maintained to assure satisfactory operation of the spring latches.
2. Two-piece spring latches mate with latching blocks (pages 2296).

Typical Application of Two-Piece Spring Latches with Post Molded Strain Relief



SOURCE: Catalog 82068

Specifications subject to change.
1-800-522-6752
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1-800-722-1111
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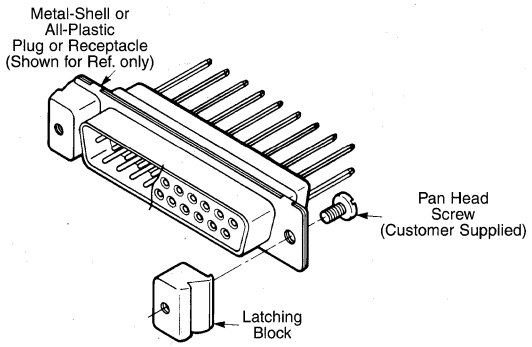
Hardware
(Continued)

Latching Blocks with Threaded Hole

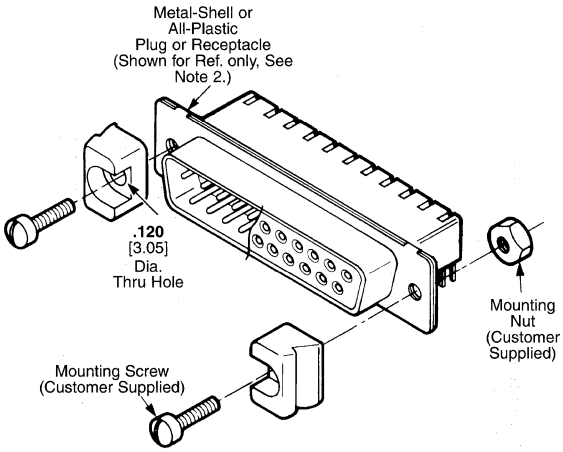


Shell (No. of Contact Pos.)	Thread Size	Rear-Panel Latching Block Part No.		Front-Panel Latching Block Part No.	
		Individual**	Bulk Packed*	Individual**	Bulk Packed*
1 thru 4 (9 thru 37)	M3 (Metric)	745403-1	—	—	—
	4-40	745403-8	745403-9	—	—
	4-40	747717-2	747717-3	—	—
	M3 (Metric)	—	—	208101-1	—
		—	—	208101-1	—
	4-40	—	—	208101-8	208101-9
5 (50)	M3 (Metric)	—	745403-6	—	—
	4-40	—	1-745403-2	—	—
	4-40	—	—	1-208101-1	1-208101-2

*Bulk packed for multiple part orders.
**Individual kits contain two latching blocks per package.

Notes: 1. All parts are packaged unassembled.
2. Each front panel latching block kit is comprised of two latching blocks. Two pan head screws of the appropriate length and thread size to be supplied by customer.
3. Latching blocks mate with spring latches (page 2295).

Latching Blocks with Slot Recess and Thru Hole



Shell (No. of Contact Pos.)	Panel Thickness	Rear-Panel Latching Block Part No.		Front-Panel Latching Block Part No.	
		Individual**	Bulk Packed*	Individual**	Bulk Packed*
1 thru 4 (9 thru 37)	.090 2.29	747080-2	—	—	—
	.060 1.52	745245-2	745245-3	—	—
	—	—	—	745286-2	745286-3
5 (50)	.060 1.52	—	745245-6	—	—

*Bulk packed for multiple part orders.
**Individual kits contain two latching blocks per package.

Notes: 1. Mounting screws and nuts are to be supplied by Customer.
2. These latching blocks allow mounting screws to be installed through the front of the block and to be screwed into the bracket of a right-angle connector, a fixed insert in a connector mounting flange, or a nut behind the connector mounting flange (as illustrated above).
3. Latching blocks mate with spring latches (page 2295).

SOURCE: Catalog 82068

Specifications subject to change.
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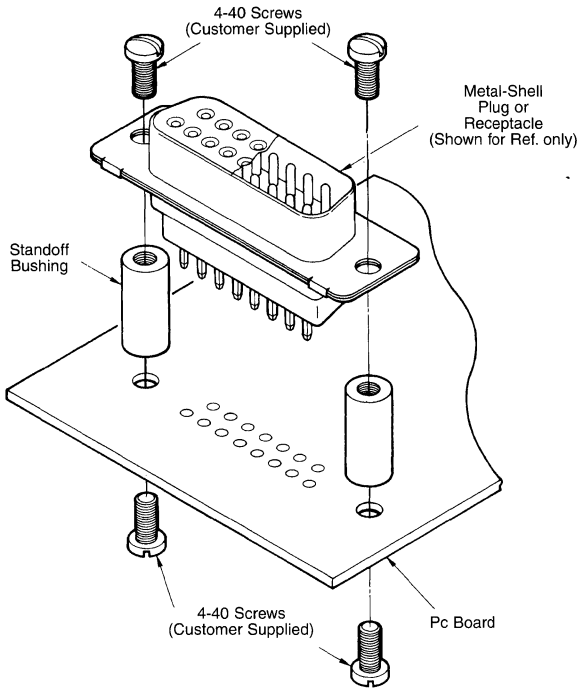
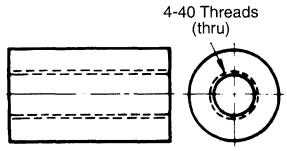
Hardware
(Continued)

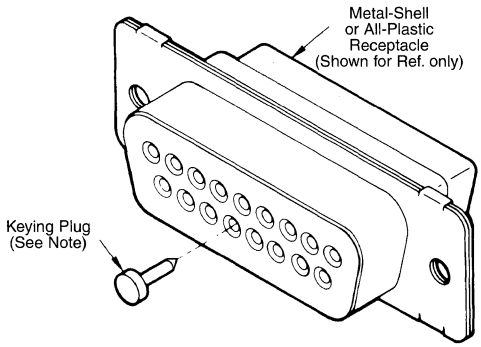
Standoff Bushings

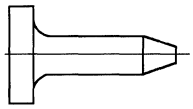




Kit Numbers:
205933-3 (two bushings per package)
205933-4 (bulk packed)*
*Parts are individually bulk packed for multiple part orders.

Keying Plug
(for Size 20 Socket Contacts)





Part Number: 206509-1

Notes: 1. Keying plug is installed taper-end first into front of receptacle.
2. Sold individually.

SOURCE: Catalog 82068

Specifications subject to change.
1-800-522-6752
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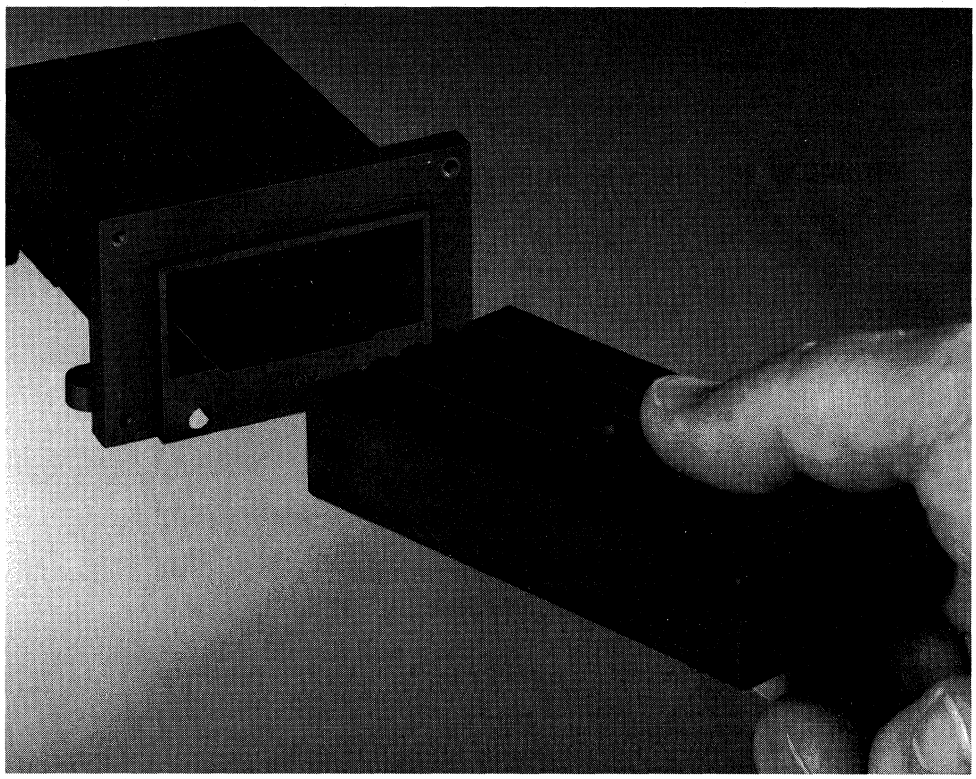
1-800-722-1111
Tooling/Technical Assistance Center

Cassette Connector



Product Facts

- **Keying of cartridge and holder prevents insertion of undesired cartridge into holder**
- **Keying variations accomplished by simply changing front and panel mount covers**

Cartridge:

- **Recessed sliding gate provides for optical sensing with reflective background**
- **Unit can be disassembled with special tool for servicing/inspection**
- **Connector concept uses industry standard AMP Subminiature D connector configuration and socket contacts with selective plating for high-cycle life**
- **Position 9 contact recessed for removal and insertion detection**

Cartridge Holder:

- **Rear panel mount cover provides flush panel mounting, avoiding cutout edges**
- **Body and connector rigidly interlocked, requiring no additional support**
- **Optical sensor and LED's can be wave-soldered directly to pc board**
- **Pin connector uses industry proven AMP Subminiature D contacts with selective plating for high-cycle life**

The AMPLIMITE cassette connector is designed as a complete systems approach for use with magnetic bubble memories, as well as RAM, PROM and EPROM memories. This versatile, highly reliable connector is comprised of a cartridge and cartridge holder.

The cartridge consists of top and bottom cover halves that snap together, a front cover which provides keying, a 33-position Subminiature D receptacle connector and a sliding gate for optical "write-protect" sensing. Cover halves also have provisions for a customer logo and program identification label. A long version of the cartridge is available to provide an additional 1.460 [37.08] of length.

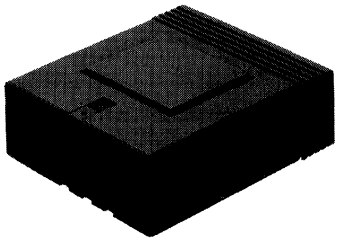
The cartridge holder consists of a holder body that accepts the cartridge and includes mounting ears for pc board mounting, a cover which provides keying and flush rear-panel mounting and a 33-position Subminiature D pin connector. Also included are provisions for "busy" and "write-protect" LED's and a "write-protect" optical sensor. A long cartridge holder is available to accept the long cartridge.

SOURCE: Catalog 82068

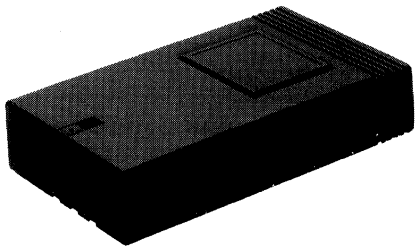
Cassette Connector
(Continued)

Cartridges

Mates with—Cartridge Holders



Standard Cartridge



Long Cartridge

Note: Standard Housing Dim. (Typ.)—
2.00 [50.8] L x 2.800 [71.12] W x .800 [20.32] H

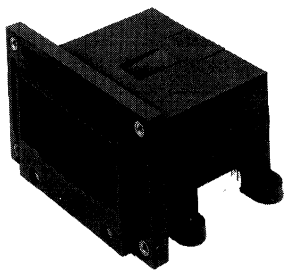
Note: Long Housing Dim. (Typ.)—
2.00 [50.8] L x 4.260 [108.2] W x .800 [20.32] H

Receptacle Part No.	Sliding Gate Part No.	Front Cover Part No.	Top Cover Part No.		Bottom Cover Part No.		Standard Kit No.		Long Kit No.	
			Standard	Long	Standard	Long	Individual	Bulk Packed*	Individual	Bulk Packed*
745447-1	745442-1	745427-1**	745432-1	745637-1	745433-1	745638-1	745538-5	745538-1	745640-2	745640-1
745447-1	745442-1	745427-4***	745432-1	—	745433-1	—	745538-8	—	—	—

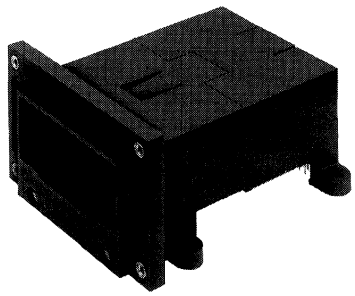
*Each part is individually bulk packed for multiple kit orders. Minimum order quantity is 50.
** Keying slot locations 1, 2, 3
***Keying slot locations 2, 3, 4
Notes: 1. All parts are packaged unassembled.
2. Each kit is comprised of a top and bottom cover (standard or long), front cover, sliding gate and 33-position receptacle. To purchase individual components separately, use the component part numbers listed above.
3. Standard cartridges are used with standard cartridge holders, and long cartridges are used with long cartridge holders.
4. Release Tool **Part No. 91251-1.**

Cartridge Holders

Mates with—Cassette Cartridges



Standard Cartridge Holder



Long Cartridge Holder

Note: Standard Housing Dim. (Typ.)—
2.940 [74.68] L x 2.298 [58.37] W x 1.755 [44.58] H

Note: Long Housing Dim. (Typ.)—
2.940 [74.68] L x 3.548 [90.12] W x 1.755 [44.58] H

Pin Connector Part No.	Holder Body Part No.	Rear Panel Mount Cover Part No.	Spacer Part No.	Standard Kit No.		Long Kit No.	
				Individual	Bulk Packed*	Individual	Bulk Packed*
745448-1	745443-1	745429-1	745639-1	745539-5	745539-1	745641-2	745641-1

*Each kit is individually bulk packed for multiple kit orders. Minimum order quantity is 50.
Notes: 1. Each kit is comprised of a holder body, rear panel mount cover, pin connector and spacer (long cartridge holder only). To purchase individual components separately, use the component part numbers listed above.
2. All parts are packaged unassembled.
3. Standard cartridge holders are used with standard cartridges, and long cartridge holders are used with long cartridges.

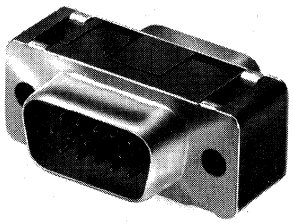
SOURCE: Catalog 82068

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

Connector Savers

HD-22
15 Position
Metal-Shell

Used with—HDP-22 Crimp Snap-In Contact Connectors



Plug-to-Receptacle
With Front Metal-Shells
Part Nos. 750629-1, 749668-1*
*Number 9 Position blocked

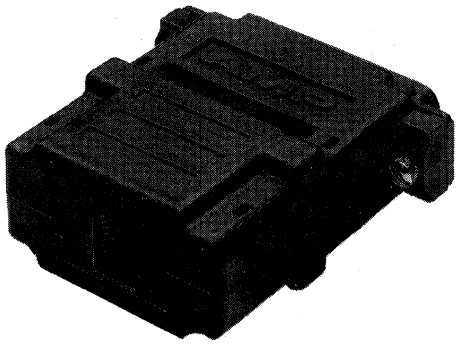
Note: 15 Pos. Housing Dim. (Typ.)—1.213 [30.81] L x .858 [21.79] W

Transition Connector (RS-232 to Modular Jack)

Product Facts

- **Flying leads are preterminated to cirmp contacts; no application tooling necessary**
- **Complete wiring configuration versatility; user selectively loads contacts into desired positions**
- **Contacts may be hand loaded; no insertion tooling necessary**
- **AMP crimp contact reliability**
- **Hermaphroditic clamp halves and modular jack; orientation of sub-assembly is unnecessary**
- **Toolless assembly of product for cost effective production**
- **Internal latch retention system to prevent unintentional disassembly or tampering**
- **Compact and lightweight design**
- **Both plug and receptacle configurations**

Interface Kits



Note: 25 Pos. Housing Dim. (Typ.)—2.090 [53.08] L x 2.100 [53.34] W x .750 [19.05] H

Connector Type	Interface Type	Kit Part Number
Size 3-25 Position Plug	6 Position Modular Jack	748100-1
Size 3-25 Position Receptacle	6 Position Modular Jack	748152-1
Size 3-25 Position Plug	8 Position Modular Jack	747772-1
Size 3-25 Position Receptacle	8 Position Modular Jack	747868-1

Note: For kit disassembly use Field Service Tool **Part No. 91266-2**.

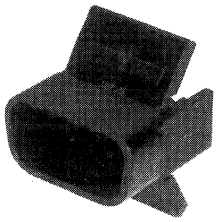
Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

HDJ-20 All-Plastic Jacketed Cable Connectors (for Crimp Snap-In Contacts)

Plug Housing 9 Position, Shell Size 1

Part No. 745032-1

Note: 9 Pos. Housing Dim. (Typ.)— .757 [19.23] L x .690 [17.53] W x .324 [8.23] H

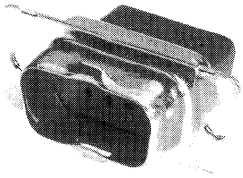


Note: These plug housings accept size 20 DF pin contact (tin plated), **Part No. 1-66507-4** for 28-24 AWG [0.08-0.2 mm²] wire sizes and **Part No. 1-66506-4** for 24-20 AWG [0.2-0.5 mm²] wire sizes. For computer applications, AMP recommends the use of gold plated pin contacts (see pages 2279 and 2280.)

Plug Housing HDP-20 9-Position, Shell Size 1

Part No. 745018-1
(Used with HDJ-20 Receptacle **Part No. 207752-1)**

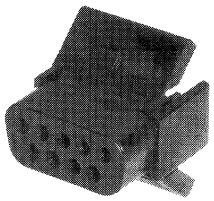
Note: 9 Pos. Housing Dim. (Typ.)— 1.198 [30.43] L x .681 [17.30] W x .479 [12.17] H



Receptacle Housing 9 Position, Shell Size 1

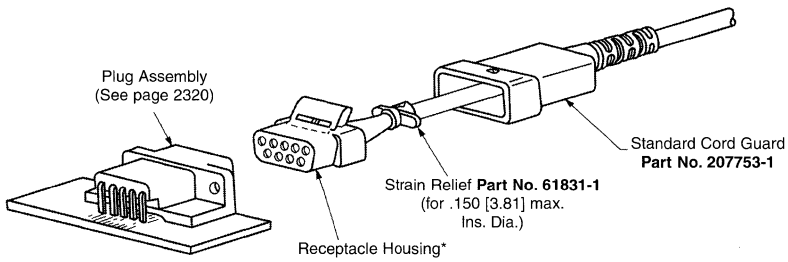
Part No. 207752-1

Note: 9 Pos. Housing Dim. (Typ.)— .642 [16.31] L x .642 [16.31] W x .310 [2.84] H



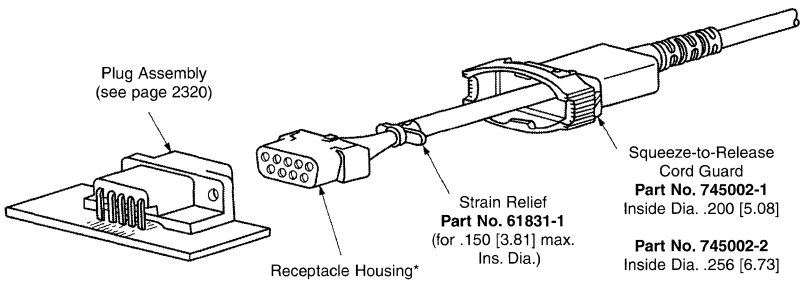
Note: These receptacle housings accept size 20 DF pin contact (tin plated), **Part No. 1-66505-4** for 28-24 AWG [0.08-0.2 mm²] wire sizes and **Part No. 1-66504-4** for 24-20 AWG [0.2-0.5 mm²] wire sizes. For computer applications, AMP recommends the use of gold plated socket contacts. (See pages 2279 and 2280.)

Standard Cord Guards 9 Position



*Standard Cord Guards also can be used on plug housings (shown above).

Squeeze-to-Release Cord Guards 9 Position

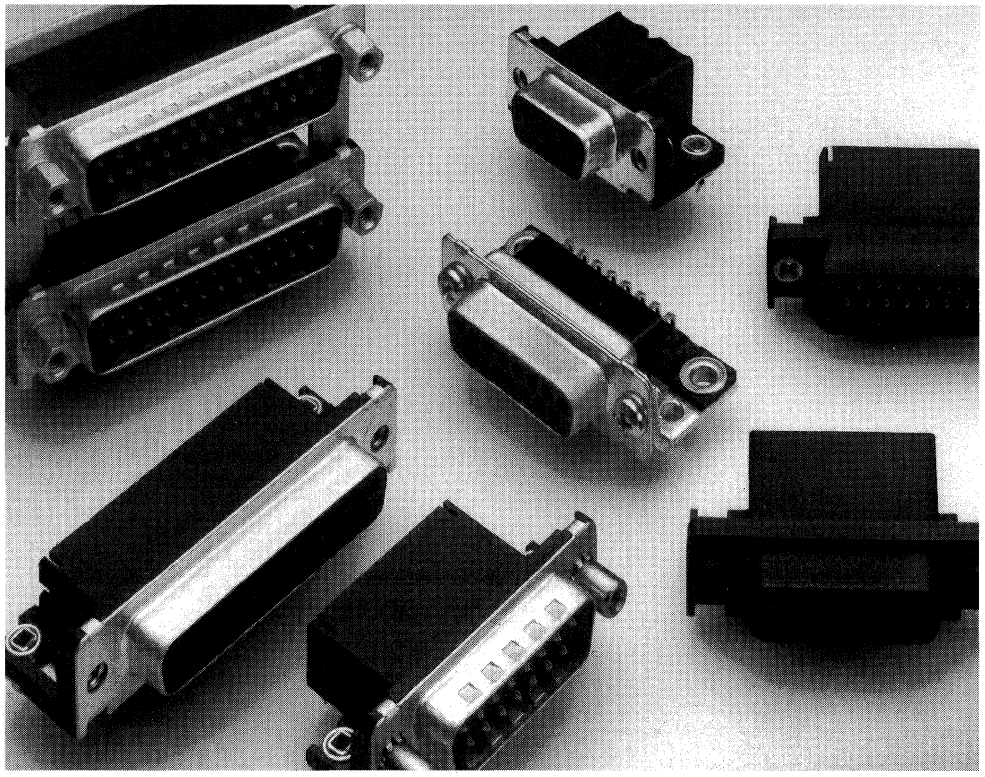


*Squeeze-to-Release Cord Guards also can be used on plug housings (shown above).

SOURCE: Catalog 82068

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

Right-Angle Posted Connectors



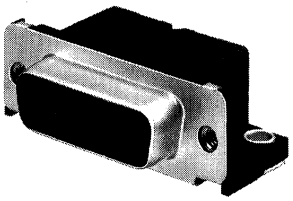
Product Facts

- Flame retardant thermoplastic housing material, UL 94V-0 rated
- HD-20 right-angle connectors are available in 9, 15, 25 and 37 positions (Shell Sizes 1 thru 4) in both plug and receptacle versions; some versions available in 50 position, (Shell Size 5)
- HD-20 stackable connectors are available in 18, 30, 50 and 74 positions (Shell Sizes 1 thru 4) in receptacle over receptacle, plug over plug and combination versions
- HD-22 right angle receptacle connectors are available in 15, 26, 44, 62 and 78 positions (Shell Sizes 1 thru 5)
- Low cost front metal-shell design compatible with full metal-shell connectors
- Integral boardlock versions secure posted connectors to pc boards prior to soldering
- HD-20 and HD-22 connector contacts are available in a variety of plating types to satisfy different applications
- HD-22 right-angle posted connectors are designed for robotic and high temperature applications
- Integral fixed 4-40 threaded inserts and screwlocks are available in both HD-20 and HD-22 connectors
- Connectors are intermateable with any size 20 or 22 subminiature D connectors dimensionally complying with MIL-C-24308
- Recognized under the Component Program of Underwriters Laboratories Inc., File No. E28476
- Certified by Canadian Standards Association, File No. LR 7189

SOURCE: Catalog 82068

HD-22 Front Metal-Shell Right-Angle Posted Connectors 350 Mount

Receptacles



Note: 44 Pos. Housing Dim. (Typ.)—2.090 [53.09] L x .836 [21.23] W x .494 [12.55] H

Mates with—HDP-22 Crimp Snap-In Contact Connectors, page 2272

Contact Finish

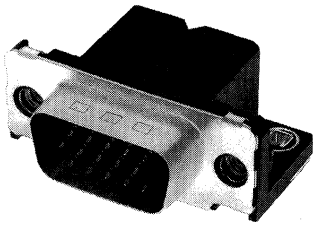
Duplex Plated

A—.000030 [0.00076] gold on mating end

Shell Size	No. of Contact Positions	Contact Finish (Plating Code)	Receptacle Part Numbers				
			Boardlocks		Solderable Eyelets		.125 [3.18] Dia. Holes
			Threaded Inserts	Female Screwlocks	Threaded Inserts	Female Screwlocks	Threaded Inserts
1	15	A	748390-5	748390-6	1-748390-4	1-748390-5	1-748390-9
		B	1-748390-1	1-748390-2	—	—	—
2	26	A	748481-5	748481-6	1-748481-4	1-748481-5	1-748481-9
3	44	A	748482-5	748482-6	1-748482-4	1-748482-5	1-748482-9
4	62	A	748394-5	748394-6	1-748394-4	1-748394-5	1-748394-9
5	78	A	748483-5	748483-6	1-748483-4	1-748483-5	1-748483-9

Notes: 1. All receptacle connectors are preloaded with size 22 DF posted socket contacts.
2. Recommended pc board thickness is .062 [1.58] for connectors with boardlocks and .093 [2.36] max. for all others.

Plugs



Note: 44 Pos. Housing Dim. (Typ.)—2.090 [53.09] L x .836 [21.23] W x .494 [12.55] H

Mates with—HDP-22 Crimp Snap-In Contact Connectors, page 2272

Contact Finish

Duplex Plated

A—.000030 [0.00076] gold on mating end

Shell Size	No. of Contact Positions	Contact Finish (Plating Code)	Plug Part Numbers		
			Boardlocks		.125 [3.18] Dia. Holes
			Threaded Inserts	Female Screwlocks	Threaded Inserts
1	15	A	749767-1	749768-1	—
2	26	A	749769-1	749770-1	—
3	44	A	749771-1	749772-1	—
4	62	A	749639-1	—	—
5	78	A	749233-1	749234-1	749235-1

Notes: 1. All receptacle connectors are preloaded with size 22 DF posted socket contacts.
2. Recommended pc board thickness is .062 [1.58] for connectors with boardlocks and .093 [2.36] max. for all others.

SOURCE: Catalog 82068

Specifications subject to change.

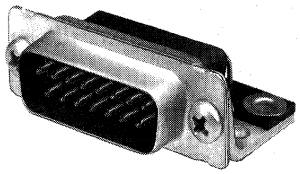
1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

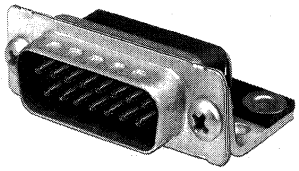
HDP-20 Full Metal-Shell Right-Angle Posted Connectors 454 Mount

Plugs and Receptacles

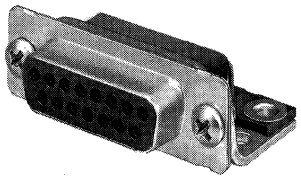
Post Size—.025 [0.64] Sq.



Plug Without Grounding Indents



Plug With Grounding Indents



Receptacle

Mates with—HDE-20 Metal-Shell IDC Connectors, page 2274; HDF-20 Low-Profile Metal-Shell Connectors, page 5019; and HDP-20 Crimp Snap-In Contact Connectors, pages 2277 and 2278

Note: 25 Pos. Housing Dim. (Typ.)—Plug, 2.088 [53.04] L x .919 [23.34] W x .494 [12.55] H; Receptacle, 2.088 [53.04] L x .923 [23.44] W x .494 [12.55] H

Shell Size	No. of Contact Positions	Contact Finish (Plating Code)	Plug Part Numbers		Receptacle Part Numbers
			Without Grounding Indents	With Grounding Indents	
1	9	A	745434-6	745434-8	745438-4
		B	—	745434-7	745438-3
		A	—	745434-4	745438-2
		B	—	—	745438-1
2	15	A	—	745435-8	745439-4
		B	—	745435-7	745439-3
		A	—	—	745439-2
		B	—	—	745439-1
3	25	A	—	745436-8	745440-4
		B	—	745436-7	745440-3
		A	—	—	745440-2
		B	—	745436-3	745440-1
4	37	A	—	745437-8	745441-4
		B	—	745437-7	745441-3
		A	—	—	745441-2
		B	—	745437-3	745441-1

Contact Finish

A—.000030 [0.00076] gold on mating end

B—Gold flash on mating end

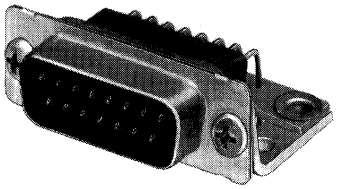
Notes: 1. All connectors are preloaded with size 20 DF posted contacts; plugs with pin contacts and receptacles with socket contacts.
2. .125 [3.18] post length is recommended for pc board thickness of .093 [2.36] max.; .220 [5.59] post length is recommended for pc board thickness of .125 [3.18] max.
3. Male screw retainers are used as mating hardware for connectors with 4-40 female screwlocks.

SOURCE: Catalog 82068

HDP-20 Full Metal-Shell Right-Angle Posted Connectors 545 Mount

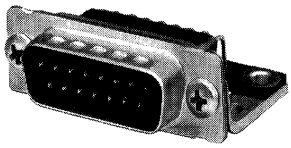
Plugs and Receptacles

Post Size—.025 [0.64] Sq.

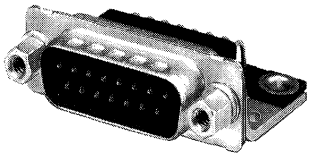


Without Grounding Indents

Plugs



With Grounding Indents



With 4-40 Female Screwlocks

Contact Finish—Brass, duplex plated as follows:
A—.000030 [0.00076] gold on mating end
B—Gold flash on mating end

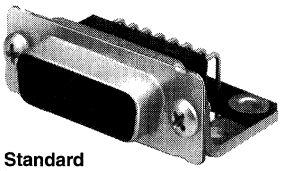
Note: 25 Pos. Housing Dim. (Typ.)—2.088 [53.04] L x 1.029 [26.14] W x .494 [12.55] H

Mates with—HDE-20 Metal-Shell IDC Connectors, page 2274; HDF-20 Low Profile Metal-Shell Connectors, page 5019; and HDP-20 Crimp Snap-In Contact Connectors, pages 2277 and 2278

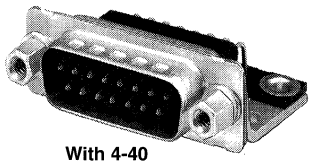
Shell Size	No. of Contact Positions	Contact Finish (Plating Code)	Plug Part Numbers		
			Without Grounding Indents	With Grounding Indents	
			With Standard Mounting Screws*	With Standard Mounting Screws	With Female Screwlocks
1	9	A	745351-2	745351-4	747197-4
		B	745351-1	745351-3	747197-3
2	15	A	—	745352-4	—
		B	745352-1	745352-3	747192-1
3	25	A	—	745353-4	747022-2
		B	745353-1	745353-3	747022-1
4	37	A	745354-2	745354-4	747444-2
		B	745354-1	745354-3	—
5	50	A	—	745355-4	747497-4
		B	—	745355-3	747497-3

*These plugs can be made available with female screwlocks, consult AMP.
Notes: 1. All plugs are preloaded with size 20 DF posted pin contacts.
2. Recommended pc board thickness is .093 [2.36] max.
3. Male screw retainers are used as mating hardware for connectors with 4-40 female screwlocks.

Receptacles



With Standard Mounting Screws



With 4-40 Female Screwlocks

Contact Finish—Phosphor bronze, duplex plated as follows:
A—.000030 [0.00076] gold on mating end
B—Gold flash on mating end

Note: 25 Pos. Housing Dim. (Typ.)—2.088 [53.04] L x 1.033 [26.24] W x .494 [12.55] H

Mates with—HDE-20 Metal-Shell IDC Connectors, page 2274; HDF-20 Low-Profile Metal-Shell Connectors, page 5019; and HDP-20 Crimp Snap-In Contact Connectors, page 2277 and 2278

Shell Size	No. of Contact Positions	Contact Finish (Plating Code)	Receptacle Part Numbers	
			With Standard Mounting Screws	With Female Screwlocks
1	9	A	745112-2	747020-2
		B	745112-1	747020-1
2	15	A	745113-2	747021-2
		B	745113-1	747021-1
3	25	A	745114-2	745536-2
		B	745114-1	745536-1
4	37	A	745115-2	745964-2
		B	745115-1	745964-1
5	50	A	745116-2	747193-2
		B	745116-1	747193-1

Notes: 1. All receptacles are preloaded with size 20 DF posted socket contacts.
2. Recommended pc board thickness is .093 [2.36] max.
3. Male screw retainers are used as mating hardware for connectors with 4-40 female screwlocks.

SOURCE: Catalog 82068

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

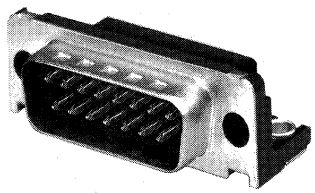
HD-20 Front Metal-Shell Right-Angle Posted Connectors 318 Mount

Plugs

Post Size—.026 [0.66] Dia.

Contact Finish—Brass, duplex plated as follows:
A—.000030 [0.00076] gold on mating end
B—Gold flash on mating end

Mates with—HDE-20 Metal-Shell IDC Connectors, page 2274; HDF-20 Low-Profile Metal-Shell Connectors, page 5019; and HDP-20 Crimp Snap-In Contact Connectors, pages 2277 and 2278.



With Grounding Indents and Grounding Straps

Note: 25 Pos. Housing Dim. (Typ.)—2.088 [53.04] L x .738 [18.75] W x .494 [12.55] H

Shell Size	No. of Contact Positions	Contact Finish (Plating Code)	Plug Part Numbers					
			Without Boardlocks			With Boardlocks		
			With Standard Mounting Holes	With Threaded Inserts	With Fixed Female Screwlocks	With Standard Mounting Holes	With Threaded Inserts	With Fixed Female Screwlocks
1	9	A	747250-2	747250-4	747250-6	747840-2	747840-4	747840-6
		B	—	747250-3	747250-5	747840-1	747840-3	747840-5
2	15	A	747236-2	747236-4	747236-6	747841-2	747841-4	747841-6
		B	—	747236-3	747236-5	—	747841-3	747841-5
3	25	A	747238-2	747238-4	747238-6	747842-2	747842-4	747842-6
		B	—	747238-3	747238-5	—	747842-3	747842-5
4	37	A	747252-2	747252-4	747252-6	747843-2	747843-4	747843-6
		B	—	—	—	—	747843-3	—

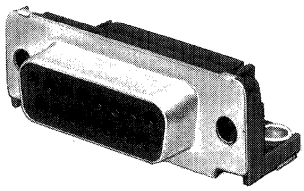
Notes: 1. All plug connectors are preloaded with size 20 DF posted pin contacts.
2. Recommended pc board thickness is .062 [1.58] for connectors with boardlocks and .093 [2.36] max. for all others.
3. Male screw retainers are used as mating hardware for connectors with 4-40 female screwlocks.

Receptacles

Post Size—.026 [0.66] Dia.

Contact Finish—Phosphor bronze, duplex plated as follows:
A—.000030 [0.00076] gold on mating end
B—Gold flash on mating end

Mates with—HDE-20 Metal-Shell IDC Connectors, page 2274; HDF-20 Low-Profile Metal-Shell Connectors, page 5019; and HDP-20 Crimp Snap-In Contact Connectors, pages 2277 and 2278.



With Grounding Straps

Note: 25 Pos. Housing Dim. (Typ.)—2.088 [53.04] L x .740 [18.80] W x .494 [12.55] H

Shell Size	No. of Contact Positions	Contact Finish (Plating Code)	Receptacle Part Numbers					
			Without Boardlocks			With Boardlocks		
			With Standard Mounting Holes	With Threaded Inserts	With Fixed Female Screwlocks	With Standard Mounting Holes	With Threaded Inserts	With Fixed Female Screwlocks
1	9	A	745781-2	745781-4	745781-6	747844-2	747844-4	747844-6
		B	745781-1	745781-3	745781-5	—	747844-3	747844-5
2	15	A	745782-2	745782-4	745782-6	747845-2	747845-4	747845-6
		B	745782-1	745782-3	745782-5	747845-1	747845-3	747845-5
3	25	A	745783-2	745783-4	745783-6	747846-2	747846-4	747846-6
		B	745783-1	745783-3	745783-5	—	747846-3	747846-5
4	37	A	745784-2	745784-4	745784-6	—	747847-4	747847-6
		B	745784-1	745784-3	—	—	747847-3	—

Notes: 1. All receptacle connectors are preloaded with size 20 DF posted socket contacts.
2. Recommended pc board thickness is .062 [1.58] for connectors with boardlocks and .093 [2.36] max. for all others.
3. Male screw retainers are used as mating hardware for connectors with 4-40 female screwlocks.

SOURCE: Catalog 82068

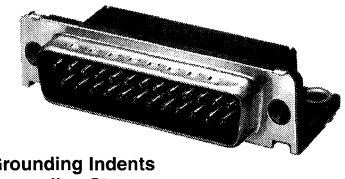
HD-20 Front Metal-Shell Right-Angle Posted Connectors 478 Mount

Plugs

Post Size—.026 [0.66] Dia.

Contact Finish—Brass, duplex plated as follows:
A—.000030 [0.00076] gold on mating end
B—Gold flash on mating end

Mates with—HDE-20 Metal-Shell IDC Connectors, page 2274; HDF-20 Low-Profile Metal-Shell Connectors, page 5019; and HDP-20 Crimp Snap-In Contact Connectors, pages 2277 and 2278.



With Grounding Indents and Grounding Straps

Note: 25 Pos. Housing Dim. (Typ.)—2.088 [53.04] L x .889 [22.58] W x .494 [12.55] H

Shell Size	No. of Contact Positions	Contact Finish (Plating Code)	Plug Part Numbers	
			With Boardlocks	
			With Threaded Inserts	With Fixed Female Screwlocks
1	9	A	747848-4	—
		B	747848-3	747848-5
2	15	A	747849-4	747849-6
		B	—	—
3	25	A	747850-4	747850-6
		B	747850-3	—

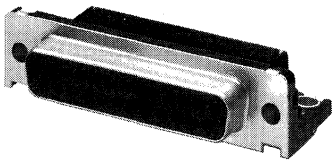
Notes: 1. All plug connectors are preloaded with size 20 DF posted pin contacts.
2. Recommended pc board thickness is .062 [1.58] for connectors with boardlocks and .093 [2.36] max. for all others.
3. Male screw retainers are used as mating hardware for connectors with 4-40 female screwlocks.

Receptacles

Post Size—.026 [0.66] Dia.

Contact Finish—Phosphor bronze, duplex plated as follows:
A—.000030 [0.00076] gold on mating end
B—Gold flash on mating end

Mates with—HDE-20 Metal-Shell IDC Connectors, page 2274; HDF-20 Low-Profile Metal-Shell Connectors, page 5019; and HDP-20 Crimp Snap-In Contact Connectors, pages 2277 and 2278.



With Grounding Straps

Note: 25 Pos. Housing Dim. (Typ.)—2.088 [53.04] L x .902 [22 91] W x .494 [12.55] H

Shell Size	No. of Contact Positions	Contact Finish (Plating Code)	Receptacle Part Numbers			
			Without Boardlocks		With Boardlocks	
			With Threaded Inserts	With Fixed Female Screwlocks	With Threaded Inserts	With Fixed Female Screwlock
1	9	A	747418-4	—	747852-4	—
		B	—	—	747852-3	—
2	15	A	747419-4	747419-6	747853-4	—
		B	747419-3	—	747853-3	—
3	25	A	747420-4	—	747854-4	747854-6
		B	747420-3	—	747854-3	747854-5

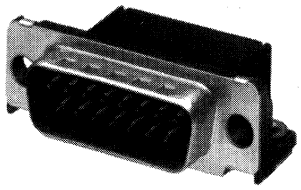
Notes: 1. All receptacle connectors are preloaded with size 20 DF posted socket contacts.
2. Recommended pc board thickness is .062 [1.58] for connectors with boardlocks and .093 [2.36] max. for all others.
3. Male screw retainers are used as mating hardware for connectors with 4-40 female screwlocks.

SOURCE: Catalog 82068

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

HD-20 Front Metal-Shell Right-Angle Posted Connectors 590 Mount

Plugs



With Grounding Indents and Grounding Straps
(Short Mounting Flange*)

Post Size—.026 [0.66] Dia.

Plating Code—Brass, duplex plated as follows:
A—.000030 [0.00076] gold on mating end
B—Gold flash on mating end

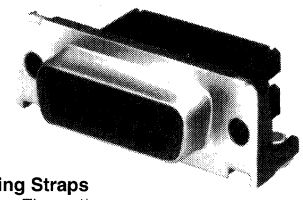
Mates with—HDE-20 Metal-Shell IDC Connectors, page 2274; HDF-20 Low-Profile Metal-Shell Connectors, page 5019; and HDP-20 Crimp Snap-In Contact Connectors, page 2277 and 2278

Note: 25 Pos. Housing Dim. (Typ.)—2.088 [53.04] L x .970 [24.64] W x .494 [12.55] H

Shell Size	No. of Contact Positions	Contact Finish (Plating Code)	Plug Part Numbers				
			Without Boardlocks			With Boardlocks	
			With Threaded Inserts	With Fixed Female Screwlocks	With Standard Mounting Holes	With Threaded Inserts	With Fixed Female Screwlocks
1	9	A	745990-4	—	747832-2	747832-4	747832-6
		B	745990-3	—	—	747832-3	—
2	15	A	745986-4	—	—	747833-4	747833-6
		B	—	—	—	—	—
3	25	A	745994-4	745994-6	—	747834-4	747834-6
		B	745994-3	745994-5	—	747834-3	747834-5
4	37	A	745998-4	—	—	747835-4	747835-6
		B	—	745998-5	—	—	—

*Short mounting flange. Connectors with long mounting flange (.646 [16.41]), are available.
Notes: 1. All plug connectors are preloaded with size 20 DF posted pin contacts.
2. Recommended pc board thickness is .062 [1.58] for connectors with boardlocks and .093 [2.36] max. for all others.
3. Male screw retainers are used as mating hardware for connectors with 4-40 female screwlocks.

Receptacles



With Grounding Straps
(Short Mounting Flange*)

Post Size—.026 [0.66] Dia.

Plating Code—Phosphor bronze, duplex plated as follows:
A—.000030 [0.00076] gold on mating end
B—Gold flash on mating end

Mates with—HDE-20 Metal-Shell IDC Connectors, page 2274; HDF-20 Low-Profile Metal-Shell Connectors, page 5019; and HDP-20 Crimp Snap-In Contact Connectors, pages 2277 and 2278

Note: 25 Pos. Housing Dim. (Typ.)—2.088 [53.04] L x .975 [24.77] W x .494 [12.55] H

Shell Size	No. of Contact Positions	Contact Finish (Plating Code)	Receptacle Part Numbers			
			Without Boardlocks		With Boardlocks	
			With Threaded Inserts	With Fixed Female Screwlocks	With Threaded Inserts	With Fixed Female Screwlocks
1	9	A	745988-4	745988-6	747836-4	747836-6
		B	745988-3	745988-5	747836-3	—
2	15	A	745984-4	—	747837-4	—
		B	745984-3	—	747837-3	—
3	25	A	745992-4	745992-6	747838-4	747838-6
		B	745992-3	745992-5	747838-3	747838-5
4	37	A	745996-4	—	747839-4	747839-6
		B	745996-3	—	747839-3	—

*Short mounting flange. Connectors with long mounting flange (.646 [16.41]), are available.
Notes: 1. All receptacle connectors are preloaded with size 20 DF posted socket contacts.
2. Recommended pc board thickness is .062 [1.58] for connectors with boardlocks and .093 [2.36] max. for all others.
3. Male screw retainers are used as mating hardware for connectors with 4-40 female screwlocks.

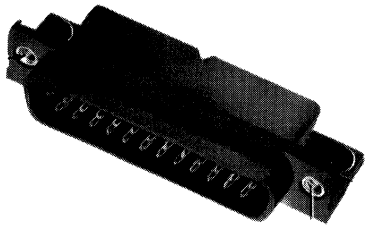
SOURCE: Catalog 82068

HD-20 All-Plastic Right-Angle Posted Connectors 318 Mount

Plugs—With Boardlocks

Plating Code—Brass, duplex plated as follows:
A—.000030 [0.00076] gold on mating end

Mates with—HDE-20 All-Plastic IDC Connectors, page 2273; HDF-20 Low-Profile All-Plastic Connectors, page 5020.



Note: 15 Pos. Housing Dim. (Typ.)—1.550 [39.37] L x .709 [18.00] W x .452 [11.48] H

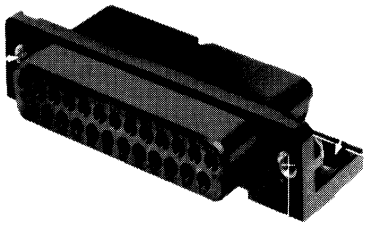
Shell Size	No. of Contact Positions	Contact Finish (Plating Code)	Part Numbers With Threaded Inserts
2	15	A	748904-1

Consult AMP for availability.
Notes: 1. All plug connectors are preloaded with size 20 DF posted pin contacts.
2. Recommended pc board thickness is .093 [2.36] max.
3. Male screw retainers are used as mating hardware for connectors with 4-40 female screwlocks.

Receptacles—With Boardlocks

Plating Code—Phosphor bronze, duplex plated as follows:
A—.000030 [0.00076] gold on mating end
B—Gold flash on mating end

Mates with—HDE-20 All-Plastic IDC Connectors, page 2273; HDF-20 Low-Profile All-Plastic Connectors, page 5020.



Note: 25 Pos. Housing Dim. (Typ.)—2.090 [53.09] L x .716 [18.18] W x .452 [11.48] H

Shell Size	No. of Contact Positions	Contact Finish (Plating Code)	Part Numbers With Threaded Inserts	Part Numbers With Fixed Female Screwlocks
1	9	A	—	748979-1
		B	—	748979-2
3	25	A	748901-1	748981-1
		B	—	748981-2
4	37	A	748902-1	—

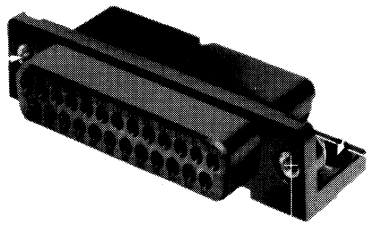
Consult AMP for availability.
Notes: 1. All receptacle connectors are preloaded with size 20 DF posted socket contacts.
2. Recommended pc board thickness is .093 [2.36] max.
3. Male screw retainers are used as mating hardware for connectors with 4-40 female screwlocks.

Receptacles—Without Boardlocks

Post Size—.026 [0.66] Dia.

Plating Code—Phosphor bronze, duplex plated as follows:
A—.000030 [0.00076] gold on mating end
B—Gold flash on mating end

Mates with—HDE-20 All-Plastic IDC Connectors, page 2273; HDF-20 Low-Profile All-Plastic Connectors, page 5020.



Note: 15 Pos. Housing Dim. (Typ.)—2.088 [53.04] L x .716 [18.18] W x .452 [11.48] H

Shell Size	No. of Contact Positions	Contact Finish (Plating Code)	Part Numbers With Threaded Inserts	Part Numbers With Fixed Female Screwlocks	Part Numbers With Standard Mounting Holes
1	9	A	745394-2	745395-2	—
		B	—	745395-1	745131-1
2	15	A	—	745396-2	745271-2
3	25	A	745392-2	745397-2	745132-2
		B	745392-1	745397-1	745132-1

Notes: 1. All receptacle connectors are preloaded with size 20 DF posted socket contacts.
2. Recommended pc board thickness is .093 [2.36] max.
3. Male screw retainers are used as mating hardware for connectors with 4-40 female screwlocks.

SOURCE: Catalog 82068

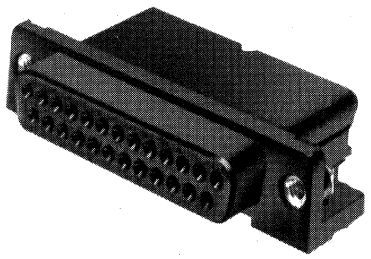
Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

HD-20 All-Plastic Right-Angle Posted Connectors 590 Mount

Receptacles—With Boardlocks

Plating Code—Phosphor bronze, duplex plated as follows:
A—.000030 [0.00076] gold on mating end
B—Gold flash on mating end

Mates with—HDE-20 All-Plastic IDC Connectors, page 2273; HDF-20 Low-Profile All-Plastic Connectors, page 5020.



Note: 25 Pos. Housing Dim. (Typ.)—2.088 [53.04] L x .988 [25.09] W x .452 [11.48] H

Shell Size	No. of Contact Positions	Contact Finish (Plating Code)	Part Numbers	
			With Threaded Inserts	With Fixed Female Screwlocks
1	9	B	748907-2	—
3	25	A	—	748989-1
		B	748909-2	748989-2
4	37	B	748910-2	—

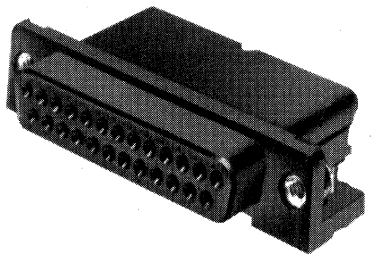
Notes: 1. All receptacle connectors are preloaded with size 20 DF posted socket contacts.
2. Recommended pc board thickness is .093 [2.36] max.
3. Male screw retainers are used as mating hardware for connectors with 4-40 female screwlocks.

Receptacles—Without Boardlocks

Post Size—.026 [0.66] Dia.

Plating Code—Brass, duplex plated as follows:
A—.000030 [0.00076] gold on mating end
B—Gold flash on mating end

Mates with—HDE-20 All-Plastic IDC Connectors, page 2273; HDF-20 Low-Profile All-Plastic Connectors, page 5020.



Note: 25 Pos. Housing Dim. (Typ.)—2.088 [53.04] L x .988 [25.09] W x .452 [11.48] H

Shell Size	No. of Contact Positions	Contact Finish (Plating Code)	Part Numbers		
			With Threaded Inserts	With Fixed Female Screwlocks	With Standard Mounting Holes
1	9	A	747459-4	747459-6	747459-2
		B	747459-3	747459-5	747459-1
2	15	A	747460-4	748948-1	747460-2
		B	747460-3	747460-5	747460-1
3	25	A	747461-4	747461-6	747461-2
		B	747461-3	747461-5	747461-1
4	37	A	747462-4	747462-6	747462-2

Notes: 1. All receptacle connectors are preloaded with size 20 DF posted socket contacts.
2. Recommended pc board thickness is .093 [2.36] max.
3. Male screw retainers are used as mating hardware for connectors with 4-40 female screwlocks.

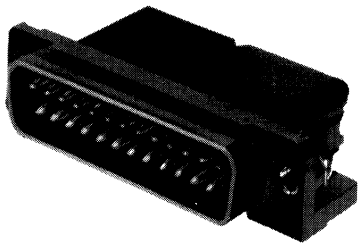
Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

HD-20 All-Plastic Right-Angle Posted Connectors 590 Mount

Plugs—With Boardlocks

Plating Code—Brass, duplex plated as follows:
A—.000030 [0.00076] gold on mating end
B—Gold flash on mating end

Mates with—HDE-20 All-Plastic IDC Connectors, page 2273; HDF-20 Low-Profile All-Plastic Connectors, page 5020.



Note: 25 Pos. Housing Dim. (Typ.)—2.090 [53.09] L x .981 [24.91] W x .452 [11.48] H

Shell Size	No. of Contact Positions	Contact Finish (Plating Code)	Part Numbers	
			With Threaded Inserts	With Fixed Female Screwlocks
2	15	A	—	748992-4
3	25	B	748913-2	748993-2

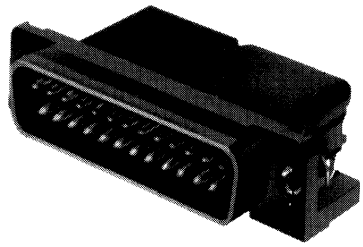
Notes: 1. All plug connectors are preloaded with size 20 DF posted pin contacts.
2. Recommended pc board thickness is .093 [2.36] max.
3. Male screw retainers are used as mating hardware for connectors with 4-40 female screwlocks.

Plugs—Without Boardlocks

Post Size—.026 [0.66] Dia.

Plating Code—Brass, duplex plated as follows:
A—.000030 [0.00076] gold on mating end
B—Gold flash on mating end

Mates with—HDE-20 All-Plastic IDC Connectors, page 2273; HDF-20 Low-Profile All-Plastic Connectors, page 5020.



Note: 25 Pos. Housing Dim. (Typ.)—2.090 [53.09] L x .981 [24.91] W x .452 [11.48] H

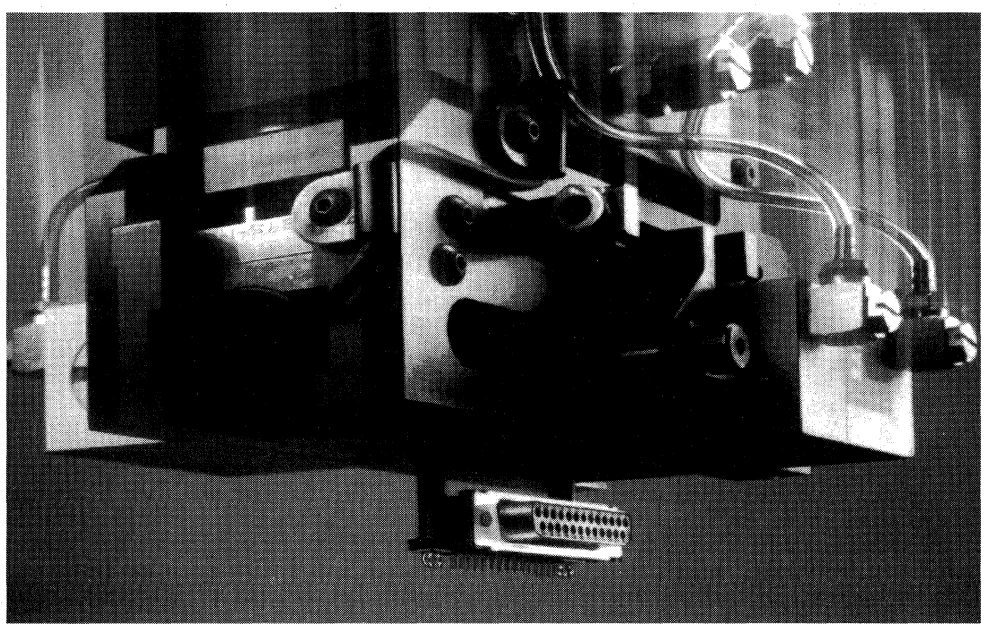
Shell Size	No. of Contact Positions	Contact Finish (Plating Code)	Part Numbers		
			With Threaded Inserts	With Fixed Female Screwlocks	With Standard Mounting Holes
1	9	A	747467-4	747467-6	747467-2
		B	—	—	747467-1
2	15	A	748872-1	748952-1	747468-2
3	25	A	748873-1	748953-1	—
		B	748873-2	748953-2	—
4	37	A	—	748954-1	747470-2
		B	—	—	747470-1

Notes: 1. All plug connectors are preloaded with size 20 DF posted pin contacts.
2. Recommended pc board thickness is .093 [2.36] max.
3. Male screw retainers are used as mating hardware for connectors with 4-40 female screwlocks.

SOURCE: Catalog 82068

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

HD-20 Right-Angle, Metal-Shell Connectors (AMPLIMITE III)



Product Facts

- Designed and packaged for use with robotic component insertion equipment
- 9, 15, 25 and 37 positions
- Standard housings are UL 94V-0 rated suitable for standard wave soldering
- High temperature housings are UL 94V-0 rated compatible with vapor-phase and infrared reflow soldering (SMT)
- Mating hardware options—4-40 threaded inserts or fixed female screwlocks
- Choice of with or without boardlocks
- Contacts available with three types of gold plating on the mating end—.000030 [0.00076], .000010 [0.00254] or gold flash
- True contact-to-board registration
- Robotic guide notch on connector housing
- Industry standard footprint—.318 [8.08]
- Offers applied cost savings through robotic application
- Recognized under the Component Program of Underwriters Laboratories, Inc. File No. E28476
- Certified by Canadian Standards Association, File No. LR 7189
- Free 3D and 2D CAD images—See page 56

AMPLIMITE III, right-angle PCB connectors provide the most wanted features of subminiature D connectors. They are designed for robotic, pick-and-place Pc board insertion equipment. Connectors are packaged in tubes for high-volume, automatic tube feeders. With these feeder tubes connectors can be inventoried, then automatically processed at a rate of up to twenty tubes of connectors, depending on the type of robotic equipment.

AMPLIMITE III connectors offer "true" contact-to-contact positioning that eliminates time consuming, labor intense connector-to-board alignment, necessary with other techniques, whether manual or robotic. In addition, as production requirements increase, tubes of connectors can be loaded while the equipment is running, minimizing downtime.

Intermateable with other subminiature D connectors, AMPLIMITE III connector housings are made of UL 94V-0 rated thermoplastic, compatible with standard wave soldering and are also available in UL 94V-0 rated high temperature housings, compatible with vapor-phase and infrared reflow soldering techniques (SMT).

The complete line is available in 9, 15, 25 and 37 positions, with industry standard .318 [8.08] footprint. Other options include: Mating hardware choice of fixed female screwlocks or 4-40 threaded inserts; connectors with or without boardlocks. Front metal-shell plug connectors incorporate grounding indents as part of their shielding capabilities.

Brass pin contacts and phosphor bronze socket contacts are available in a choice of three types of gold plating to meet the needs of a variety of applications: .000030 [0.00076], .000010 [0.00254] and gold flash on the mating end.

Design, Engineering, and Technical Support combined with Robotic PCB Application, all add up to quality products and services with the added advantage of overall applied cost savings.

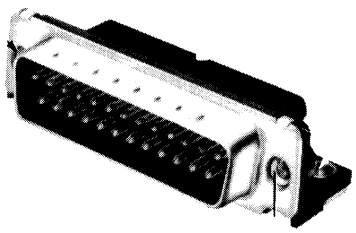
HD-20 Metal-Shell Right-Angle Connectors (AMPLIMITE III) 318 Mount

EADS CD-ROM

Plugs

Plating Code—Brass, duplex plated as follows:
A—.000030 [0.00076] gold on mating end
B—Gold flash on mating end
C—.000010 [0.000254] gold on mating end

Mates with—HDE-20 Metal-Shell IDC Connectors, page 2274; HDF-20 Low-Profile Metal-Shell Connectors, page 5019; HDP-20 Crimp Snap-In Contact Connectors, pages 2277 and 2278.



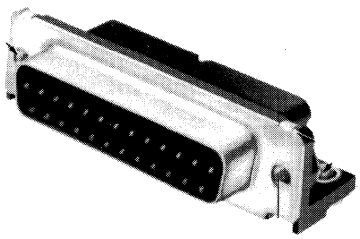
Note: 25 Pos. Housing Dim. (Typ.)—2.090 [53.09] L x .738 [18.74] W x .494 [12.55] H

Shell Size	No. of Contact Positions	Contact Finish (Plating Code)	Without Boardlocks		With Boardlocks			
			With Threaded Inserts	With Fixed Female Screwlocks	With Threaded Inserts (SMT Compat.)	With Threaded Inserts	With Fixed Female Screwlocks (SMT Compat.)	With Fixed Female Screwlocks
1	9	A	748839-1	—	748879-4	748879-1	748959-5	748959-1
		B	—	—	—	748879-2	—	748959-2
		C	—	—	—	748879-3	—	—
2	15	A	748840-1	—	748880-4	—	748960-4	748960-1
		B	748840-2	—	—	748880-2	—	748960-2
3	25	A	—	748921-1	748881-4	748881-1	748961-4	748961-1
		B	—	—	—	748881-2	—	—
		C	—	—	—	748881-3	—	—
4	37	A	—	—	748882-4	748882-1	748962-4	—

Receptacles

Plating Code—Brass duplex plated as follows:
A—.000030 [0.00076] gold on mating end
B—Gold flash on mating end
C—.000010 [0.000254] gold on mating end

Mates with—HDE-20 Metal-Shell IDC Connectors, page 2274; HDF-20 Low-Profile Metal-Shell Connectors, page 5019; HDP-20 Crimp Snap-In Contact Connectors, pages 2277 and 2278.



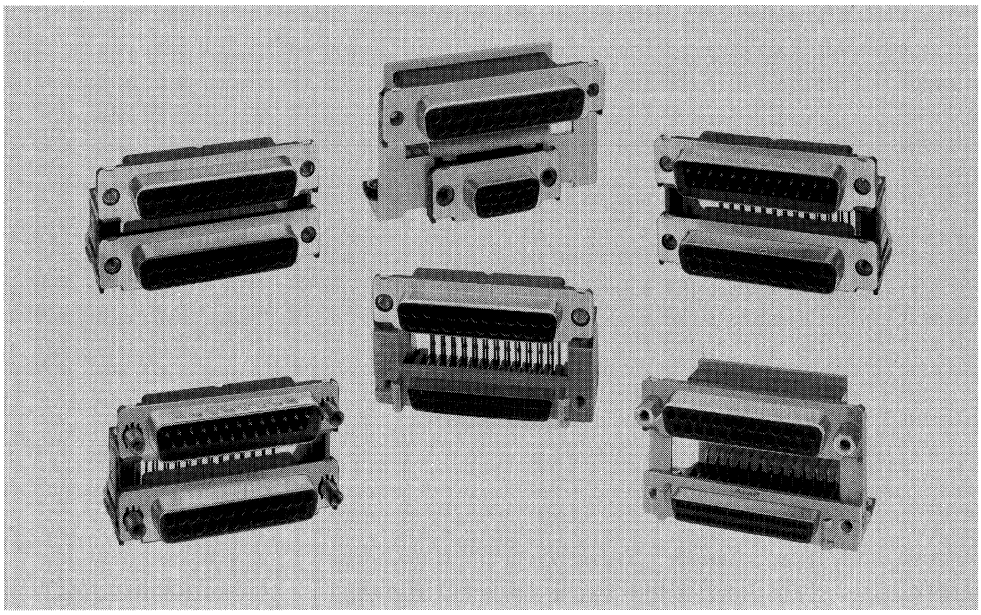
Note: 25 Pos. Housing Dim. (Typ.)—2.090 [53.09] L x .740 [18.80] W x .494 [12.55] H

Shell Size	No. of Contact Positions	Contact Finish (Plating Code)	Without Boardlocks		With Boardlocks			
			With Threaded Inserts	With Fixed Female Screwlocks	With Threaded Inserts (SMT Compat.)	With Threaded Inserts	With Fixed Female Screwlocks (SMT Compat.)	With Fixed Female Screwlocks
1	9	A	—	748915-1	748875-4	748875-1	748955-5	748955-1
		B	—	—	—	748875-2	—	748955-2
		C	—	—	—	748875-3	—	—
2	15	A	748836-1	748916-1	748876-4	748876-1	748956-5	748956-1
		B	—	—	—	748876-2	—	—
		C	—	—	—	748876-3	—	—
3	25	A	748837-1	748917-1	748877-5	748877-1	748957-4	748957-1
		B	—	748917-2	—	748877-2	—	748957-2
		C	—	—	—	748877-3	—	—
4	37	A	—	—	748878-4	748878-1	748958-4	—
		B	—	—	—	748878-2	—	—

SOURCE: Catalog 82068

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

Stacked PCB Connectors Series II and Hybrid Styles



Product Facts

- **Stacked pcb connectors save board real estate**
- **Wide choice of configurations available**
- **Front Metal-Shells for EMI/RFI shielding**
- **Housings made of UL 94V-0 rated thermoplastic**
- **Intermateable with other subminiature D connectors**
- **Plug connectors have built-in grounding indents**
- **Choice of 4-40 threaded insert or female screwlock mating hardware**
- **Configurations available with boardlocks**
- **Series II offer high performance and greater economy**
- **Hybrid styles provide maximum selectivity and permit mixing of signal speeds**
- **Packaged in plastic trays for ease of handling**
- **Recognized under the Component Program of Underwriters Laboratories Inc., File No. E28476**
- **Certified by Canadian Standards Association, File No. LR 7189**

AMPLIMITE HD-20 Subminiature D, Stacked PCB Connectors are members of the complete line of AMPLIMITE Subminiature D Connector family which has been accepted by the electronic industry for their rugged design and ease of application.

Stacked connectors add the advantage of reducing overall board real estate normally consumed by individual pcb connectors. The versatility of the AMPLIMITE HD-20 connector line enables you to select the stacked connector best suited for your specific application.

Series II

AMPLIMITE HD-20 Stacked Connectors, Series II offer the same high degree of performance as Series I, but at a reduced cost. Contact tails are supported by a thermoplastic stabilizing bar. The Series II line consists of:

- Receptacle over Receptacle in a total of 18, 30, 50, and 74 contact positions
- Plug over Plug in a total of 18, 30, 50, and 74 contact positions
- Receptacle over Plug in a total of 18, 30, 50, and 74 contact positions
- Plug over Receptacle in a total of 18, 30, 50, and 74 contact positions

All configurations are available with a choice of mounting hardware—4-40 threaded inserts and female screwlocks, with or without boardlocks.

Hybrid

AMPLIMITE Hybrid Stacked Connectors combine a variety of subminiature D connector configurations into a single connector. This permits mixing signal speeds with a substantial reduction in pc board real estate.

The present line consists of AMPLIMITE HD-20 Series II, High Density Connectors, and AMPLIMITE .050 Series Connectors. Configuration styles include:

- Series II with a 25-position AMPLIMITE HD-20 Receptacle over a 50-position AMPLIMITE .050 Series Receptacle

All AMPLIMITE Stacked PCB Connectors feature front metal-shells for EMI/RFI shielding, with housings made of UL 94V-0 approved material. Series II offers a choice of duplex plated contacts in either .000030 [0.00076] min. gold or gold flash on the mating end and tin-lead plating on the termination end, with the entire contact nickel underplated. Hybrid connectors are available with .000030 [0.00076] min. gold plating on the mating end. Hybrid connectors with gold flash plated contacts can be provided, consult AMP for further information

Due to the versatility of the AMPLIMITE Hybrid line of connectors any combination with AMPLIMITE HD-20 as the top connector and HD-22 High Density, and AMPLIMITE .050 Series as the bottom connector can be provided based on your application requirements. Contact AMP for additional information.

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

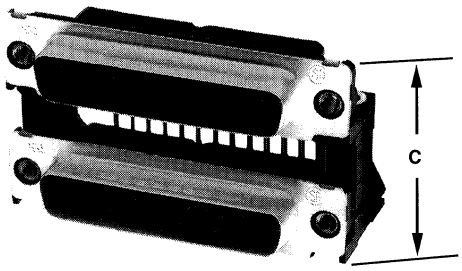
HD-20 Front Metal-Shell Right-Angle Stacked Connectors, Series II

Post Size—.026 [0.66] Dia.

Plating Code—Duplex plated as follows:
A—.000030 [0.00076] gold on mating end
B—Gold flash on mating end

Mates with—HDE-20 Metal-Shell IDC Connectors, page 2274; HDF-20 Low-Profile Metal-Shell Connectors, page 5019; HDP-22 and HDP-20 Crimp Snap-In Contact Connectors, pages 2277 and 2278.

Receptacle over Receptacle



Note: 50 Pos. Housing Dim. (Typ.)—2.090 [53.09] L x 1.039 [26.39] W

Shell Size	No. of Contact Positions	Dim. C	Contact Finish (Plating Code)	Part Numbers			
				Without Boardlocks		With Boardlocks	
				With Threaded Inserts	With Female Screwlocks	With Threaded Inserts	With Female Screwlocks
1	18	**1.394** 35.41	A	750585-5	750586-5	750585-6	750586-6
			B	1-750585-1	1-750586-0	1-750585-2	—
		1.244 31.60	A	750585-3	750586-3	750585-4	750586-4
			B	750585-9	750586-9	—	—
		1.144 29.06	A	—	—	750585-2	—
		1.119 28.42	A	—	—	750585-8	—
2	30	**1.244** 31.60	A	—	—	750587-4	—
			B	1-750587-0	—	1-750587-1	—
		1.144 29.06	A	—	—	750587-2	—
3	50	**1.394** 35.41	A	750589-5	—	750589-6	750590-6
			B	1-750589-0	1-750590-0	1-750589-2	—
		1.244 31.60	A	—	750590-3	750589-4	—
		1.119 28.42	A	—	—	750589-8	—
4	74	**1.394** 35.41	A	750591-3	—	—	750592-4
			B	750591-9	750592-9	—	—
		1.244 31.60	A	—	—	750591-6	—

Notes: 1. All connectors are preloaded with size 20 DF posted socket contacts.
2. Recommended pc board thickness is .062 [1.58] for connectors with boardlocks and .093 [2.36] max. for all others.
3. Male screw retainers are used as mating hardware for connectors with 4-40 female screwlocks.

SOURCE: Catalog 82068

Specifications subject to change.
1-800-522-6752 Product Information Center/ AMP FAX Service
1-800-722-1111 Tooling/Technical Assistance Center

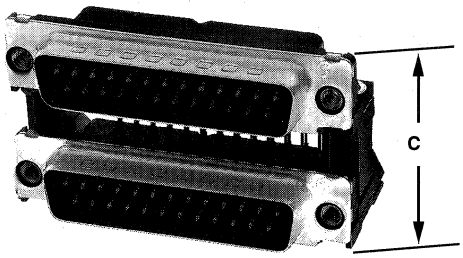
HD-20 Front Metal-Shell Right-Angle Stacked Connectors, Series II
(Continued)

Post Size—.026 [0.66] Dia.

Plating Code—Duplex plated as follows:
A—.000030 [0.00076] gold on mating end
B—Gold flash on mating end, tin-lead on termination end

Mates with—HDE-20 Metal-Shell IDC Connectors, page 2274; HDF-20 Low Profile Metal-Shell Connectors, page 5019; HDP-22 and HDP-20 Crimp Snap-In Contact Connectors, pages 2277 and 2278

Plug over Plug



Note: 50 Pos. Housing Dim. (Typ.)—2.090 [53.09] L x 1.032 [26.21] W

Shell Size	No. of Contact Positions	Dim. C	Contact Finish (Plating Code)	Part Numbers			
				Without Boardlocks		With Boardlocks	
				With Threaded Inserts	With Female Screwlocks	With Threaded Inserts	With Female Screwlocks
1	18	**1.394** 35.41	A	—	—	750593-6	—
		1.244 31.60	A	—	750594-3	750593-4	750594-4
			B	—	—	1-750593-0	—
2	30	**1.394** 35.41	A	—	—	—	750596-6
3	50	**1.394** 35.41	A	750597-5	—	—	—
			B	—	—	1-750597-2	—
		1.244 31.60	A	750597-3	—	750597-4	750598-4
			B	750597-9	—	—	—
		1.144 29.06	A	750597-7	—	—	—
		1.119 28.42	A	750597-7	—	—	—
4	74	**1.394** 35.41	A	750599-5	750600-5	750599-6	—
		1.244 31.60	A	—	—	750599-4	—
		1.144 29.06	A	—	—	750599-2	—

Notes: 1. All connectors are preloaded with size 20 DF posted socket contacts.
2. Recommended pc board thickness is .062 [1.58] for connectors with boardlocks and .093 [2.36] max. for all others.
3. Male screw retainers are used as mating hardware for connectors with 4-40 female screwlocks.

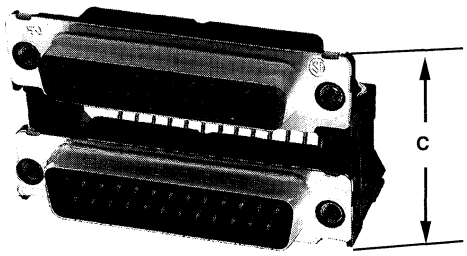
HD-20 Front Metal-Shell Right-Angle Stacked Connectors, Series II
(Continued)

Post Size—.026 [0.66] Dia.

Plating Code— Duplex plated as follows:
A—.000030 [0.00076] gold on mating end
B—Gold flash on mating end

Mates with—HDE-20 Metal-Shell IDC Connectors, page 2274; HDF-20 Low-Profile Metal-Shell Connectors, page 5019; HDP-22 and HDP-20 Crimp Snap-In Contact Connectors, pages 2277 and 2278

Receptacle over Plug



Note: 50 Pos. Housing Dim. (Typ.)—2.090 [53.09] L x 1.039 [26.39] W

Shell Size	No. of Contact Positions	Dim. C	Contact Finish (Plating Code)	Part Numbers			
				Without Boardlocks		With Boardlocks	
				With Threaded Inserts	With Female Screwlocks	With Threaded Inserts	With Female Screwlocks
1	18	**1.394** 35.41	A	—	750610-5	—	—
		1.244 31.60	A	750609-3	—	750609-4	—
		1.144 29.06	A	—	—	750609-2	—
		1.119 28.42	A	—	—	750609-8	—
2	30	**1.244** 31.60	A	—	—	750611-4	—
3	50	**1.394** 35.41	A	750613-5	750614-5	750613-6	—
			B	—	—	1-750613-1	—
		1.244 31.60	A	750613-3	—	750613-4	750614-4
			B	750613-9	—	—	—

Notes: 1. All connectors are preloaded with size 20 DF posted socket contacts.
2. Recommended pc board thickness is .062 [1.58] for connectors with boardlocks and .093 [2.36] max. for all others.
3. Male screw retainers are used as mating hardware for connectors with 4-40 female screwlocks.

SOURCE: Catalog 82068

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

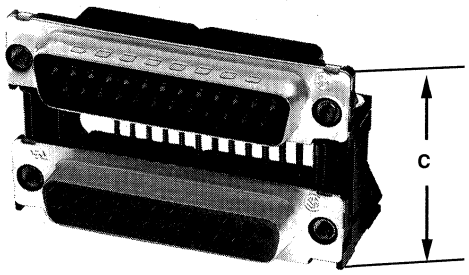
HD-20 Front Metal-Shell Right-Angle Stacked Connectors, Series II
(Continued)

Post Size—.026 [0.66] Dia.

Plating Code—Duplex plated as follows:
A—.000030 [0.00076] gold on mating end
B—Gold flash on mating end

Mates with—HDE-20 Metal-Shell IDC Connectors, page 2274; HDF-20 Low-Profile Metal-Shell Connectors, page 5019; HDP-22 and HDP-20 Crimp Snap-In Contact Connectors, pages 2277 and 2278.

Plug Over Receptacle



Note: 50 Pos. Housing Dim. (Typ.)—2.090 [53.09] L x 1.032 [26.21] W

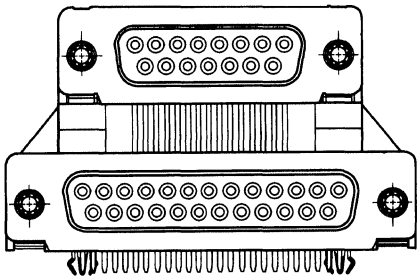
Shell Size	No. of Contact Positions	Dim. C	Contact Finish (Plating Code)	Part Numbers	
				Without Boardlocks	With Boardlocks
				With Threaded Inserts	With Threaded Inserts
1	18	**1.394** 35.41	A	—	750603-6
		1.244 31.60	A	—	750603-4
2	30	**1.244** 31.60	A	—	750605-4
3	50	**1.394** 35.41	A	—	750601-6
		1.244 31.60	A	750601-3	750601-4
			B	—	1-750601-0
4	74	**1.394** 35.41	A	—	750607-6
		1.244 31.60	A	—	750607-4

Notes: 1. All connectors are preloaded with size 20 DF posted socket contacts.
2. Recommended pc board thickness is .062 [1.58] for connectors with boardlocks and .093 [2.36] max. for all others.
3. Male screw retainers are used as mating hardware for connectors with 4-40 female screwlocks.

HD-20 Front Metal-Shell Right-Angle Stacked Connectors, Series II
(Continued)

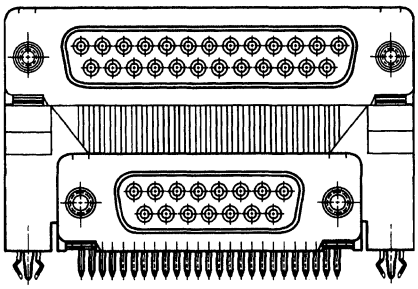
Receptacle over Receptacle Part No. 787069-1

15-Position AMPLIMITE HD-20 Receptacle over 25-Position AMPLIMITE HD-20 Receptacle



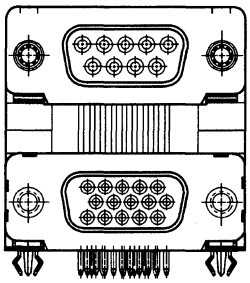
Receptacle over Receptacle Part No. 786590-1

25-Position AMPLIMITE HD-20 Receptacle over 15-Position AMPLIMITE HD-20 Receptacle



Receptacle over Receptacle Part No. 786592-1

9-Position AMPLIMITE HD-20 Receptacle over 15-Position AMPLIMITE HD-22 Receptacle

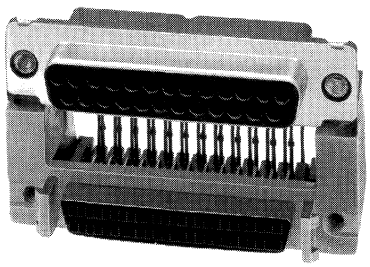


Hybrid Stacked PCB Connectors, Series II

Part No. 786387-1, with 4-40 Threaded Inserts

Part No. 786387-2, with 2-56 Threaded Inserts

25-Position AMPLIMITE HD-20 Receptacle over 50-Postion AMPLIMITE .050 Series Receptacle



Note: Housing Dim. (Typ.)—
2.090 [53.09] L x .983 [24.98] W x 1.249 [31.72] H

SOURCE: Catalog 82068

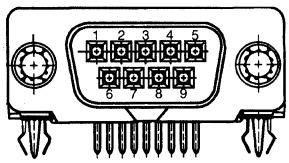
Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

HDJ-20 Front Metal-Shell Right-Angle Posted Connectors

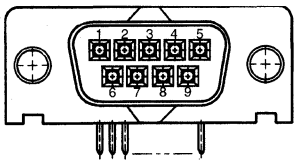
9 Position Plugs (with Panel Lock)

Mates with—

HDJ-20 Receptacles,
HDP-20 Receptacles,
HDF-20 Receptacles,
HDE-20 Receptacles



Part No. 750759-1
318 Mount



Part No. 749247-1
590 Mount

Note: Housing Dim. (Typ.) —1.213 [30.81] L x .733 [18.62] W x .494 [12.55] H

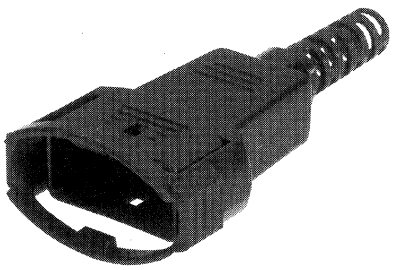
HDJ-20 All-Plastic Right-Angle Posted Connectors 590 Mount

9 Position Plugs (with Panel Lock)

Plating Code—
A—Gold flash over .000050 [0.00127] nickel on entire contact, with additional .000030 [0.00076] gold on mating end
B—.000030 [0.00076] gold on mating end, .000100 [0.00254] tin-lead on termination end, all over .000050 [0.00127] nickel underplating

Mates with—

HDJ-20 Receptacles,
HDP-20 Receptacles,
HDF-20 Receptacles,
HDE-20 Receptacles



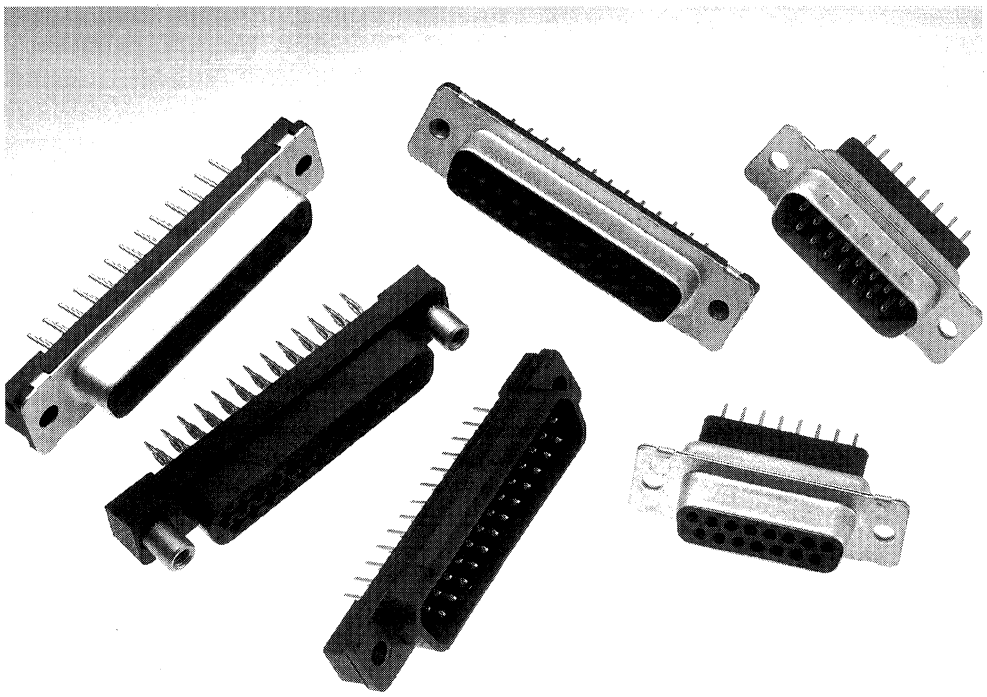
Contact Finish Plating Code	Part No.
B	745001-2
A	745001-3
B	745001-7*

*With inserts.

Note: 9 Pos. Housing Dim. (Typ.)—1.213 [30.81] L x .985 [25.02] W x .452 [11.48] H

SOURCE: Catalog 82068

Straight Posted Connectors



Product Facts

- Flame retardant thermoplastic housing material, UL 94V-0 rated
- HD-20 straight posted connectors are available in 9, 15, 25, 37 and 50 positions (Shell Sizes 1 thru 5)
- HD-20 straight posted connectors in Full Metal-Shell, Front Metal-Shell and All-Plastic versions
- HD-20 connectors with ACTION PIN contacts are available in low, medium and high profiles with integral standoffs
- HD-22 straight posted connectors are available in 15, 26, 44 and 78 positions (Shell Sizes 1, 2, 4 and 5)
- ACTION PIN contact connectors for both .093 [2.36] and .062 [1.58] min. thick pc board application
- Various straight posted connectors offer a choice of through-holes, 4-40 threaded inserts or 4-40 fixed female screwlocks
- Choice of contact platings
- Integral boardlock feature secures connector to pc board prior to soldering
- Connectors are intermateable with any size 20 or 22 subminiature D connectors dimensionally complying with MIL-C-24308
- Recognized under the Component Program of Underwriters Laboratories Inc., File No. E28476
- Certified by Canadian Standards Association, File No. LR 7189

SOURCE: Catalog 82068

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

HD-20 Full Metal-Shell Straight Posted Connectors

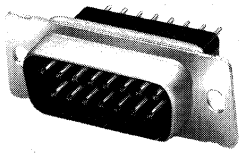
Plugs

Post Size—.025 [0.64] Sq.

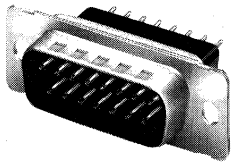
Plating Code—
A—.000030 [0.00076] gold on mating end, tin-lead on termination end, with entire contact .000050 [0.00127] (min.) nickel underplated
B—Gold flash on mating end, tin-lead on termination end, with entire contact .000050 [0.00127] (min.) nickel underplated

Mates with—HDE-20 Metal-Shell IDC Connectors, page 2274; HDF-20 Low-Profile Metal-Shell Connectors, page 5019; HDP-20 Crimp Snap-In Contact Connectors, pages 2277 and 2278.

Without Grounding Indents



With Grounding Indents



Note: 25 Pos. Housing Dim. (Typ.)—2.088 [53.04] L x .432 [10.97] W x .494 [12.55] H

Shell Size	No. of Contact Positions	Post Length*	Contact Finish (Plating Code)	Plug Part Numbers	
				Without Grounding Indents	With Grounding Indents
1	9	.125 3.18	A	745182-1	745410-1
			B	745182-2	745410-2
		.188 4.78	A	—	745410-7
			B	745182-8	—
2	15	.125 3.18	A	745184-1	745411-1
			B	745184-2	745411-2
		.188 4.78	A	—	745411-7
			B	—	745411-8
3	25	.125 3.18	A	745186-1	745412-1
			B	745186-2	745412-2
		.188 4.78	A	745186-7	745412-7
			B	—	745412-8
4	37	.125 3.18	A	745188-1	745413-1
		.188 4.78	B	—	745413-8
5	50	.125 3.18	A	—	745414-1
			B	—	745414-2
		.188 4.78	A	—	745414-7

*.125 [3.18] post length is for recommended pc board thickness of .062-.093 [1.58-2.36] max.; .188 [4.78] post length is for recommended pc board thickness of .125 [3.18].

Notes: 1. All plugs are preloaded with size 20 DF posted pin contacts.
2. Special loading of contacts can be arranged upon request.
3. Longer post lengths available, consult AMP.

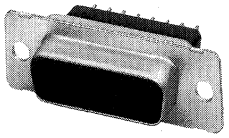
Receptacles

Post Size—.025 [0.64] Sq.

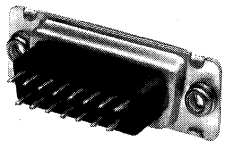
Plating Code—
A—.000030 [0.00076] gold on mating end, tin-lead on termination end, with entire contact .000050 [0.00127] min. nickel underplated
B—Gold flash on mating end, tin-lead on termination end, with entire contact .000050 [0.00127] min. nickel underplated

Mates with—HDE-20 Metal-Shell IDC Connectors, page 2274; HDF-20 Low-Profile Metal-Shell Connectors, page 5019; HDP-20 Crimp Snap-In Contact Connectors, pages 2277 and 2278.

With Standard Mounting Holes



With Clinch Nuts



Note: 25 Pos. Housing Dim. (Typ.)—2.088 [53.04] L x .432 [10.97] W x .494 [12.55] H

Shell Size	No. of Contact Positions	Post Length*	Contact Finish (Plating Code)	Receptacle Part Numbers	
				With Standard Mounting Holes	With Clinch Nuts
1	9	.125 3.18	A	745183-1	747190-1
			B	745183-2	747190-2
		.188 4.78	A	745183-7	—
			B	745183-8	747190-4
2	15	.125 3.18	A	745185-1	745820-1
			B	745185-2	745820-2
		.188 4.78	A	745185-7	745820-7
			B	745185-8	745820-8
3	25	.125 3.18	A	745187-1	745886-1
			B	745187-2	745886-2
		.188 4.78	A	745187-7	745886-7
			B	745187-8	745886-8
4	37	.125 3.18	A	745189-1	747315-1
			B	—	747315-2
		.188 4.78	A	745189-7	747315-7
			B	745189-8	—
5	50	.125 3.18	A	745191-1	747302-1
			B	745191-2	747302-2
		.188 4.78	A	745191-7	747302-7
			B	745191-8	—

*.125 [3.18] post length is for recommended pc board thickness of .062-.093 [1.58-2.36] max.; .188 [4.78] post length is for recommended pc board thickness of .125 [3.18].

Notes: 1. All receptacles are preloaded with size 20 DF posted socket contacts.
2. Special loading of contacts can be arranged upon request.
3. Longer post lengths available, consult AMP.

SOURCE: Catalog 82068

HD-22 Front Metal-Shell Straight Posted Connectors

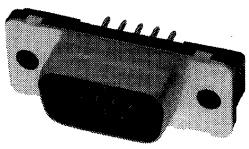
Plugs

Post Size—.025 [0.64] Sq.

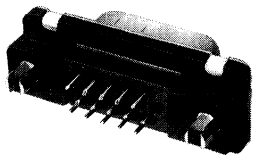
Plating Code—
A—.000030 [0.00076] gold on mating end, tin-lead on termination end, with entire contact .000050 [0.00127] min. nickel underplated

Mates with—HDP-22 Crimp Snap-In Contact Connectors, page 2272.

With 4-40 Threaded Inserts



With Retention Inserts



Note: 15 Pos. Housing Dim. (Typ.)—1.213 [30.81] L x .469 [11.91] W x .494 [12.55] H

Shell Size	No. of Contact Positions	Contact Finish (Plating Code)	Part Numbers	
			4-40 Threaded Inserts	Retention Inserts (for .062 [1.58] PCB)
1	15	A	749798-1	750489-1
5	78	A	749019-1	—

Notes: 1. All connectors are preloaded with size 22 DF posted pin contacts.
2. Recommended pc board thickness is .062 [1.58] for connectors with boardlocks and .093 [2.36] max. for all others.
3. Male screw retainers are used as mating hardware for connectors with 4-40 female screwlocks.
4. Pc board hole size is .121±.002 [3.07±0.051] for all retention inserts.

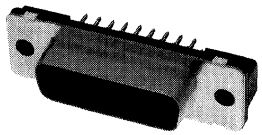
Receptacles

Post Size—.026 [0.66] Dia.

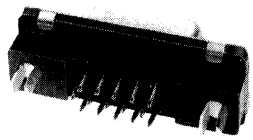
Plating Code—
A—.000030 [0.00076] gold on mating end, tin-lead on termination end, with entire contact .000050 [0.00127] min. nickel underplated
B—Gold flash on mating end, tin-lead on termination end, with entire contact .000050 [0.00127] min. nickel underplated

Mates with—HDP-22 Crimp Snap-In Contact Connectors, page 2272.

With 4-40 Threaded Inserts



With Retention Insert



Note: 26 Pos. Housing Dim. (Typ.)—1.541 [39.14] L x .479 [12.17] W x .494 [12.55] H

Shell Size	No. of Contact Positions	Contact Finish (Plating Code)	Part Numbers	
			4-40 Threaded Inserts	Retention Inserts (for .062 [1.58] PCB)
1	15	A	749374-1	749374-3
		B	—	749374-2
2	26	A	749030-1	—
4	62	A	747786-6	—
		B	747786-5	1-747786-3
5	78	A	748831-1	—

Notes: 1. All connectors are preloaded with size 22 DF posted socket contacts.
2. Recommended pc board thickness is .062 [1.58] for connectors with boardlocks and .093 [2.36] max. for all others.
3. Male screw retainers are used as mating hardware for connectors with 4-40 female screwlocks.
4. Pc board hole size is .121±.002 [3.07±0.051] for all retention inserts.

HD-20 Front Metal-Shell Striaght Posted Connectors

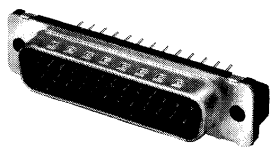
Plugs

Post Size—.026 [0.66] Dia.

Plating Code—
A—.000030 [0.00076] gold on mating end, tin-lead on termination end, with entire contact .000050 [0.00127] min. nickel underplated
B—Gold flash on mating end, tin-lead on termination end, with entire contact .000050 [0.00127] min. nickel underplated

Mates with—HDE-20 Metal-Shell IDC Connectors, page 2274; HDF-20 Low-Profile Metal-Shell Connectors,page 5019; HDP-20 Crimp Snap-In Contact Connectors, page 2277 and 2278.

With Grounding Indents



Note: 25 Pos. Housing Dim. (Typ.)—2.090 [53.09] L x .466 [11.83] W x .494 [12.55] H

Shell Size	No. of Contact Positions	Post Length*	Contact Finish (Plating Code)	Plug Part Numbers			
				With Standard Mounting Holes	With Threaded Inserts	With Retention Inserts (for .062 [1.58] PCB)	With Fixed Female Screwlocks
1	9	.125 3.18	A	747871-2	747871-8	2-748003-0	1-747871-4
			B	747871-1	—	1-748003-9	1-747871-3
		.170 4.32	A	747871-4	—	—	1-747871-6
			B	747871-3	—	—	1-747871-5
2	15	.125 3.18	A	747872-2	747872-8	—	1-747872-4
		.170 4.32	A	747872-4	—	—	1-747872-6
3	25	.125 3.18	A	745968-2	745968-8	2-747704-0	1-745968-4
			B	745968-1	745968-7	1-747704-9	1-745968-3
		.170 4.32	A	745968-4	—	—	1-745968-6
			B	—	—	—	1-745968-5
4	37	.125 3.18	A	747375-2	747375-8	2-747705-0	—
			B	—	747375-7	—	1-747375-3
		.170 4.32	A	—	1-747375-0	—	—

*.125 [3.18] post length is recommended for pc board thickness of .062-.093 [1.58-2.36] max.; .170 [4.32] post length is recommended for pc board thickness of .093-.125 [2.36-3.18]

Notes: 1. All plugs are preloaded with size 20 DF posted pin contacts.
2. Special loading of contacts can be arranged upon request.
3. Male screw retainers are used as mating hardware for connectors with 4-40 female screwlocks.
4. Pc board hole size is .121±.002 [3.07±0.0508] for all retention inserts.

SOURCE: Catalog 82068

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

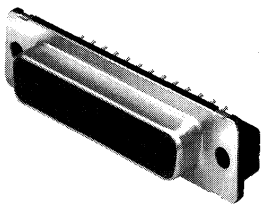
HD-20 Front Metal-Shell Straight Posted Connectors (Continued)

Receptacles

Post Size—.026 [0.66] Dia.

Plating Code—

A—.000030 [0.00076] gold on mating end, tin-lead on termination end, with entire contact .000050 [0.00127] min. nickel underplated
B—Gold flash on mating end, tin-lead on termination end, with entire contact .000050 [0.00127] min. nickel underplated



Mates with—HDE-20 Metal-Shell IDC Connectors, page 2274; HDF-20 Low-Profile Metal-Shell Connectors, page 5019; HDP-20 Crimp Snap-In Contact Connectors, pages 2277 and 2278.

Note: 25 Pos. Housing Dim. (Typ.)—2.090 [53.094] L x .479 [12.16] W x .494 [12.55] H

Shell Size	No. of Contact Positions	Post Length*	Contact Finish (Plating Code)	Receptacle Part Numbers			
				With Standard Mounting Holes	With Threaded Inserts	With Retention Inserts (for .062 [1.58] PCB)	With Fixed Female Screwlocks
1	9	.125 3.18	A	747150-2	747150-8	2-747706-0	1-747150-4
			B	747150-1	747150-7	—	1-747150-3
		.170 4.32	A	747150-4	—	—	1-747150-6
			B	—	747150-9	—	1-747150-5
2	15	.125 3.18	A	747299-2	747299-8	2-747707-0	1-747299-4
			B	747299-1	747299-7	—	1-747299-3
		.170 4.32	A	747299-4	1-747299-0	—	1-747299-6
			B	—	—	—	1-747299-5
3	25	.125 3.18	A	745967-2	745967-8	2-747708-0	1-745967-4
			B	745967-1	745967-7	1-747708-9	1-745967-3
		.170 4.32	A	745967-4	1-745967-0	—	1-745967-6
			B	745967-3	745967-9	—	1-745967-5
		.250 6.35	B	—	1-745967-1	—	—
4	37	.125 3.18	A	747301-2 747481-2**	747301-8	2-747709-0	1-747301-4
			B	747301-1	747301-7	1-747709-9	—
		.170 4.32	A	747301-4	—	—	1-747301-6

*.125 [3.18] post length is recommended for pc board thickness of .062-.093 [1.58-2.36] max.; .170 [4.32] post length is recommended for pc board thickness of .093-.125 [2.36-3.18]; .250 [6.35] post length is for special applications.
**With mating face discharge conductor.
Notes: 1. All receptacles are preloaded with size 20 DF posted socket contacts.
2. Special loading of contacts can be arranged upon request.
3. Male screw retainers are used as mating hardware for connectors with 4-40 female screwlocks.
4. Pc board hole size is .121±.002 [3.07±0.0501] for all retention inserts.

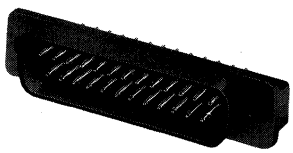
HD-20 All-Plastic Straight Posted Connectors

Plugs

Post Size—.026 [0.66] Dia.

Plating Code—

A—.000030 [0.00076] gold on mating end, tin-lead on termination end, with entire contact .000050 [0.00127] min. nickel underplated
B—Gold flash on mating end, tin-lead on termination end, with entire contact .000050 [0.00127] min. nickel underplated



Mates with—HDE-20 All-Plastic IDC Connectors, page 2274; and HDF-20 Low-Profile All-Plastic Connectors, page 5020.

Note: 25 Pos. Housing Dim. (Typ.)—2.095 [53.21] L x .486 [12.34] W x .420 [10.67] H

Shell Size	No. of Contact Positions	Post Length*	Contact Finish (Plating Code)	Plug Part Numbers		
				With Standard Mounting Holes	With Threaded Inserts	With Fixed Female Screwlocks
1	9	.125 3.18	A	208006-2	745051-2	745071-2
			B	208006-1	745051-1	745071-1
		.170 4.32	A	—	745051-4	745071-4
			B	—	—	745071-3
2	15	.125 3.18	A	208007-2	745052-2	745072-2
			B	208007-1	745052-1	745072-1
		.170 4.32	A	208007-4	—	745072-4
			B	—	745052-3	—
3	25	.125 3.18	A	208008-2	745053-2	745073-2
			B	208008-1	745053-1	745073-1
		.170 4.32	A	208008-4	—	745073-4
			B	—	—	745073-3
4	37	.125 3.18	A	208009-2	745054-2	745074-2
			B	208009-1	—	745074-1
		.170 4.32	A	—	745054-4	745074-4
			B	208009-3	—	745074-3
5	50	.125 3.18	A	208010-2	—	—
			B	208010-1	745055-1	—
		.170 4.32	A	208010-4	—	—
			B	—	—	745075-3

*.125 [3.18] post length is recommended for pc board thickness of .062-.093 [1.58-2.36] max.; .170 [4.32] post length is recommended for pc board thickness of .093-.125 [2.36-3.18]
Notes: 1. All plugs are preloaded with size 20 DF posted pin contacts.
2. It is recommended that these connectors be secured with appropriate hardware to a pc board and/or panel.
3. Male screw retainers are used as mating hardware for connectors with 4-40 female screwlocks.

SOURCE: Catalog 82068

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

HD-20 All-Plastic Straight Posted Connectors

(Continued)

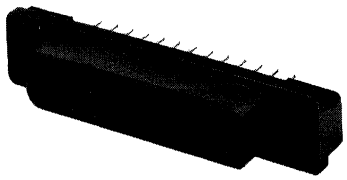
Receptacles

Post Size—.026 [0.66] Dia.

Plating Code—

A—.000030 [0.00076] gold on mating end, tin-lead on termination end, with entire contact .000050 [0.00127] min. nickel underplated
B—Gold flash on mating end, tin-lead on termination end, with entire contact .000050 [0.00127] min. nickel underplated

Mates with—HDE-20 All-Plastic IDC Connectors, page 2274; and HDF-20 Low-Profile All-Plastic Connectors, page 5020.



Note: 25 Pos. Housing Dim. (Typ.)—2.095 [53.21] L x .489 [12.42] W x .420 [10.67] H

Shell Size	No. of Contact Positions	Post Length*	Contact Finish (Plating Code)	Receptacle Part Numbers		
				With Standard Mounting Holes	With Threaded Inserts	With Fixed Female Screwlocks
1	9	**.125** 3.18	A	207826-4	207841-4	745076-4
			B	207826-3	207841-3	745076-3
		.170 4.32	A	—	—	745076-6
			B	—	—	745076-5
		.250 6.35	A	—	207841-8	—
2	15	**.125** 3.18	A	207827-4	745057-4	745077-4
			B	207827-3	745057-3	745077-3
		.170 4.32	A	207827-6	—	745077-6
			B	—	—	745077-5
		.250 6.35	A	—	—	745077-8
3	25	**.125** 3.18	A	207828-4	745058-4	745078-4
			B	207828-3	745058-3	745078-3
		.170 4.32	A	207828-6	745058-6	745078-6
			B	207828-5	745058-5	745078-5
		.250 6.35	B	—	—	745078-7
4	37	**.125** 3.18	A	207829-4	745059-4	745079-4
			B	207829-3	745059-3	745079-3
		.170 4.32	A	207829-6	745059-6	745079-6
			B	—	—	745079-5
5	50	**.125** 3.18	A	207830-4	745060-4	745080-4
			B	207830-3	745060-3	745080-3
		1.70 4.32	A	207830-6	745060-6	745080-6

*.125 [3.18] post length is recommended for pc board thickness of .062-.093 [1.58-2.36] max.; .170 [4.32] post length is recommended for pc board thickness of .093-.125 [2.36-3.18]; .250 [6.35] post length is for special applications.

Notes: 1. All receptacles are preloaded with size 20 DF posted socket contacts.
2. It is recommended that these connectors be secured with appropriate hardware to a pc board and/or panel.
3. Male screw retainers are used as mating hardware for connectors with 4-40 female screwlocks.

SOURCE: Catalog 82068

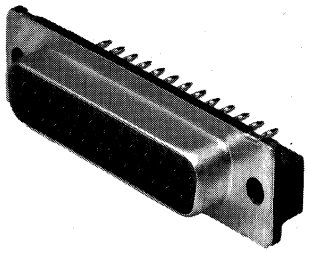
Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

HD-20 Front Metal-Shell Straight Posted Connectors

Receptacles (with ACTION PIN Contacts)

Plating Code—
ACTION PIN Contacts—Copper alloy, duplex plated as follows:
A—.000030 [0.00076] gold on mating end, tin-lead on ACTION PIN post surface, with entire contact .000050 [0.00127] min. nickel underplated
B—Gold flash on mating end, tin-lead on ACTION PIN post surface, with entire contact .000030 [0.00076] min. nickel underplated

Mates with—HDE-20 Metal-Shell IDC Connectors, page 2274; HDF-20 Low-Profile Metal Shell Connectors, page 5019; HDP-20 Crimp Snap-In Contact Connectors, pages 2277 and 2278.



For .062 [1.57] min. Thick Pc Boards

Note: 25 Pos. Housing Dim. (Typ.)—2.088 [53.04] L x .479 [12.17] W x .509 [12.93] H

Shell Size	No. of Contact Positions	Contact Finish (Plating Code)	Receptacle Part Numbers		Seating Tool Part No.
			With Threaded Inserts	With Fixed Female Screwlocks	
1	9	A	748650-1	—	91164-2
3	25	A	748484-2	748688-2	91168-2
		B	—	748688-1	
5	50	A	748485-2	—	91167-2

For .093 [2.36] min. Thick Pc Boards

Note: 25 Pos. Housing Dim. (Typ.)—2.088 [53.04] L x .479 [12.17] W x .509 [12.93] H

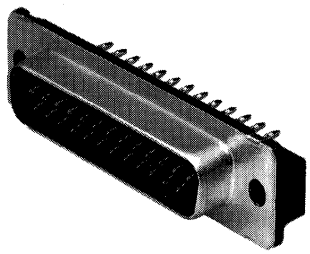
Shell Size	No. of Contact Positions	Contact Finish (Plating Code)	Receptacle Part Numbers			Seating Tool Part No.
			With Standard Mounting Holes	With Threaded Inserts	With Fixed Female Screwlocks	
1	9	A	747089-2	747090-2	747091-2	91164-2
		B	—	—	747091-1	
2	15	A	747140-2	747141-2	747142-2	91165-2
		B	747140-1	—	747142-1	
3	25	A	745922-2	745925-2	745928-2	91168-2
		B	—	745925-1	745928-1	
4	37	A	747713-2	747714-2	747715-2	91166-2
		B	—	747714-1	747715-1	
5	50	A	747143-2	747144-2	747145-2	91167-2
		B	—	747144-1	747145-1	

Notes: 1. All receptacles are preloaded with straight posted ACTION PIN socket contacts.
2. Male screw retainers are used as mating hardware for connectors with 4-40 female screwlocks.

Plugs (with ACTION PIN Contacts)

Plating Code—
ACTION PIN Contacts—Copper alloy, duplex plated as follows:
A—.000030 [0.00076] gold on mating end, tin-lead on ACTION PIN post surface, with entire contact .000050 [0.00127] min. nickel underplated
B—Gold flash on mating end, tin-lead on ACTION PIN post surface, with entire contact .000030 [0.00076] min. nickel underplated

Mates with—HDE-20 Metal-Shell IDC Connectors, page 2274; HDF-20 Low-Profile Metal Shell Connectors, page 5019; HDP-20 Crimp Snap-In Contact Connectors, pages 2277 and 2278.



For .093 [2.36] min. Thick Pc Board

Note: 25 Pos. Housing Dim. (Typ.)—2.088 [53.04] L x .479 [12.17] W x .494 [12.55] H

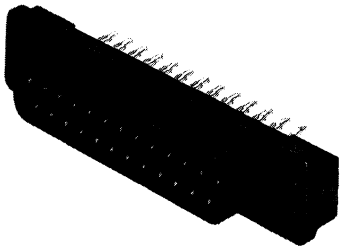
Shell Size	No. of Contact Positions	Contact Finish (Plating Code)	Plug Part Numbers			Seating Tool Part No.
			With Standard Mounting Holes	With Threaded Inserts	With Fixed Female Screwlocks	
1	9	A	—	786830-1	—	58274-3
2	15	A	—	786831-1	—	58274-6
3	25	A	748146-2	748146-4	748146-6	58274-1
4	37	A	—	786534-1	750060-1	58274-5
5	50	A	748090-2	748090-4	—	58273-1
		B	—	749892-1	—	

Notes: 1. All plugs are preloaded with straight posted ACTION PIN pin contacts.
2. Male screw retainers are used as mating hardware for connectors with 4-40 female screwlocks.

SOURCE: Catalog 82068

HD-20 All-Plastic Straight Posted Connectors

Receptacles with ACTION PIN Contacts (Low and High Profile)



Plating Code—
ACTION PIN Contacts—Copper alloy, duplex plated as follows:
A—.000030 [0.00076] gold on mating end, tin-lead on ACTION PIN post surface, with entire contact .000050 [0.00127] min. nickel underplated
B—Gold flash on mating end, tin-lead on ACTION PIN post surface, with entire contact .000030 [0.00076] min. nickel underplated

Mates with—HDE-20 All-Plastic IDC Connectors, page 2274; and HDF-20 Low-Profile All-Plastic Connectors, page 5020.

Note: 25 Pos. Housing Dim. (Typ.)—2.095 [53.21] L x .395 [10.03] W (Low Profile), .695 [17.65] W (High Profile) x .410 [10.41] H

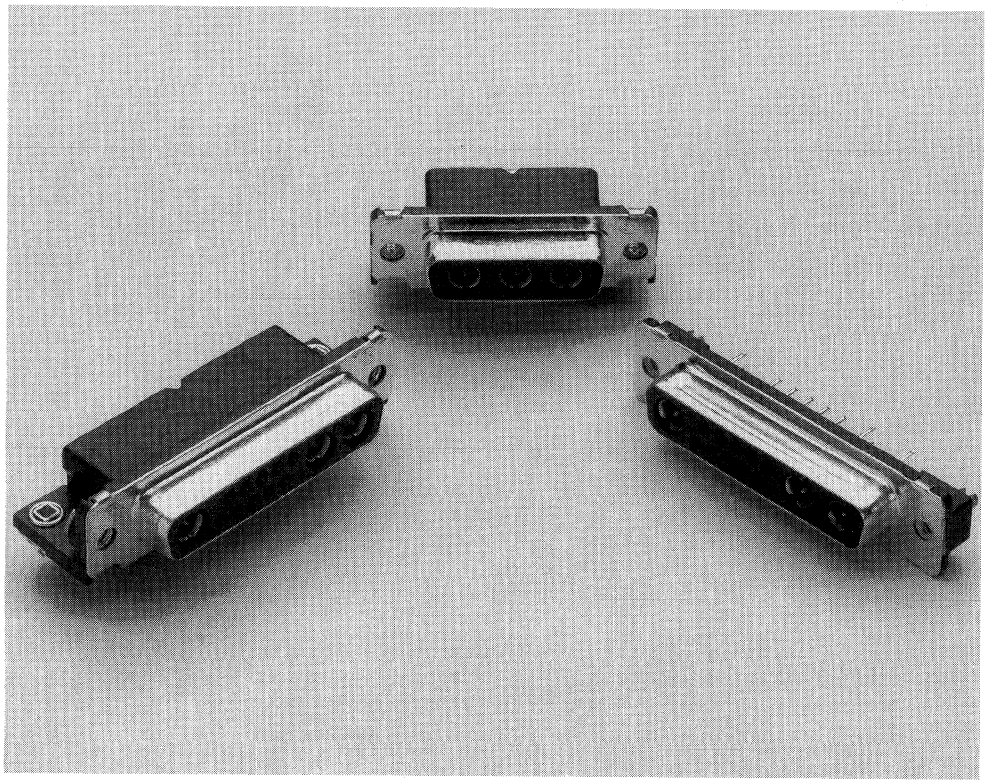
Shell Size	No. of Contact Positions	Profile	Contact Finish (Plating Code)	Receptacle Part Numbers						Seating Tool Part No.
				For .093 [2.36] min. Thick Pc Boards			For .062 [1.57] min. Thick Pc Boards			
				With Standard Mounting Holes	With Threaded Inserts	With Fixed Female Screwlocks	With Standard Mounting Holes	With Threaded Inserts	With Fixed Female Screwlocks	
1	9	Low	A	—	—	745454-2	—	—	—	91164-1
			B	—	—	745454-1	—	—	—	
		High	A	—	745463-2	745455-2	—	—	—	91164-3
			B	—	—	—	—	—	—	
2	15	Low	A	745336-2	745380-2	745456-2	—	—	—	91165-1
			B	—	—	745456-1	—	—	—	
		High	A	—	—	—	—	745612-2	—	91165-3
			B	—	745464-1	—	—	—	745627-1	
3	25	Low	A	208069-2	—	745458-2	745588-2	—	—	91168-1
			B	—	—	745458-1	—	—	—	
		High	A	—	745465-2	745031-2	—	745613-2	745628-2	91168-3
			B	208089-1	745465-1	745031-1	—	745613-1	745628-1	
4	37	Low	A	745337-2	—	745459-2	745589-2	—	—	91166-1
			B	745337-1	—	—	—	—	—	
		High	A	—	—	—	745599-2	—	—	91166-3
5	50	Low	B	—	—	—	—	—	745620-1	91167-1

Notes: 1. All receptacles are preloaded with straight posted ACTION PIN socket contacts.
2. Male screw retainers are used as mating hardware for connectors with 4-40 female screwlocks.

SOURCE: Catalog 82068

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

Coax Mix Connectors



Product Facts

- Choice of 13C3 or 3C3 subminiature D connector configurations
- Right-angle 3C3 and 13C3 configurations, plus vertical 13C3 configuration
- Pcb connectors supplied preassembled
- Design assures coax contact true position at mating face
- EMI/RFI shielding
- Signal and coaxial contacts available in a choice of platings
- Connector housing material UL rated 94V-0 thermoplastic
- All connectors have a mating face per MIL-STD 18275, Arrangement 4
- Recognized under the Component Program of Underwriters Laboratories Inc., File No. E28476
- Certified by Canadian Standards Association, File No. LR7189

AMPLIMITE Coax Mix Connectors provide signal and coaxial contacts in a subminiature D connector configuration. AMP offers two configurations. The popular 13C3 contains ten HD-20 signal contacts and three special size 8 coaxial contacts. In addition, the 3C3 configuration is also available, containing three special size 8 coaxial contacts.

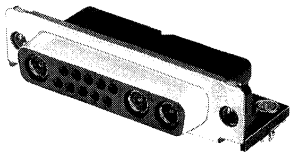
AMPLIMITE Coax Mix Connectors are designed for high performance in 75 ohm impedance systems. Receptacle pcb connectors are available in right-angle configurations, and the 13C3 is also available in a vertical mount configuration.

Receptacle pcb connectors are supplied preassembled with HD-20 and/or special size 8 coaxial contacts in a one-piece, 94V-0 rated thermoplastic housing with a front metal shell.

Specifications subject to change.
1-800-522-6752 Product Information Center/ AMP FAX Service
1-800-722-1111 Tooling/Technical Assistance Center

Coax Mix 13C3 Connectors

Right-Angle Board-Mount Receptacle

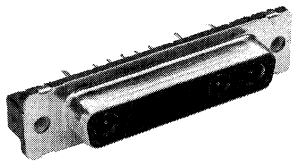


Note: Housing Dim. (Typ.) — 2.090 [53.09] L x .895 [22.73] W x .494 [12.55] H

Part No. 749958-1—
Center coax contacts .000030 [0.00076] min. gold plating on mating end, .000120 [0.00305] min. tin-lead on solder end, all over .000050 [0.00127] min. nickel underplating

Part No. 749958-2—
Center coax contacts .000015 [0.00038] min. gold plating on mating end, .000120 [0.00305] min. tin-lead on solder end, all over .000050 [0.00127] min. nickel underplating

Vertical Mount Receptacle



Note: Housing Dim. (Typ.) — 2.090 [53.09] L x .479 [12.16] W x .494 [12.55] H

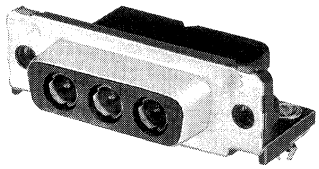
Part No. 786456-1—
Center coax contacts .000030 [0.00076] min. gold plating on mating end, .000120 [0.00305] min. tin-lead on solder end, all over .000050 [0.00127] min. nickel underplating

Part No. 786456-3—
Center coax contacts .000015 [0.00038] min. gold plating on mating end, .000120 [0.00305] min. tin-lead on solder end, all over .000050 [0.00127] min. nickel underplating

Coax Mix 3C3 Connectors

Right-Angle Board-Mount Receptacle .404 [10.26] Footprint

Connectors with Unplated Housings



Part No. 750276-1—
Center coax contacts .000030 [0.00076] min. gold plating on mating end, .000120 [0.00305] min. tin-lead on solder end, all over .000050 [0.00127] min. nickel underplating

Part No. 750276-2—
Center coax contacts .000015 [0.00038] min. gold plating on mating end, .000120 [0.00305] min. tin-lead on solder end, all over .000050 [0.00127] min. nickel underplating

Connectors with Plated Housings

Note: Housing Dim. (Typ.) — 1.550 [39.37] L x .895 [22.73] W x .494 [12.55] H

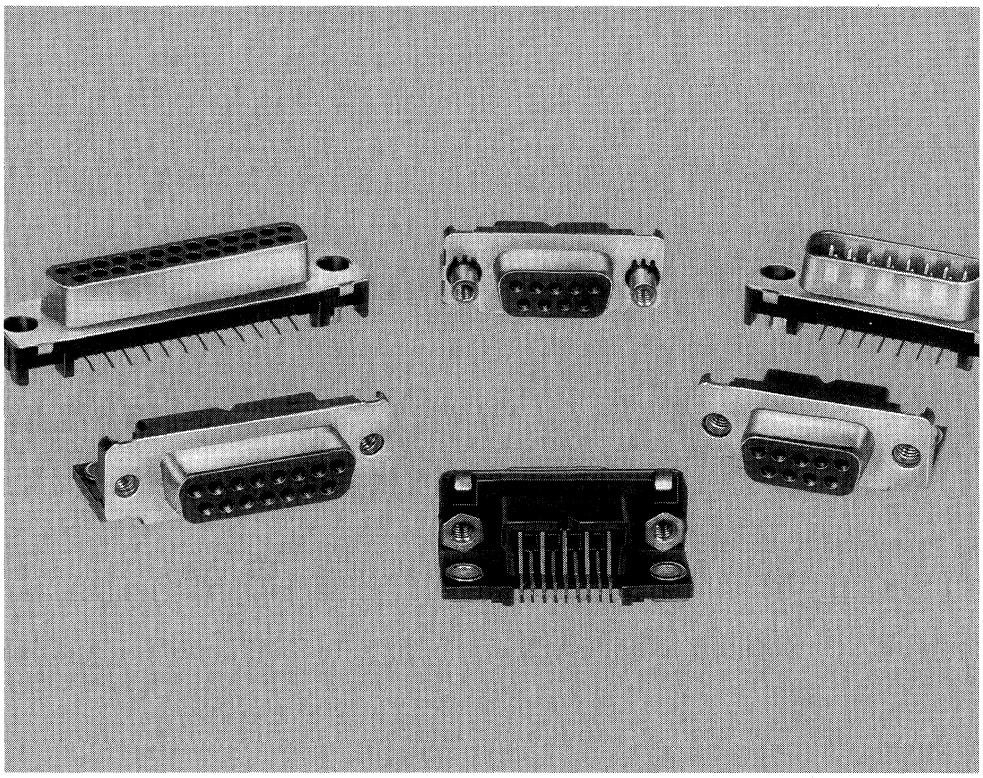
Part No. 750276-5—
Center coax contacts .000030 [0.00076] min. gold plating on mating end, .000120 [0.00305] min. tin-lead on solder end, all over .000050 [0.00127] min. nickel underplating

Part No. 750276-6—
Center coax contacts .000015 [0.00038] min. gold plating on mating end, .000120 [0.00305] min. tin-lead on solder end, all over .000050 [0.00127] min. nickel underplating

SOURCE: Catalog 82068

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

HD-20 Surface-Mount Connectors



Product Facts

- **Right-angle pc board mount connectors with butt-joint board contacts available in 9, 15, 25, and 37 positions**
- **Right-angle pc board mount connectors with gull-wing type board contacts available in 9, 15, and 25 positions**
- **15-position vertical-mount plug and 25-position vertical-mount receptacle available**
- **Intermateable with other subminiature D connectors**
- **Housings made of UL 94V-0 rated, high temperature thermoplastic material for vapor-phase and infrared reflow soldering**
- **Visual inspection of solder joints**
- **Front metal-shells for EMI/RFI shielding**
- **Plug connectors have built-in grounding indents**
- **Right-angle connectors available in a choice of gull-wing type or butt-joint solder contacts**
- **Top-actuated eyelets facilitate zero force robotic board mounting and eliminate under-the-board tooling**
- **Choice of female screwlocks or threaded inserts for connector mating**
- **Designed for robotic pick-and-place application**
- **Single tube or tape-mounted packaging for robotic application**
- **Recognized under the Component Program of Underwriters Laboratories Inc., File No. E28476**
- **Certified by Canadian Standards Association, File No. LR 7189**

AMPLIMITE surface-mount connector housings are made of UL 94V-0 rated, high temperature thermoplastic suitable for vapor-phase and infrared reflow soldering. Front metal-shells offer excellent EMI/RFI shielding. All plug connectors have built-in grounding indents. Right-angle board mount connectors are available in 9, 15, 25, and 37 positions with butt-joint board contacts and 9, 15, and 25 positions with gull-wing type board contacts. A 15-position, vertical mount plug connector and a 25-position vertical mount receptacle connector, both featuring gull-wing type board contacts, are also available. Mating hardware options are female screwlocks or threaded inserts.

Connectors feature top-actuated eyelets that eliminate the need for under-the board tooling. Top-actuated eyelets retain the connector to the pc board prior to soldering and provide mechanical strain relief for the soldered contacts.

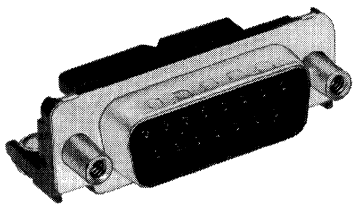
Designed for robotic pick-and-place applications, AMPLIMITE surface-mount connectors have the necessary lead registration, dimensional uniformity and locator features required. Packaged in single tubes or on tape, connectors can be gripped front-to-back, side-to-side, or from the top with a vacuum chuck. To complement your automatic equipment, AMP can also furnish connector feeders and grippers.

Specifications subject to change.
1-800-522-6752 Product Information Center/ AMP FAX Service
1-800-722-1111 Tooling/Technical Assistance Center

HD-20 Front Metal-Shell, Right-Angle, Surface-Mount Connectors with Gull-Wing Solder Contacts

Plugs

Plating Code—Duplex plated
A— .000030 [0.00076] min. gold on mating end, .000120 [0.00305] min. tin-lead on solder end, all underplated .000050 [0.00127] min. nickel
B— Gold flash on mating end, .000120 [0.00305] min. tin-lead on solder end, all underplated .000050 [0.00127] min. nickel



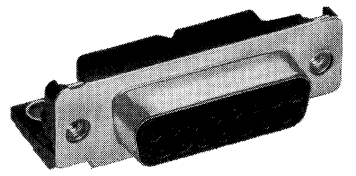
Note: 15 Pos. Housing Dim. (Typ.)—1.541 [39.14] L x .738 [18.75] W x .494 [12.55] H

Shell Size	No. of Contact Positions	Plating Code	Plug Part Numbers			
			with Threaded Inserts	with Female Screwlocks	with Threaded Inserts and Top-Actuated Eyelets	with Female Screwlocks and Top-Actuated Eyelets
1	9	A	786265-1	786266-1	786267-1	786268-1
		B	786265-2	786266-2	786267-2	786268-2
2	15	A	786269-1	786270-1	786271-1	786272-1
		B	786269-2	786270-2	786271-2	786272-2
3	25	A	786273-1	786274-1	786275-1	786276-1
		B	786273-2	786274-2	786275-2	786276-2

Note: .062 [1.57] recommended Pc board thickness.

Receptacles

Plating Code—Duplex plated
A— .000030 [0.00076] min. gold on mating end, .000120 [0.00305] min. tin-lead on solder end, all underplated .000050 [0.00127] min. nickel
B— Gold flash on mating end, .000120 [0.00305] min. tin-lead on solder end, all underplated .000050 [0.00127] min. nickel



Note: 15 Pos. Housing Dim. (Typ.)—1.541 [39.14] L x .745 [18.92] W x .494 [12.55] H

Shell Size	No. of Contact Positions	Plating Code	Plug Part Numbers			
			with Threaded Inserts	with Female Screwlocks	with Threaded Inserts and Top-Actuated Eyelets	with Female Screwlocks and Top-Actuated Eyelets
1	9	A	786253-1	786254-1	786255-1	786256-1
		B	786253-2	786254-2	786255-2	786256-2
2	15	A	786257-1	786258-1	786259-1	786260-1
		B	786257-2	786258-2	786259-2	786260-2
3	25	A	786261-1	786262-1	786263-1	786264-1
		B	786261-2	786262-2	786263-2	786264-2

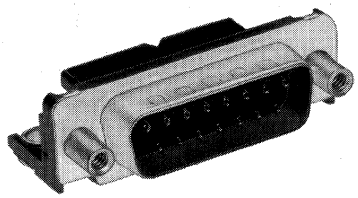
Note: .062 [1.57] recommended Pc board thickness.

SOURCE: Catalog 82068

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

HD-20 Front Metal-Shell, Right-Angle, Surface-Mount Connectors with Butt-Joint Contacts

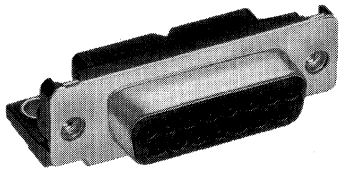
Plugs



Note: 15 Pos. Housing Dim. (Typ.)—1.550 [39.37] L x .732 [18.59] W x .494 [12.55] H

Shell Size	No. of Contact Positions	Plug Part Numbers	
		Threaded Inserts	Female Screwlocks
1	9	787117-1	787118-1
2	15	787119-1	787120-1
3	25	787121-1	787122-1

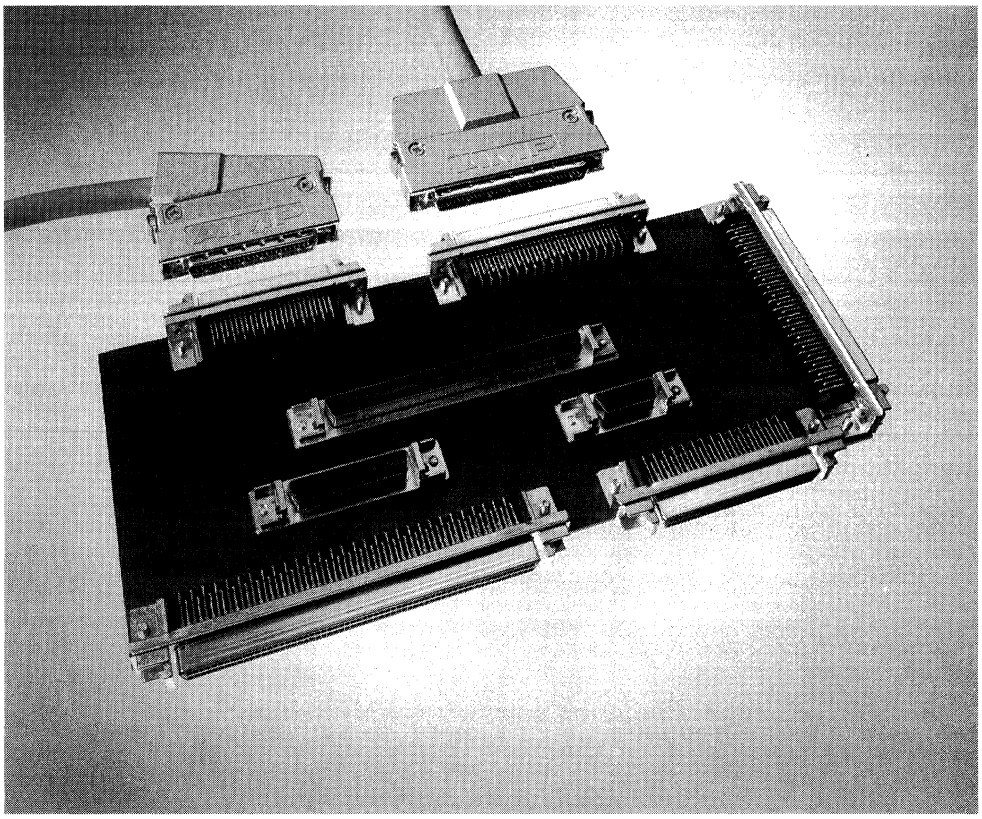
Receptacles



Note: 15 Pos. Housing Dim. (Typ.)—1.550 [39.37] L x .732 [18.59] W x .494 [12.55] H

Shell Size	No. of Contact Positions	Receptacle Part Numbers	
		Threaded Inserts	Female Screwlocks
1	9	786917-1	786918-1
2	15	786919-1	786920-1
3	25	786642-1	786921-1

Series III Connectors (.050 x .100 [1.27 x 2.54] Centerline)



Product Facts

- Compatible with SCSI-2, EIA RS-232, ISO/IEC 11569 HIPPI and IPI-2 standards
- High-density D type interface
- 20 through 120 contact positions
- Tab plug contacts and tuning-fork receptacle contacts, with reliable two-point (redundant) contact; contact normal force is not dependent on plastic housing support
- Insulation displacement wire termination of discrete wire, round-to-flat laminated wires and flat ribbon cable
- Vertical and right-angle headers
- Board-to-board, cable-to-board and cable-to-cable connection
- Rugged die cast backshell with excellent EMI/RFI protection
- Shields mate before contacts, with ground mating first and breaking last
- Squeeze-to-release latches or jackscrew hardware
- Keying available
- Board connectors compatible with standard thru-hole flow solder and surface-mount reflow solder processes
- Unshielded, All-Plastic Cable Plugs available
- Recognized under the Component Program of Underwriters Laboratories Inc., File No. E28476
- Certified by Canadian Standards Association, File No. LR 7189A
- Free 3D and 2D CAD images— See page 56

EADS CD-ROM

Shielded AMPLIMITE .050 Series connectors offer a high-density D type interface. Featuring .050 x .100 [1.27 x 2.54] contact centerline spacing, these compact and reliable connectors are available in 20 through 120 positions. Their construction offers exceptional EMI/RFI shielding effectiveness.

Shielded AMPLIMITE .050 Series Connectors, Series III, are approved to SCSI-2, SCSI-3, EIA RS-232, IPI-2, ISO/IEC 11569 and HIPPI standards.

Connectors are available in cable-mount and panel mount versions and vertical and right-angle mount pcb headers. The headers feature high temperature housings, tight tolerances and registration features to make them suitable for robotic assembly and high temperature reflow soldering.

Cable and panel connectors use insulation displacement contacts for fast termination of discrete, round-to-flat laminated, and ribbon cable. Recommended wire size is 28 AWG [0.08-0.09 mm^2] or 30 AWG [0.05 mm^2], solid or 7 strand, with a .029-.036 [0.74-0.89] insulation diameter.

Backshells are available with either a straight or angled cable exit. Hardware includes a choice of integral squeeze-to-release latches or jackscrews.

Unshielded, All-Plastic Cable Plugs are available in 50, 68, and 100 positions and offer an economical answer to your connector needs on applications where EMI/RFI protection is not a factor.

Termination Connectors are available for SCSI-2 Single-Ended and SCSI-2 Differential applications.

Series I, II and III intermateability:

Series I—will intermate with 50, 68 and 96 position connectors in Series II and III.

Series II—will intermate with all Series III positions and the 50, 68, and 96 position Series I

Series III—will intermate with all Series II positions and the 50, 68, and 96 position Series I

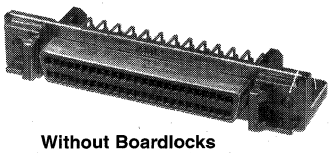
SOURCE: Catalog 82068

Specifications subject to change.
1-800-522-6752 Product Information Center/ AMP FAX Service
1-800-722-1111 Tooling/Technical Assistance Center

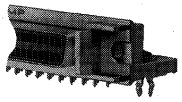
Right-Angle Receptacle Headers Series III

With Rails and Latch Blocks

.112 [2.84] Solder Tail Length



Without Boardlocks



With Boardlocks

EADS CD-ROM

Note: 50 Pos. Housing Dim. (Typ.)—2.065 [52.45] L x .664 [16.87] W x .406 [10.31] H

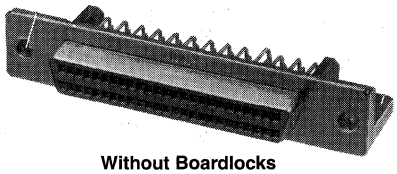
No. of Pos.	Part Numbers	
	Without Boardlocks	With Boardlocks
20	749075-1	—
26	749075-2	749830-2
28	749075-3	749830-3
40	—	749830-4
50	749075-5	749830-5
50	750494-5*	750463-5*
60	749075-6	—
68	749075-7	749830-7
80	749075-8	—
100	749075-9	749830-9
120	1-749075-0	—

*Have 4-40 threaded mating holes (2 places) for use with female screwlock **Part No. 750644-1.**

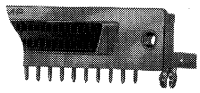
Note: Extra pin contact protection is provided by rails, which facilitate a straight-out, unmating motion. A side-to-side rocking motion should not be used to disengage the connector system.

Without Rails and Latch Blocks

.112 [2.84] and .144 [3.66] Solder Tail Lengths (for use with jackscrew mating hardware)



Without Boardlocks



With Boardlocks

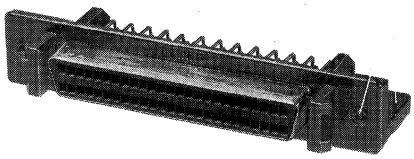
Note: 68 Pos. Housing Dim. (Typ.)—2.515 [63.88] L x .656 [16.66] W x .406 [10.31] H

No. of Pos.	Part Numbers		
	With .112 [2.84] Solder Tails		With .144 [3.66] Solder Tails
	Without Boardlocks	With Boardlocks	With Boardlocks
50	749076-5	750737-5	786324-5
68	749076-7	750737-7	786324-7
100	749076-9	750737-9	786324-9

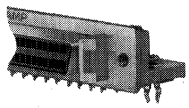
Note: Female screwlocks must be used to mate with cable assemblies with male jackscrew hardware.

Without Rails—With Latch Blocks

.112 [2.84] and .144 [3.66] Solder Tail Lengths



Without Boardlocks



With Boardlocks

Note: 50 Pos. Housing Dim. (Typ.)—2.065 [52.45] L x .664 [16.87] W x .406 [10.31] H

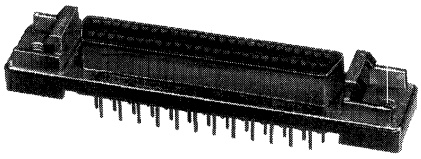
No. of Pos.	Part Numbers			
	With .112 [2.84] Solder Tails		With .144 [3.66] Solder Tails	
	Without Boardlocks	With Boardlocks	Without Boardlocks	With Boardlocks
20	—	—	786521-1	—
26	749649-1	749831-2	—	—
28	—	749831-3	—	—
40	749649-4	—	—	—
50	749649-5	749831-5	786521-5	786323-5
50	—	750641-5*	—	—
60	—	—	—	—
68	749649-7	749831-7	786521-7	786323-7
80	—	—	786521-8	—
100	749649-9	—	—	786323-9
100	750505-9*	—	—	—
120	—	1-749831-0	—	—

*Have 4-40 threaded mating holes (2 places), for use with female screwlock **Part No. 750644-1**.

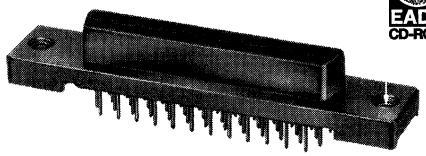
SOURCE: Catalog 82068

Vertical Receptacle Headers, Series III

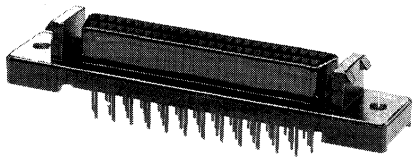
.125 [3.18] Solder Tail Length



With Rails and Latch Blocks



Wtihout Rails and Latch Blocks
(for use with jackscrew mating hardware)



Without Rails—With Latch Blocks

Note: 50 Pos. Housing Dim. (Typ.)—2.065 [52.45] L x .406 [10.31] W x .351 [8.92] H

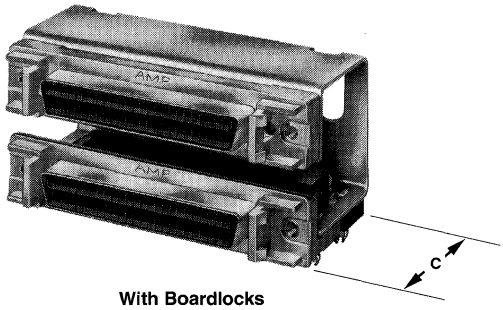
No. of Pos.	Part Number		
	With Rails and Latch Blocks[1]	Without Rails and Latch Blocks[2]	Without Rails/ with Latch Blocks
26	749069-2	—	—
28	—	—	749721-3
40	749069-4	—	—
50	749069-5	749070-5	749721-5
68	749069-7	749070-7	749721-7
100	—	749070-9	—

[1] Extra pin contact protection is provided by rails, which facilitate a straight-out, unmating motion. A side-to-side rocking motion should not be used to disengage the connector system.
[2] Female screwlocks must be used to mate with cable assemblies with male jackscrew hardware.

Stacked Right-Angle Headers, Series III

With Rails and Latch Blocks

.112 [2.84] Solder Tail Length



With Boardlocks

Note: 50 Pos. Housing Dim. (Typ.)—
2.065 [52.45] L X .957 [24.31] W X .825 [20.96] H

No. of Pos.	Dim. C	Part No.
26	**.821** [20.85]	750713-1
50	**.957** [24.31]	750885-1
50	**.906** [23.01]	750885-2

Note: Extra pin contact protection is provided by rails, which facilitate a straight-out, unmating motion. A side-to-side rocking motion should not be used to disengage the connector system.

SOURCE: Catalog 82068

Specifications subject to change.

1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

Vertical Receptacle Headers, Series III, with ACTION PIN Contacts

(.050 x .100 [1.27 x 2.54] Centerlines)

Approvals

- **Recognized under the Component Program of Underwriters Laboratories Inc., File No. E28476**
- **Certified by Canadian Standards Association, File No. LR7189**
- **Free 3D and 2D CAD images— See page 56**

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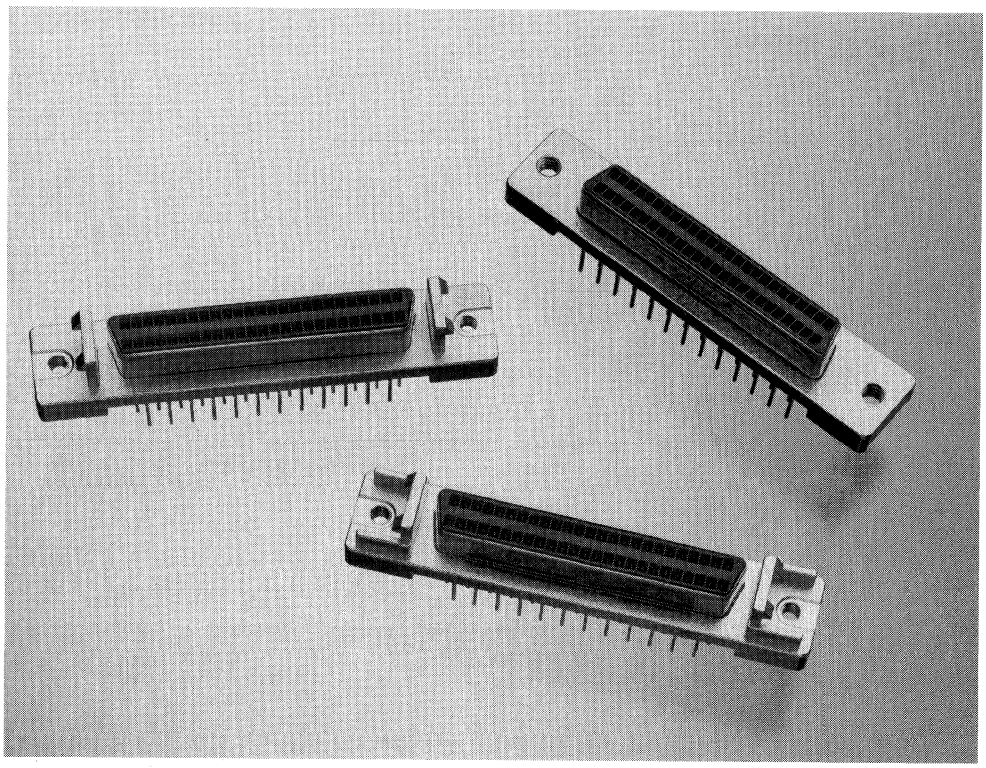


Shielded AMPLIMITE .050 Series headers with ACTION PIN contacts offer a high-density D type interface, and a solderless board-mount interconnection. These vertical mount headers are available in 20, 26, 50, 68, 100, and 120 contact sizes. Choice of configurations includes: headers with rails and latch blocks, with latch blocks only, and without rails and latch blocks.

ACTION PIN contact tails are available in two lengths: .173 [4.39] for pc boards with a nominal thickness of .062 [1.57] and .093 [2.36], and .280 [7.11] for pc boards with a nominal thickness of .125 [3.18] and .200 [5.08].

AMPLIMITE .050 Series headers with ACTION PIN contacts are compatible with SCSI-2, SCSI-3, EIA RS-232, IPI-2 and HIPPI standards.

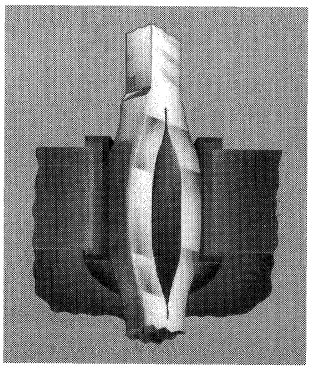
Principle of the AMPLIMITE .050 Series Compliant ACTION PIN Contact

When an AMPLIMITE .050 Series, compliant ACTION PIN contact is inserted into a plated-through hole, two spring members are compressed, exerting force against the hole for a gas-tight connection.

The diameter of the hole is smaller than the diagonal size of the pin.

The beam characteristics of the pin are designed so that a plastic, as well as an elastic, deformation takes place during insertion. The two spring members compress to different degrees to accommodate hole tolerances. The compliant pin also reduces strain on the board. With a rigid pin, the elastic strain energy is stored entirely in the board, leading to damage of the plated-through holes. With the AMPLIMITE .050 Series, compliant ACTION PIN contact, the residual force of the elastic deformation maintains stored energy to produce a gas-tight contact zone between the pin and the plated-through hole. This ensures long term electrical and mechanical reliability of the interconnection.

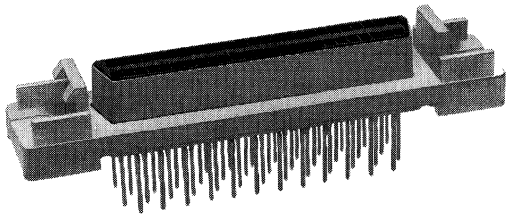
Cross-section ACTION PIN contact



Vertical Receptacle Headers, Series III

With Rails and Latch Blocks

.173 [4.39] and .280 [7.11] Lengths, ACTION PIN Tails



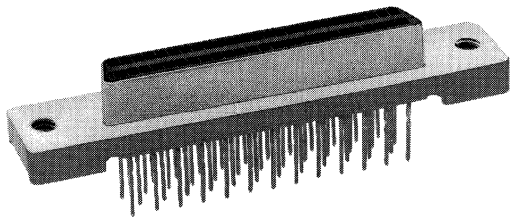
Note: 50 Pos. Housing Dim. (Typ.)—2.065 [52.45] L x .406 [10.31] W x .351 [8.92] H

No. of Pos.	Part Numbers		
	With .173 [4.39] ACTION PIN Contacts	With .280 [7.11] ACTION PIN Contacts	Seating Tool
20	786554-1	786556-1	856371-1
26	786554-2	786556-2	856371-2
50	786554-5	786556-5	856371-5
68	786554-7	786556-7	856371-7
100	786554-9	786556-9	856371-9
120	1-786554-0	1-786556-0	1-856371-0

Notes: 1. Extra pin contact protection is provided by rails, which facilitate a straight-out unmating motion. A side-to-side rocking motion should not be used to disengage the connector system.
2. Headers with contact tail lengths of .173 [4.39] are designed for boards with a nominal thickness of .062 [1.57] and .093 [2.36]; headers with contact tail lengths of .280 [7.11] are designed for boards with a nominal thickness of .125 [3.18] and .200 [5.08].

Without Rails and Latch Blocks

.173 [4.39] and .280 [7.11] Lengths, ACTION PIN Tails



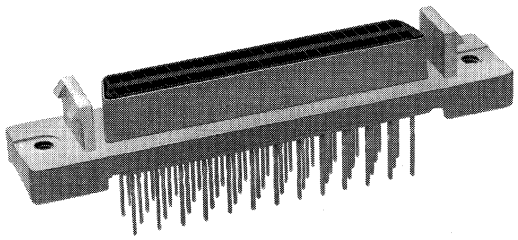
Note: 50 Pos. Housing Dim. (Typ.)—2.065 [52.45] L x .406 [10.31] W x .343 [8.71] H

No. of Pos.	Part Numbers		
	With .173 [4.39] ACTION PIN Contacts	With .280 [7.11] ACTION PIN Contacts	Seating Tool
20	786555-1	786557-1	856371-1
26	786555-2	786557-2	856371-2
50	786555-5	786557-5	856371-5
68	786555-7	786557-7	856371-7
100	786555-9	786557-9	856371-9
120	1-786555-0	1-786557-0	1-856371-0

Note: Headers with contact tail lengths of .173 [4.39] are designed for boards with a nominal thickness of .062 [1.57] and .093 [2.36]; headers with contact tail lengths of .280 [7.11] are designed for boards with a nominal thickness of .125 [3.18] and .200 [5.08].

Without Rails—With Latch Blocks

.173 [4.39] and .280 [7.11] Lengths, ACTION PIN Tails



Note: 50 Pos. Housing Dim. (Typ.)—2.065 [52.45] L x .406 [10.31] W x .351 [8.92] H

No. of Pos.	Part Numbers		
	With .173 [4.39] ACTION PIN Contacts	With .280 [7.11] ACTION PIN Contacts	Seating Tool
20	786155-1	786162-1	856371-1
26	786155-2	786162-2	856371-2
50	786155-5	786162-5	856371-5
68	786155-7	786162-7	856371-7
100	786155-9	786162-9	856371-9
120	1-786155-0	1-786162-0	1-856371-0

Note: Headers with contact tail lengths of .173 [4.39] are designed for boards with a nominal thickness of .062 [1.57] and .093 [2.36]; headers with contact tail lengths of .280 [7.11] are designed for boards with a nominal thickness of .125 [3.18] and .200 [5.08].

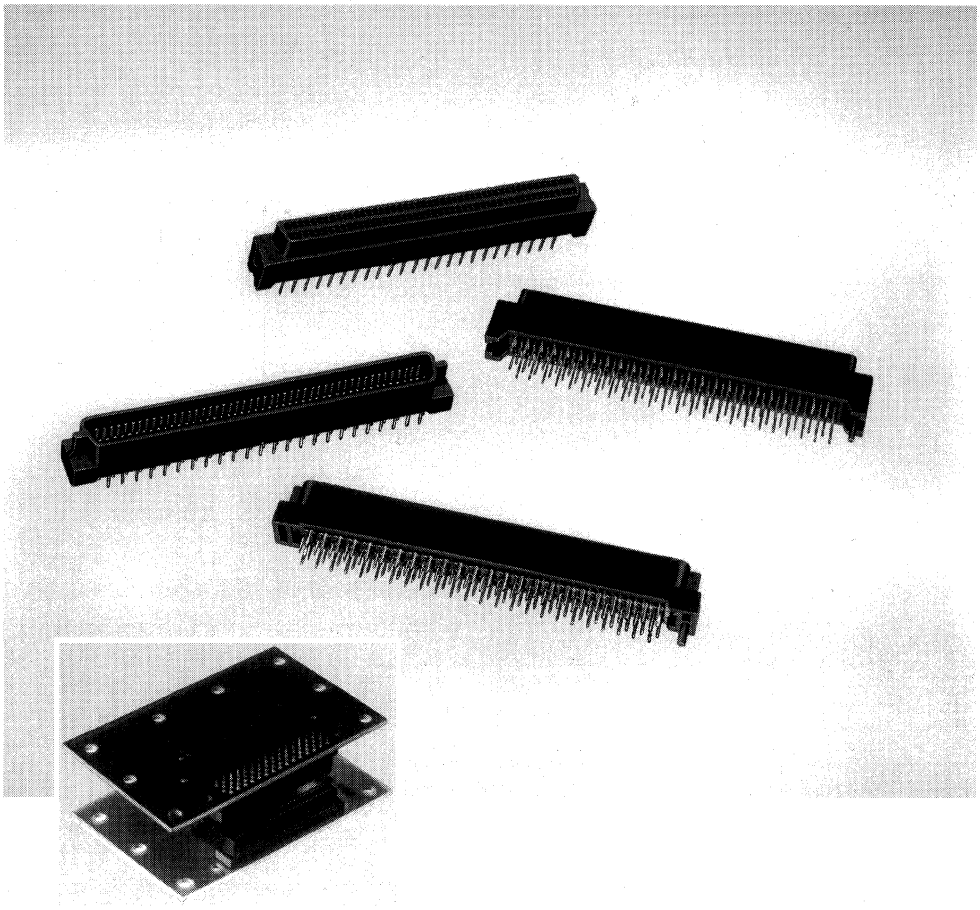
SOURCE: Catalog 82068

Specifications subject to change.

1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

SBus Connectors Series III



Product Facts

- **Meets requirements of VME bussing pcb per SBus standards**
- **Available in plug and receptacle header configurations for parallel board stacking**
- **Gold-over-nickel plated contacts**
- **Polished receptacle contact tips for low insertion/extraction forces**
- **Solder tails accept .062 [1.57] pc boards**
- **Housing material UL 94V-0 rated, thermoplastic for standard wave soldering process**
- **Polarized housings available (optional)**
- **Intermateable and interchangeable with standard .050 [1.27] Series SBus interconnect product**
- **Recognized under the Component Program of Underwriters Laboratories Inc., File No. E28476**
- **Certified by Canadian Standards Association, File No. LR 7189**
- **Free 3D and 2D CAD images— See page 56**

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AMPLIMITE .050 Series SBus connectors are high density interface pcb mount connectors that meet the requirements of Versa Module Europe (VME) bussing per SBus standards.

These 96-position connectors are available in plug and receptacle header configurations for parallel board stacking as required by SBus specifications. Connector contacts are on .100 x .050 [2.54 x 1.27] centerlines with a pcb footprint of .100 x .075 [2.54 x 1.91]. Board contact tails are .134 [3.40] and will accommodate .062 [1.57] pc boards. Contacts are phosphor bronze with a choice of .000030 [0.00076] or .000010 [0.000254] gold on mating end and .000150 [0.0038] tin-lead on solder end, all over a .000050 [0.00127] nickel underplating. Receptacle contacts feature a tuning fork design with polished contact tips for low insertion/extraction forces and high cycle durability.

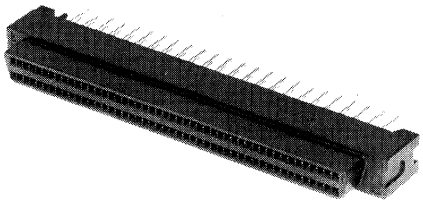
Housings are available with posted polarization (optional) to assure proper connector placement. All connectors feature kinked hold-down legs for positive board retention prior to soldering. Housings are made of UL 94V-0 rated, thermoplastic for thru-hole standard wave soldering processes.

AMPLIMITE .050 Series SBus connectors are intermateable with standard SBus interconnect products.

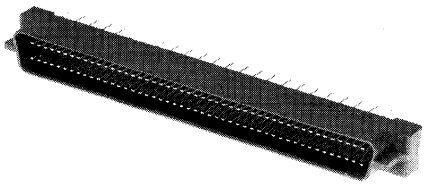
SBus Connectors Series III
(Continued)

Receptacle and Plug Header

Plating Code—
A—.000030 [0.00076] min. gold on mating end, .000150 [0.0038] min. tin-lead on solder end, all over .000050 [0.00127] min. nickel underplating
B—.000010 [0.00025] min. gold on mating end, .000150 [0.0038] min. tin-lead on solder end, all over .000050 [0.00127] min. nickel underplating



Receptacle



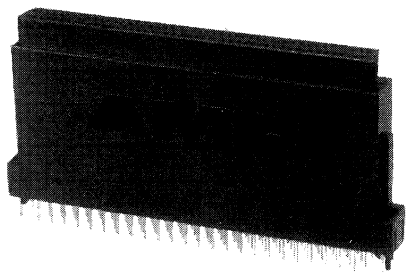
Plug

Note: 96 pos. Housing Dim. (Typ.)—2.795 [70.99] L x .287 [7.30] W x .569 [14.45] H (Receptacle), .366 [9.30] H (Plug)

No. of Positions	Contact Plating Code	With Polarization		Without Polarization	
		Receptacle Header	Plug Header	Receptacle Header	Plug Header
96	A	—	6-178464-8	—	6-174683-8
	B	750295-2	178464-8	750350-2	174683-8

Extended SBus Connectors, Series III

Receptacle Header



Plating Code—
B—.000010 [0.00025] min. gold on mating end, .000150 [0.0038] min. tin-lead on solder end, all over .000050 [0.00127] min. nickel underplating

Note: 96 Pos. Housing Dim. (Typ.)—2.795 [70.99] L x .287 [7.29] W x 1.369 [34.77] H

No. of Pos.	Contact Plating Coding	Part Number
96	B	750925-2

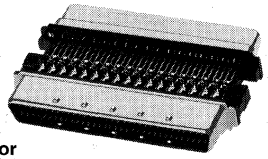
SOURCE: Catalog 82068

Specifications subject to change.
1-800-522-6752 Product Information Center/ AMP FAX Service
1-800-722-1111 Tooling/Technical Assistance Center

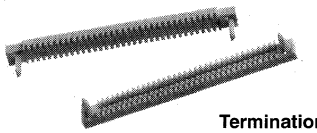
Cable Plug Connectors Series III

Bussing Connector and Cover

Recommended Wire Size—
28 AWG [0.08-0.09 mm²] or
30 AWG [0.05 mm²], solder or
7 strand, with a .029-.036
[0.74-0.91] insulation diameter



Connector



Termination Covers
(2 Required)

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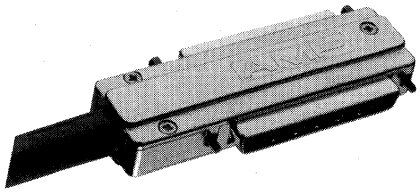
No. of Pos.	Wire Outer Dia.	Part Numbers Connector Assembly*
50	.032-.036 0.81-0.91	786305-5
68		786305-7
50	.029-.031 0.74-0.79	1-786305-5
68		1-786305-7

*Includes two termination covers.
Note: 50 position connectors are not for standard SCSI application. Shown for reference only.

Backshell Kit, Cable Bussing Connector

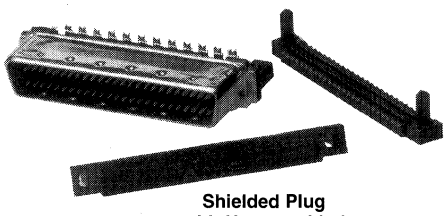


(Terminated connector shown for illustration purpose only, must be ordered separately, see chart above.)

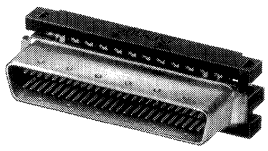
No. of Pos.	Max. Cable O. D.	Part Numbers Backshell Kit
50	.400 10.16	786307-1
68	.440 11.18	786306-1

Shielded Plugs

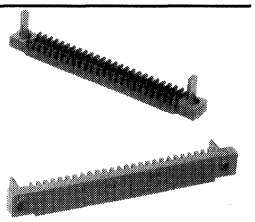
Recommended Wire Size—
28 AWG [0.08-0.09 mm²] or
30 AWG [0.05 mm²], solder or
7 strand, with a .029-.036
[0.74-0.91] insulation diameter



Shielded Plug with Unassembled Termination Covers



Shielded Plug with Assembled Termination Covers



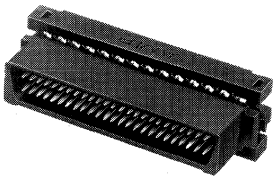
Wire Lacing Termination Covers

No. of Pos.	Part Numbers: Connector With Standard Termination Covers		Connector With Unassembled Wire Lacing Termination Covers		Wire Lacing Covers Only	
	Assembled Covers	Unassembled Covers	.032-.036 [0.81-0.91] Outer Wire Dia.	.029-.031 [0.74-0.79] Outer Wire Dia.	.032-.036 [0.81-0.91] Outer Wire Dia. Black	.029-.031 [0.74-0.79] Outer Wire Dia. Gray
20	749111-1	—	—	—	—	—
26	1-749111-0	749621-2	750913-2	1-750913-2	750877-2	1-750877-2
28	749111-2	749621-3	—	—	—	—
40	749111-3	749621-4	—	—	—	—
50	749111-4	749621-5	750913-5	1-750913-5	750877-5	1-750877-5
60	—	749621-6	—	—	—	—
68	749111-6	749621-7	750913-7	1-750913-7	750877-7	1-750877-7
80	749111-7	749621-8	—	—	—	—
100	749111-8	749621-9	750913-9	1-750913-9	750877-9	1-750877-9
120	749111-9	1-749621-0	—	—	—	—

Notes: 1. Plug connector requires backshell kit for complete assembly and must use round jacketed cable (discrete or laminated). Refer to pages 2341 and 2342 for backshell kit part numbers.
2. Wire lacing covers can be used to terminate connectors on pages 2340, 2341, 2343 and 2344.

Unshielded Plugs

Unshielded Plug with Assembled Termination Covers



No. of Pos.	Part Numbers With Standard Termination Covers Assembled Covers
50	749925-3
68	749925-5
100	749925-6

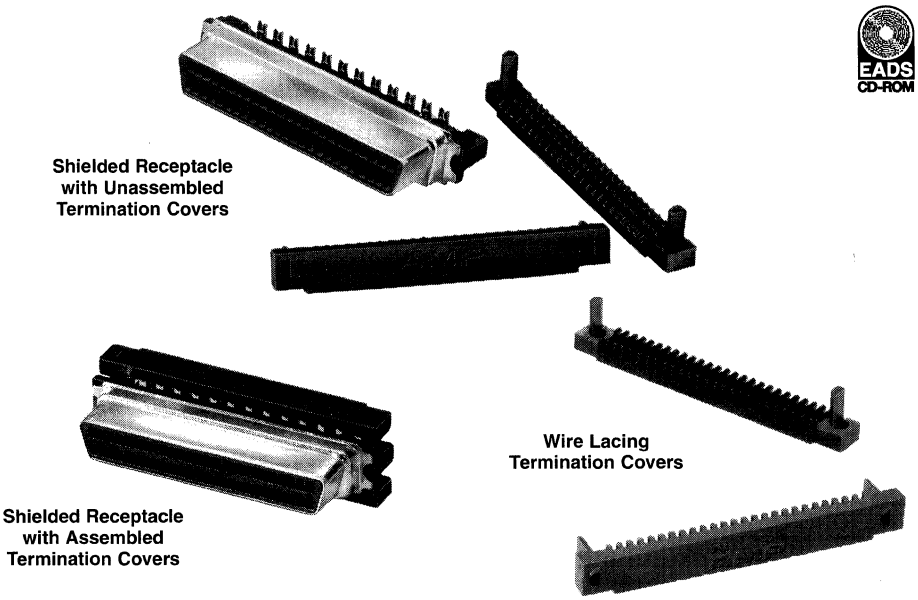
Notes: 1. Can use flat ribbon cable or round jacketed cable.
2. Can be used with backshell kit when using round jacketed cable.

SOURCE: Catalog 82068

Cable Receptacle Connectors Series III

Shielded Receptacles

Recommended Wire Size—
28 AWG [0.08-0.09 mm²] or 30 AWG [0.05 mm²], solid or 7 strand, with a .029-.036 [0.74-0.91] insulation diameter

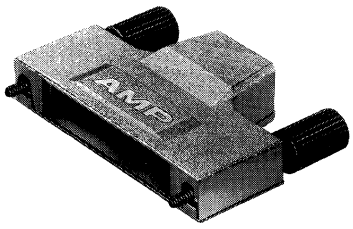


No. of Pos.	Part Numbers			
	Connector With Standard Termination Covers		Connector With Unassembled Wire Lacing Termination Covers	
	Assembled Covers	Unassembled Covers	.032-.036 [0.81-0.91] Outer Wire Dia.	.029-.031 [0.74-0.79] Outer Wire Dia.
26	749210-2	749699-2	786860-2	1-786860-2
40	—	749699-4	—	—
50	749210-5	749699-5	786860-5	1-786860-5
68	749210-7	749699-7	786860-7	1-786860-7
100	—	749699-8	786860-9	1-786860-9

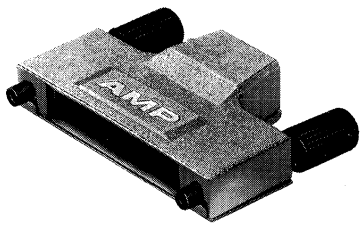
Note: Receptacle connector requires backshell kit for complete assembly. See below and page 2342 for backshell kit part numbers.

Shielded Backshell Kits, Series III

With Jackscrews



Straight Exit
Male Jackscrews



Straight Exit
Female Jackscrews

Note: 50 Pos. Housing Dim. (Typ.)—2.085 [52.96] L x 1.270 [32.26] W x .480 [12.19] H

No. of Pos.	Max. O.D.	Part Numbers	
		Standard Male with #2-56 Threads	Standard Female with #2-56 Threads
50	**.400** [10.16]	749080-1	749082-1
100	**.500** [12.70]	749081-1	749083-1
100	**.550** [13.97]	749854-1	749855-1

Notes: 1. Each backshell kit includes upper and lower backshells, two male or female jackscrews, one strain relief staple and two 2-56 screws. All are packaged unassembled.
2. Meets IPI and HIPPI standards.

SOURCE: Catalog 82068

Specifications subject to change.

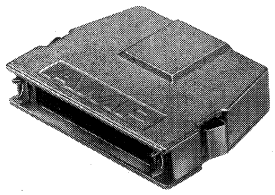
1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

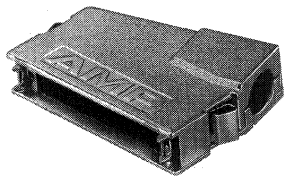
Shielded Backshell Kits, Series III
(Continued)

With Spring Latches

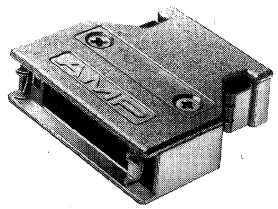
Straight and Angled Exit RFI/EMI Shields (Two-Piece) for Jacketed Cable



Style A
Straight Exit with Latches



Style A
Angled Exit with Latches



Style B
Straight Exit with Latches

EADS CD-ROM

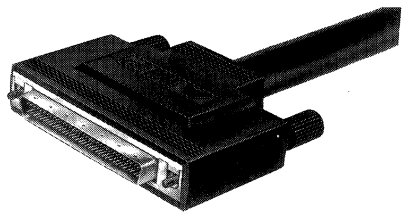
Note: 50 Pos. Housing Dim. (Typ.)—Style A, 1.965 [49.91] L x 1.395 [35.43] W x .480 [12.19] H; Style B, 1.965 [49.91] L x 1.800 [45.72] W x .492 [12.50] H

No. of Pos.	Style	Max. O.D.	Straight Exit with Latches	Angled Exit with Latches
20	A	**.270** [6.86]	749190-1	749199-1
26	B	**.270** [6.86]	749608-1	—
26	A	**.270** [6.86]	—	749609-1
28	A	**.295** [7.49]	749191-1	—
40	A	**.340** [8.64]	749192-1	749201-1
50	A	**.355** [9.02]	749193-1	749202-1
50	A	**.400** [10.16]	749193-2	749202-2
50	B	**.480** [12.19]	749889-3	—
60	A	**.380** [9.65]	749194-1	—
68	A	**.400** [10.16]	—	749204-1
68	A	**.440** [11.18]	749195-2	749204-2
80	A	**.420** [10.67]	749196-1	749205-1
80	A	**.500** [12.70]	749196-2	—
100	A	**.500** [12.70]	749197-1	749206-1
120	A	**.550** [13.97]	749198-1	749207-1

Notes: 1. Each backshell kit includes upper and lower backshells, two spring latches, one strain relief staple and two 2-56 screws. All are packaged unassembled.
2. 50 and 68 positions meet SCSI-2 standards.
3. Extra pin contact protection is provided by rails on the receptacle, which facilitate a straight-out unmating motion. A side-to-side rocking motion should not be used to disengage the connector system.

Shielded Enclosure Kits, Series III

With Male Jackscrews



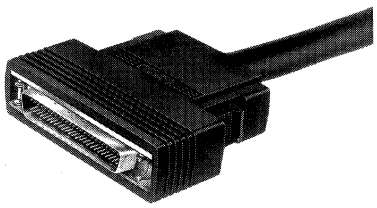
Note: 68 Pos. Housing Dim. (Typ.)—2.645 [67.18] L x 1.887 [47.93] W x .660 [16.76] H

No. of Pos.	Max. O.D.	Part No. with #2-56 Threads
68	**.520** [13.21]	750752-1

Notes: 1. Each enclosure kit contains two backshells, one boot, two jackscrews, one staple and two screws. All are packaged unassembled.
2. Meets SCSI-3 standards.

Shielded Enclosure Kits, Series III

With Spring Latches



Note: 50 Pos. Housing Dim. (Typ.)—2.105 [53.47] L x 1.800 [45.72] W x .580 [14.73] H

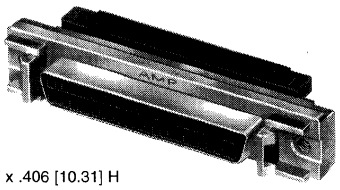
No. of Pos.	Max. O.D.	Part Numbers with Handles	Part Numbers without Handles
50	**.400** [10.16]	750681-1	750681-3
50	**.480** [12.19]	750681-2	750681-4

Note: 1. Each backshell kit includes upper and lower backshells, two spring latches, one strain relief staple and two 2-56 screws. All are packaged unassembled.
2. Meets SCSI-2 standards.
3. Extra pin contact protection is provided by rails on the receptacle, which facilitate a straight-out unmating motion. A side-to-side rocking motion should not be used to disengage the connector system.

SOURCE: Catalog 82068

Panel Mount Receptacle Assemblies Series III

With Rails, Latch Blocks



EADS CD-ROM

Note: 50 Pos. Housing Dim. (Typ.) —
2.065 [52.45] L x .596 [15.14] W x .406 [10.31] H

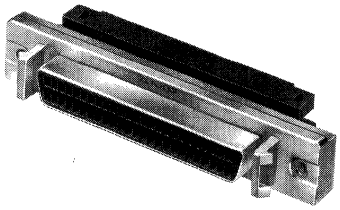
Recommended Wire Size—
28 AWG [0.08-0.09 mm²] or 30 AWG [0.05 mm²] solid or 7 strand, with a .029-.036 [0.74-0.91] insulation diameter or .050 [1.27] centerline, 28 AWG [0.08-0.09 mm²] stranded, PVC, flat ribbon cable

No. of Pos.	Part Numbers		
	Connectors With Assembled Standard Termination Covers	Connectors With Unassembled Wire Lacing Termination Covers	
		.032-.036 [0.81-0.91] Outer Wire Dia.	.029-.031 [0.74-0.79] Outer Wire Dia.
20	749611-2	—	—
26	749611-1	786861-2	1-786861-2
28	749611-3	—	—
50	749611-5	786861-5	1-786861-5
50	750450-1*	786864-5*	1-786864-5*
68	749611-7	786861-7	1-786861-7
80	749611-8	—	—
100	—	786861-9	1-786861-9
120	1-749611-0	—	—

*Has 4-40 threaded holes. All other receptacle assemblies have 2-56 threaded holes.

Note: Extra pin contact protection is provided by rails, which facilitate a straight-out, unmating motion. A side-to-side rocking motion should not be used to disengage the connector system.

Without Rails, With Latch Blocks



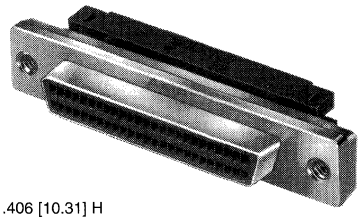
Note: 50 Pos. Housing Dim. (Typ.) —
2.065 [52.45] L x .596 [15.14] W x .406 [10.31] H

Recommended Wire Size—
28 AWG [0.08-0.09 mm²] or 30 AWG [0.05 mm²] solid or 7 strand, with a .029-.036 [0.74-0.91] insulation diameter or .050 [1.27] centerline, 28 AWG [0.08-0.09 mm²] stranded, PVC, flat ribbon cable

No. of Pos.	Part Numbers		
	Connectors With Assembled Standard Termination Covers	Connectors With Unassembled Wire Lacing Termination Covers	
		.032-.036 [0.81-0.91] Outer Wire Dia.	.029-.031 [0.74-0.79] Outer Wire Dia.
26	—	786862-2	1-786862-2
28	749656-3	—	—
50	749656-5	786862-5	1-786862-5
50	750640-1*	786865-5*	1-786865-5*
60	749656-6	—	—
68	749656-7	786862-7	1-786862-7
100	—	786862-9	1-786862-9

*Has 4-40 threaded holes. All other receptacle assemblies have 2-56 threaded holes.

Panel Mount Flat Top Receptacle Assemblies Series III Without Rails and Latch Blocks



Note: 50 Pos. Housing Dim. (Typ.) —
2.065 [52.45] L x .596 [15.14] W x .406 [10.31] H

Recommended Wire Size—
28 AWG [0.08-0.09 mm²] or 30 AWG [0.05 mm²] solid or 7 strand, with a .029-.036 [0.74-0.91] insulation diameter or .050 [1.27] centerline, 28 AWG [0.08-0.09 mm²] stranded, PVC, flat ribbon cable

No. of Pos.	Part Numbers			
	Assembled	Unassembled	Connectors with Unassembled Wire Lacing Termination Covers	
			.032-.036 [0.81-0.91] Outer Wire Dia.	.029-.031 [0.74-0.79] Outer Wire Dia.
50	749877-5	750721-1	786863-5	1-786863-5
68	749877-7	—	786863-7	1-786863-7
100	749877-9	—	786863-9	1-786863-9

SOURCE: Catalog 82068

Specifications subject to change.

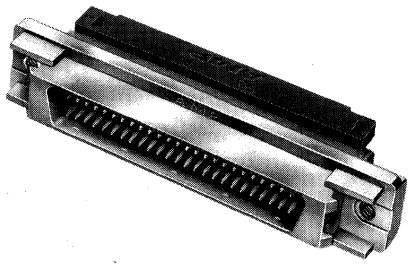
1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

Panel Mount Plug Assemblies Series III

With Rails and Latch Blocks

Recommended Wire Size—
28 AWG [0.08-0.09 mm²] or 30 AWG [0.05 mm²], solid or 7 strand, with a .029-.036 [0.74-0.91] insulation diameter or .050 [1.27] centerline, 28 AWG [0.08-0.09 mm²] stranded, PVC, flat ribbon cable



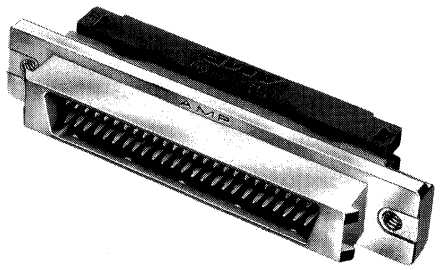
Note: 50 Pos. Housing Dim. (Typ.)—2.065 [52.45] L x .598 [15.19] W x .406 [10.31] H

No. of Pos.	Part No.
26	749878-2
40	749878-4
50	749878-5
68	749878-7
100	749878-9

Note: Extra pin contact protection is provided by rails, which facilitate a straight-out, unmating motion. A side-to-side rocking motion should not be used to disengage the connector system.

Without Rails, with Latch Blocks

Recommended Wire Size—
28 AWG [0.08-0.09 mm²] or 30 AWG [0.05 mm²], solid or 7 strand, with a .029-.036 [0.74-0.91] insulation diameter or .050 [1.27] centerline, 28 AWG [0.08-0.09 mm²] stranded, PVC, flat ribbon cable

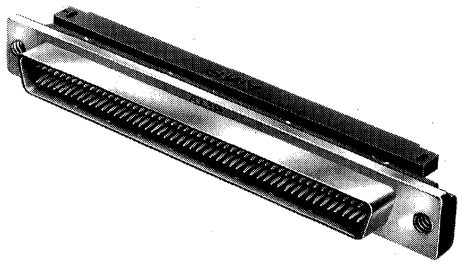


Note: 50 Pos. Housing Dim. (Typ.)—2.065 [52.45] L x .598 [15.19] W x .406 [10.31] H

No. of Pos.	Part No.
26	749880-2
40	749880-4
50	749880-5
68	749880-7
100	749880-9

Without Rails and Latch Blocks

Recommended Wire Size—
28 AWG [0.08-0.09 mm²] or 30 AWG [0.05 mm²], solid or 7 strand, with a .029-.036 [0.74-0.91] insulation diameter or .050 [1.27] centerline, 28 AWG [0.08-0.09 mm²] stranded, PVC, flat ribbon cable



Note: 50 Pos. Housing Dim. (Typ.)—2.065 [52.45] L x .598 [15.19] W x .406 [10.31] H

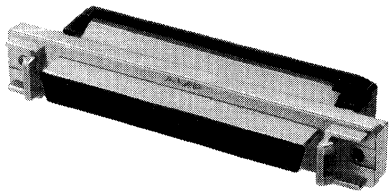
No. of Pos.	Part Numbers	
	Assembled Covers	Unassembled Covers
50	749879-5	750722-1
68	—	750722-7
100	749879-9	750722-9

SOURCE: Catalog 82068

EADS CD-ROM

Panel Mount Receptacle Assemblies for .025 [0.64] Centerline Ribbon Cable Series III

With Rails and Latch Blocks

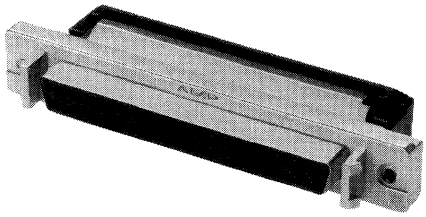


Recommended Wire Size—
.025 [0.64] centerline, 30 AWG [0.05 mm²] solid or 7 strand, PVC, flat ribbon cable

Note: 50 Pos. Housing Dim. (Typ.)—2.065 [52.45] L x .786 [19.96] W x .406 [10.31] H

No. of Pos.	Part No.
50	786103-5
68	786103-7

Without Rails, With Latch Blocks

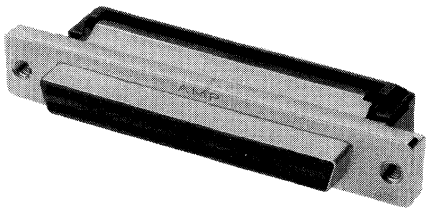


Recommended Wire Size—
.025 [0.64] centerline, 30 AWG [0.05 mm²] solid or 7 strand, PVC, flat ribbon cable

Note: 50 Pos. Housing Dim. (Typ.)—2.065 [52.45] L x .786 [19.96] W x .406 [10.31] H

No. of Pos.	Part No.
50	786161-5
68	786161-7

Without Rails and Latch Blocks

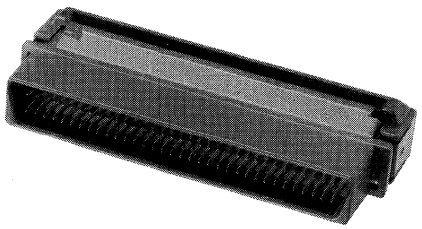


Recommended Wire Size—
.025 [0.64] centerline, 30 AWG [0.05 mm²] solid or 7 strand, PVC, flat ribbon cable

Note: 50 Pos. Housing Dim. (Typ.)—2.065 [52.45] L x .786 [19.96] W x .406 [10.31] H

No. of Pos.	Part No.
50	786096-5
68	786096-7

Plug Assemblies Unshielded for .025 [0.64] Centerline Ribbon Cable Series III



Recommended Wire Size—
.025 [0.64] centerline, 30 AWG [0.05 mm²] solid or 7 strand, PVC, flat ribbon cable

Note: 50 Pos. Housing Dim. (Typ.)—
1.579 [40.11] L x .778 [19.76] W x .423 [10.74] H

No. of Pos.	Part No.
50	786090-5
68	786090-7

Backshell Kit for .025 [0.64] Centerline Unshielded Plug

No. of Pos.	Kit Part No.
50	787032-5
68	787032-7

Strain Relief for .025 [0.64] Centerline Unshielded Plug

68-Position
Part No. 787043-7

SOURCE: Catalog 82068

Specifications subject to change.

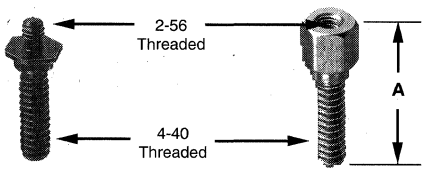
1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

Hardware and Dust Covers Series III

Screwlock Kits

Used with—Right-Angle or Vertical Receptacle Headers

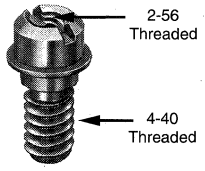


Male
Part No. 749086-1
(Includes two screwlocks)

Female
(Includes two screwlocks)

Dim. A	Part No.
.562 14.27	749087-1[1]
.380 9.65	749087-2[1]
.548 13.92	749087-6

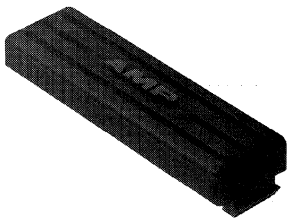
[1]Recommended for right-angle board mount connectors.



Female
Part No. 750644-1
(Includes two screwlocks)

Recommended for pc board mount to panel mount connectors with #4-40 threads and latches or latches and rails. Permits cable connectors to be spring latch-type or jackscrew-type

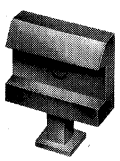
Protective Dust Covers



No. of Pos.	Part Number	
	Cable Connector[1]	Board Mount[2]
20	—	750062-1
26	—	750062-2
28	—	750062-3
40	—	750062-4
50	749894-5	750062-5
80	—	750062-8
120	—	1-750062-0

[1]Covers can be used with connectors which have backshells with latches installed.
[2]Covers can be used with pc board or panel mount connectors which have latch blocks.

Latch Blocks for Cable-to-Cable Applications



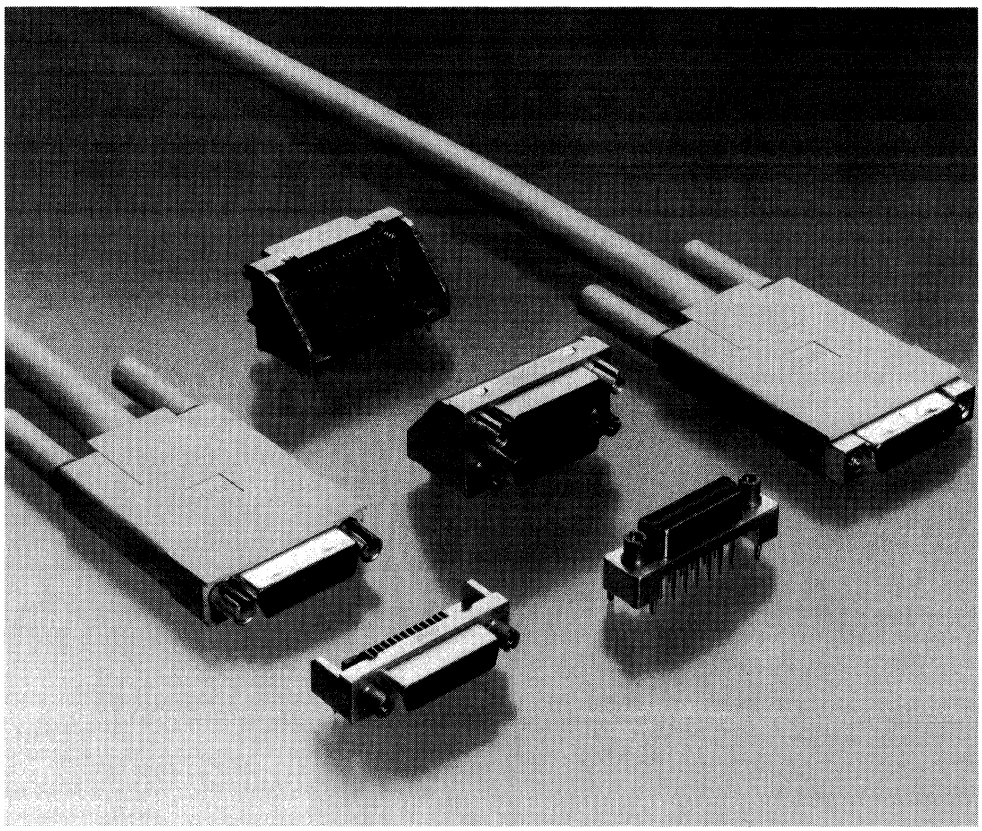
Part No. 749900-2

Shielded Slimline Connectors

Product Facts

- **Compact design, profile for the right-angle header 1.230 x .588 [31.24 x 14.94], vertical header 1.230 x .433 [31.24 x 11.00], right-angle stacked headers 1.230 x .803 [31.24 x 20.40]**
- **Housings and covers made of UL 94V-0 rated thermoplastic**
- **Headers are compatible with surface mount reflow solder processes**
- **Header footprint for right-angle and stacked configurations is .100 x .050 [2.54 x 1.27] staggered centerlines**
- **Header footprint for vertical configuration is .100 x .075 [2.54 x 1.90] staggered centerlines**
- **Right-angle and stacked headers feature integral boardlocks for positive board retention and grounding**
- **Vertical headers feature 8 below the board, retentive contact legs for mechanical retention before and after soldering**
- **Vertical headers feature polarized grounding posts to assure correct header-to-board orientation**
- **Stacked headers reduce overall total header volume by 48% and Pc board area by 38%**
- **Stacked headers offer optional contact shield for additional EMI/RFI protection**
- **Plugs preloaded with insulation displacement contacts (IDC) provide fast, reliable and economical terminations**
- **Aesthetically designed backshell kits feature easy-to-use finger grip jackscrews to secure mated connectors**
- **Choice of three keying positions, plus non-keyed inserts for assurance against mismatch mating**
- **Listed and complies with UL 1863, Communication Circuit Accessories, File No. E81956**
- **Certified by Canadian Standards Association, File No. LR7189A**
- **Free 3D and 2D CAD images— See page 56**

SOURCE: Catalog 82068



Shielded AMPLIMITE .050 Series, Slimline Connectors answer today's industry requirement for higher density in a smaller overall package. The present line consists of 26 position, shielded right-angle and vertical PCB receptacle headers, 26 position right-angle stacked PCB receptacle header, and mating 26 position plug connectors. All header, plug and backshell housings are made of UL 94V-0 rated thermoplastic.

PCB headers are compatible with surface mount reflow solder processes. Right-angle and stacked PCB headers feature contact footprints on .100 x .050 [2.54 x 1.27] staggered centerlines and vertical header footprints are on .100 x .075 [2.54 x 1.90] staggered centerlines.

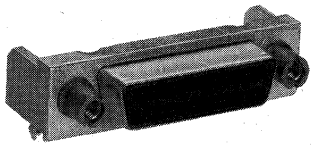
Specifications subject to change.

1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

Shielded Slimline Connectors
(Continued)

26 Position Right-Angle Receptacle Header



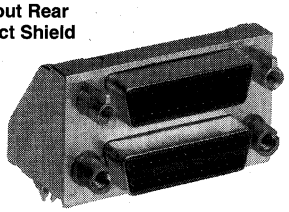
Part No. 750823-1

Notes: 1. Rear panel mounting only.
2. Female screwlocks are not included with receptacles and must be ordered separately. See below for screwlock kit information.
3. Pc board thickness is .062±.008 [1.57±0.20].

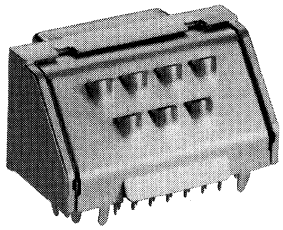
EADS CD-ROM

26 Position Right-Angle Stacked Receptacle Header

Without Rear Contact Shield



With Rear Contact Shield



Notes: 1. Rear panel mounting only.
2. Female screwlocks are not included with receptacles and must be ordered separately. See below for screwlock kit information.
3. Pc board thickness is .062±.008 [1.57±0.20].

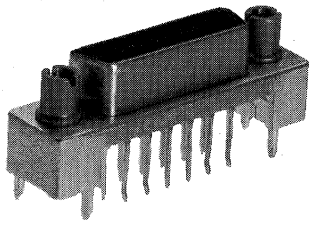
Note: 26 Pos. Housing Dim. (Typ.)—1.230 [31.24] L x .803 [20.40] W x .635 [16.13] H

No. of Positions	Part Numbers			
	Std. Recept. without Rear Contact Shield		Recept. with Rear Contact Shield[3]	
	Keyed[1]	Unkeyed[2]	Keyed[1]	Unkeyed[2]
26/26	786199-1	786200-1	750821-1	750820-1

[1]Lower header unkeyed with 4-40 threaded holes, upper header keyed in keying position 1.
[2]Both headers unkeyed with 4-40 threaded holes.
[3]Receptacle includes a metal contact shield for added RFI protection to the rear of the receptacle assembly.

26 Position Vertical Mount Receptacle Header

Note: 26 Pos. Housing Dim. (Typ.) — 1.230 [31.24] L x .325 [8.26] W x .553 [14.05] H



Part No. 750828-1

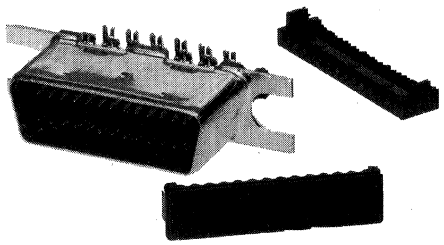
Notes: 1. Rear panel mounting only.
2. Female screwlocks are not included with receptacles and must be ordered separately. See below for screwlock kit information.
3. Pc board thickness is .062±.008 [1.57±0.20].

26 Position Cable Plug Connector

Recommended Wire Size— 28 AWG [0.08 mm²] with max. O.D. .032 [0.813]. PVC or polyolefin insulation. **Wire must be approved by AMP Engineering.**

Note: 26 Pos. Housing Dim. (Typ.) — 1.170 [29.72] L x .576 [14.63] W x .275 [6.99] H

Note: Cable connectors must be used with backshell kits.



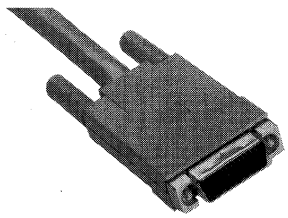
Part No. 750833-1

26 Position Panel Mount Receptacle Connector

Part No. 786548-1

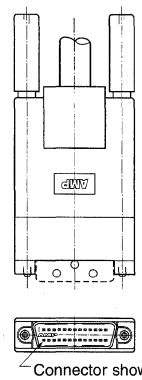
Backshell Kits

Note: Housing Dim. (Typ.) — 1.250 [31.75] L x 1.745 [44.32] W x .330 [8.38] H



Part Numbers		Cable Dia.	Packaging*
Unkeyed Kit	Keyed Kit		
750850-1	750852-1	.250-.280 6.35-7.11	Individually Packed Kit
750850-2	750852-2		Bulk Packed Kit
750850-3	750852-3	.280-.310 7.11-7.87	Individually Packed Kit
750850-4	750852-4		Bulk Packed Kit

*Bulk packaging—100 kits per box.



Connector shown for illustration purposes only, must be purchased separately.

Accessories
Female Screwlock Kit

Note: Female screwlocks to be used with connectors mounted to panels having a thickness of .047 [1.19]

Part No.	Packaging
750831-1	Individually Packed Kit (2 Screwlocks per kit)
750831-2	Bulk Packed Kit* (2 Screwlocks per kit)

*Minimum order is 510 kits.

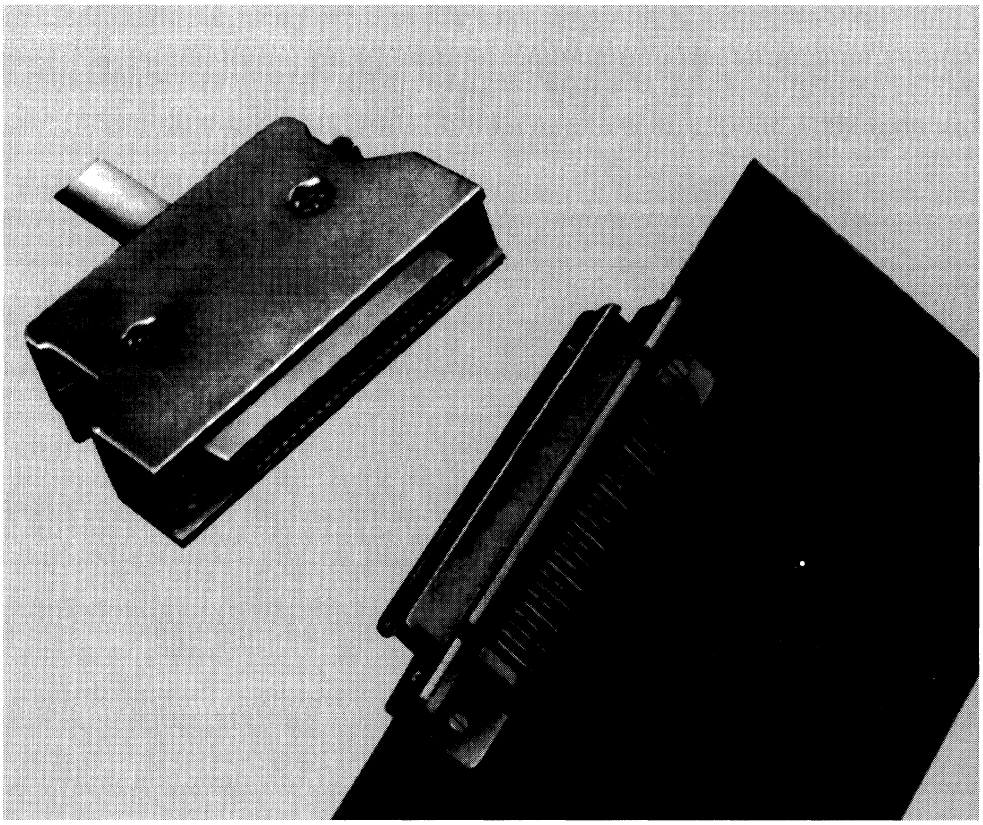
SOURCE: Catalog 82068

Specifications subject to change.
1-800-522-6752 Product Information Center/ AMP FAX Service
1-800-722-1111 Tooling/Technical Assistance Center

Shielded Series II Connectors (.050 x .100 [1.27 x 2.54] Centerlines)

Product Facts

- High-density D type interface
- Flame retardant thermoplastic housing, material UL 94V-0 rated
- 20 through 68 contact positions
- Tab and tuning-fork receptacle contacts, with reliable two-point (redundant) contact
- Right-angle and vertical headers
- Board-to-board, cable-to-board and cable-to-cable connections
- Zinc diecast backshells offer excellent EMI/RFI protection
- Shields mate before contacts, with ground mating first/break last
- Keying available
- Recognized under the Component Program of Underwriters Laboratories Inc., File No. E28476
- Certified by Canadian Standards Association, File No. LR7189
- Free 3D and 2D CAD images— See page 56



Shielded AMPLIMITE .050 Series Connectors offer excellent EMI/RFI protection. The 50- and 68-position wire-to-board connectors have been qualified to meet SCSI standards. The complete family is available in 20, 28, 36, 50 and 68 position configurations. The cable connectors use insulation displacement contacts for fast termination of discrete, round-to-flat laminated and ribbon cable. Recommended wire size is 28 AWG [0.08-0.09 mm²] with a .020-.026 [0.5-0.65] insulation diameter. For other wire sizes and insulation diameters, consult AMP.

A selection of cable connector backshell kits is offered, including a standard 180° Exit, a Keyed 180° Exit, and for SCSI applications a 36 and 50 position 180° Exit and a 50 position 75° Exit.

Board-mount headers are available in a choice of right-angle plugs and receptacles and a vertical mount plug.

Important Note: Only the 50 and 68 position wire-to-board connectors for SCSI Applications are intermateable with Shielded AMPLIMITE .050 Series, Series III connectors.

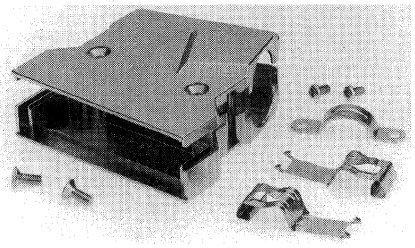
SOURCE: Catalog 82068

Specifications subject to change.

1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

Backshell Kits 180° Cable Exit



Note: 36 Pos. Housing Dim. (Typ.)—
1.559 [39.6] L x 1.40 [32.5] W x .433 [11.0] H

EADS CD-ROM

No. of Pos.*	Part Numbers
20	174542-1
28	174543-1
36	174544-1
50	174545-1
68	174548-1

*96 positions are available, consult AMP.

180° Cable Exit (SCSI Application)

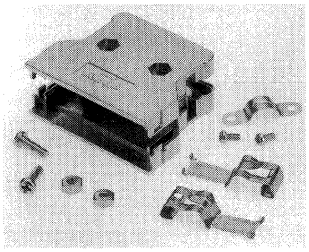
Note: 36 Pos. Housing Dim. (Typ.)—
1.560 [39.6] L x 1.244 [31.6] W x .409 [10.4] H

No of. Pos.	Part Numbers	Cable Dia.	Applicable Connector Part Number	
36	176853-1	.366 9.3	□-174340-3 □-174731-3	□-175705-3 □-175707-3
50	176854-1	.445 11.3	□-174340-4 □-174731-4	□-175705-4 □-175707-4

50 Position 75° Cable Exit (SCSI Application)

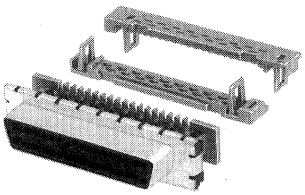
Applicable Connectors:
Part Nos. □-174340-4
□-174731-4
□-175705-4
□-175707-4

Note: 50 Pos. Housing Dim. (Typ.) —
1.909 [48.5] L x 1.772 [45.0] W
x .559 [14.2] H Max. Cable Dia. .445 [11.3]



Backshell Kit Part No. 176855-1

Receptacle Connector Kits



Receptacle Connector

30 AWG [0.05 mm²]

Note: 36 Pos. Housing Dim. (Typ.)—1.276 [32.4] L x .492 [12.50] W x .323 [8.20] H

No. of Pos.	Part Numbers			
	Black* (.020-.026 [0.5-0.65])		Gray* (.031-.035 [0.8-0.88])	
	.000008 [0.0002]	.000030 [0.00076]	.000008 [0.0002]	.000030 [0.00076]
20	175705-1	1-175705-1	2-175705-1	3-175705-1
28	175705-2	1-175705-2	2-175705-2	3-175705-2
36	175705-3	1-175705-3	2-175705-3	3-175705-3
50	175705-4	1-175705-4	2-175705-4	3-175705-4
68	175705-5	1-175705-5	2-175705-5	3-175705-5

*These are housing and cover colors. Dimensions in parentheses are insulation O.D.
Notes: 1. Kit includes receptacle and cover.
2. 96 Positions are available, consult AMP.

28 AWG [0.08 mm²]

Note: 36 Pos. Housing Dim. (Typ.)—1.276 [32.4] L x .492 [12.50] W x .323 [8.20] H

No. of Pos.	Part Numbers			
	Black* (.020-.026 [0.5-0.65])		Gray* (.031-.035 [0.8-0.88])	
	.000008 [0.0002]	.000030 [0.00076]	.000008 [0.0002]	.000030 [0.00076]
20	174340-1	1-174340-1	2-174340-1	3-174340-1
28	174340-2	1-174340-2	—	3-174340-2
36	174340-3	1-174340-3	2-174340-3	3-174340-3
50	174340-4	1-174340-4	2-174340-4	3-174340-4
68	174340-5	1-174340-5	2-174340-5	3-174340-5

Note: Kit includes receptacle and cover.
*These are housing and cover colors. Dimensions in parentheses are insulation O.D.

SOURCE: Catalog 82068

Specifications subject to change.

1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

Receptacle Connector Kits for Flat and Laminated Wire

Wire Range— AWG 28 [0.08 mm²]

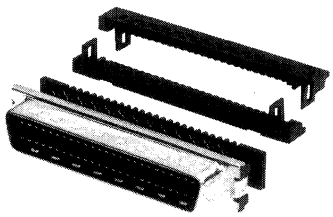
Wire Insulation Diameter—
.020-.026 [0.5-0.65]

Note: 50 Pos. Housing Dim. (Typ.)—1.626 [41.3] L x .492 [12.50] W x .323 [8.20] H

No. of Pos.	Part Numbers	
	.000008 [0.0002]	.000030 [0.00076]
50	175644-4	1-175644-4
68	175644-5	1-175644-5

Note: Kit includes receptacle and cover.

Plug Connector Kits With Detent



30 AWG [0.05 mm²]

Note: 36 Pos. Housing Dim. (Typ.)—1.276 [32.4] L x .504 [12.80] W x .323 [8.20] H

No. of Pos.	Part Numbers			
	Black* (.020-.026 [0.5-0.65])		Gray* (.031-.035 [0.8-0.88])	
	.000008 [0.0002]	.000030 [0.00076]	.000008 [0.0002]	.000030 [0.00076]
20	175707-1	1-175707-1	2-175707-1	3-175707-1
28	175707-2	1-175707-2	2-175707-2	3-175707-2
36	175707-3	1-175707-3	2-175707-3	3-175707-3
50	175707-4	1-175707-4	2-175707-4	3-175707-4
68	175707-5	1-175707-5	2-175707-5	3-175707-5

*These are housing and cover colors. Dimensions in parentheses are insulation O.D.
Note: Kit includes plug and cover.

28 AWG [0.08 mm²]

Note: 36 Pos. Housing Dim. (Typ.)—1.276 [32.0] L x .504 [12.80] W x .323 [8.20] H

No. of Pos.	Part Numbers			
	Black* (.020-.026 [0.5-0.65])		Gray* (.031-.035 [0.8-0.88])	
	.000008 0.0002	.000030 0.00076	.000008 0.0002	.000030 0.00076
20	174731-1	1-174731-1	2-174731-1	3-174731-1
28	174731-2	1-174731-2	2-174731-2	3-174731-2
36	174731-3	1-174731-3	2-174731-3	3-174731-3
50	174731-4	1-174731-4	2-174731-4	3-174731-4
68	174731-5	1-174731-5	2-174731-5	3-174731-5

*These are housing and cover colors. Dimensions in parentheses are insulation O.D.
Notes: 1. Kit includes plug and cover.
2. 96 positions are available, consult AMP.

Plug Connector Kits for Panel Mount

Wire Range—AWG 28
[0.08 mm²] (Flat Ribbon Cable)

Wire Insulation Diameter—
.020-.035 [0.5-0.88]

Note: 50 Pos. Housing Dim. (Typ.)—2.067 [52.5] L x .504 [12.80] W x .421 [10.7] H

No. of Pos.	Part Numbers	
	.000008 [0.0002]	.000030 [0.00076]
36	175590-3	2-175590-3
50	175590-4	2-175590-4
68	—	2-175590-5

Notes: 1. Kit includes plug and cover.
2. 96 positions available, consult AMP.

SOURCE: Catalog 82068

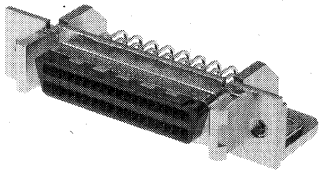
Specifications subject to change.

1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

Right-Angle Mount Receptacle Headers

With Mounting Holes



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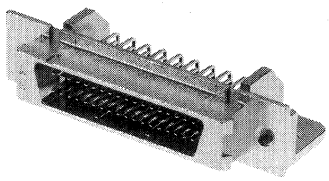
Note: 36 Pos. Housing Dim. (Typ.)—1.717 [43.6] L x .658 [16.70] W x .406 [10.30] H

No. of Pos.	Part Numbers	
	.000008 [0.0002]	.000030 [0.00076]
20	174726-1	2-174726-1
28	174726-2	2-174726-2
36	174726-3	2-174726-3
50	174726-4	2-174726-4
68	174726-5	2-174726-5

Right-Angle Mount Plug Headers With Latches

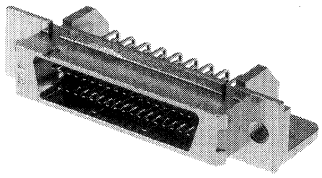
With Threaded Mounting Holes



Note: 36 Pos. Housing Dim. (Typ.)—1.717 [43.6] L x .681 [17.30] W x .406 [10.30] H

No. of Pos.	Part Numbers	
	.000008 [0.0002]	.000030 [0.00076]
20	174225-1	—
28	174225-2	—
36	174225-3	2-174225-3
50	174225-4	2-174225-4
68	174225-5	2-174225-5

With Retention Legs

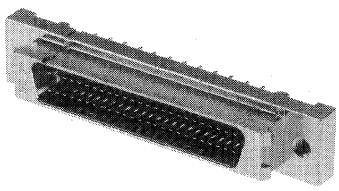


Note: 36 Pos. Housing Dim. (Typ.)—1.717 [43.6] L x .681 [17.30] W x .406 [10.30] H

No. of Pos.	Part Numbers	
	.000008 [0.0002]	.000030 [0.00076]
20	174341-1	2-174341-1
28	174341-2	2-174341-2
36	174341-3	2-174341-3
50	174341-4	2-174341-4
68	174341-5	2-174341-5

Vertical Mount Plug Headers

With Threaded Mounting Holes



Note: 50 Pos. Housing Dim. (Typ.)—2.067 [52.5] L x .406 [10.30] W x .366 [9.3] H

No. of Pos.*	Part Numbers	
	.000008 [0.0002]	.000030 [0.00076]
50	174339-4	2-174339-4
68	174339-5	2-174339-5

*96 position available, consult AMP.

SOURCE: Catalog 82068

Specifications subject to change.

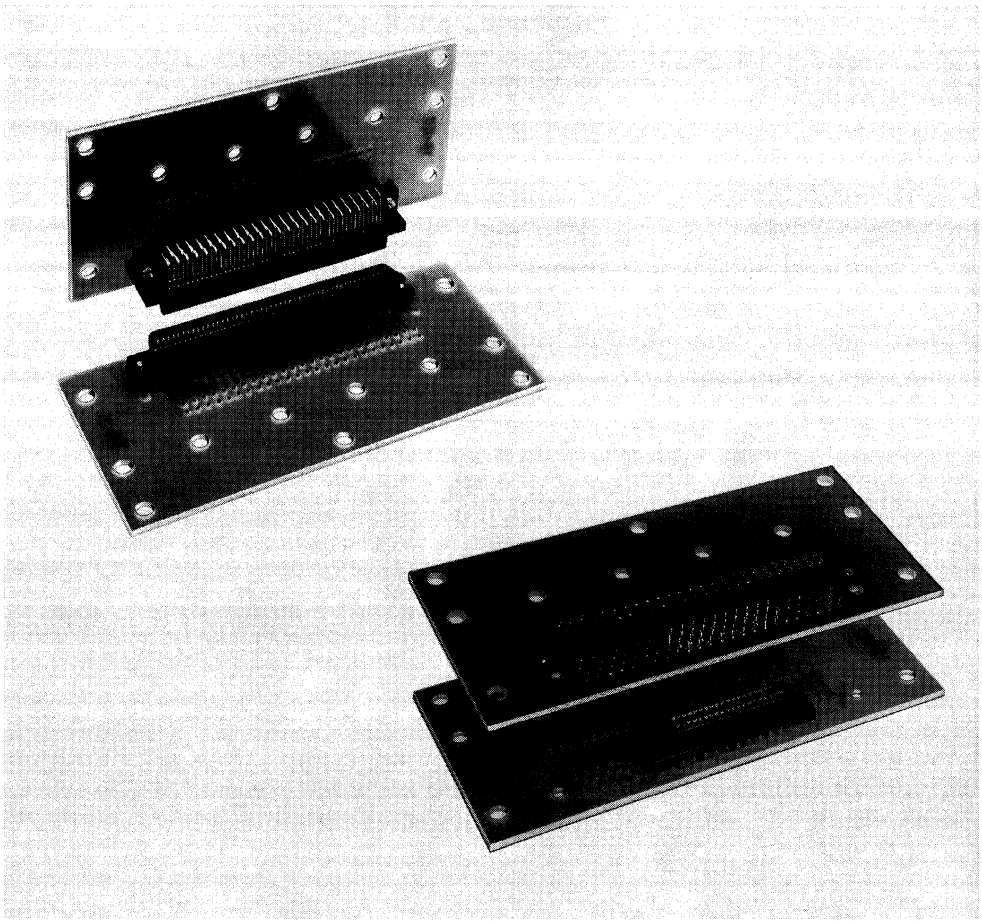
1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

Series I, All-Plastic Board-to-Board Connectors (.050 x .100 [1.27 x 2.54] Centerline)

Product Facts

- High-density D type interface
- Flame retardant thermoplastic housings, material 94V-0 rated
- Right-angle and vertical configurations available
- Right-angle headers—30-96 contact positions
- Vertical headers—20-96 contact positions
- Recognized under the Component Program of Underwriters Laboratories Inc., File No. E28476
- Certified by Canadian Standards Association, File No. LR7189
- Free 3D and 2D CAD images—See page 56



These board-mount, plug and receptacle headers offer a high-density D type interface and feature a .050 x .100 [1.27 x 2.54] contact centerline spacing. They are ideally suited for applications where EMI/RFI protection is not necessary. Headers are available in two configurations, right-angle and vertical mount, with a choice of screw down, retention leg or solder post board retention. This versatility in mounting configurations makes possible a variety of board-to-board interconnections, such as horizontal, parallel and right-angle. Right-angle headers are available in 30 through 96 positions and vertical mount headers are available in 20 through 96 positions.

SOURCE: Catalog 82068

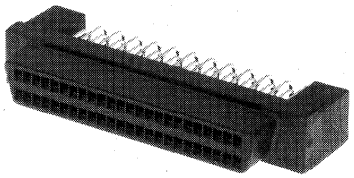
Specifications subject to change.

1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

Right-Angle Mount Receptacle Headers

With Retention Legs and Self-Retaining Solder Posts (Without Board Standoff)

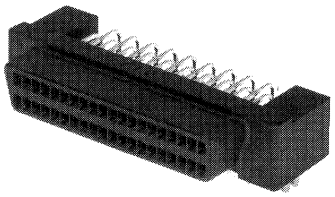


Note: 48 Pos. Housing Dim. (Typ.)—1.600 [40.50] L x .677 [17.2] W x .287 [7.30] H

No. of Pos.	Part Numbers			
	With Retention Legs		With Self-Retaining Posts	
	.000008 [0.0002]	.000030 [0.00076]	.000008 [0.0002]	.000030 [0.00076]
34	174207-5	6-174207-5	174682-5	6-174682-5
48	174207-6	6-174207-6	174682-6	6-174682-6
68	—	—	3-174682-7	8-174682-7
96	—	—	3-174682-8	8-174682-8

Note: Connector is secured to the pc board by soldering contact posts.

With and Without Retention Legs

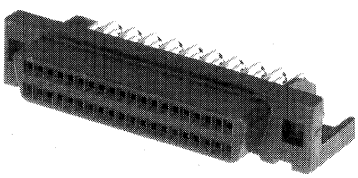


Note: 40 Pos. Housing Dim. (Typ.)—1.394 [35.40] L x .677 [17.2] W x .306 [7.80] H

No. of Pos.	Part Numbers			
	With Retention Legs		Without Retention Legs	
	.000008 [0.0002]	.000030 [0.00076]	.000008 [0.0002]	.000030 [0.00076]
30	174217-1	6-174217-1	174213-1	6-174213-1
40	174217-2	6-174217-2	174213-2	6-174213-2
50	174217-3	6-174217-3	174213-3	6-174213-3
60	174217-4	6-174217-4	174213-4	—

Note: Connector is secured by soldering contact posts. For connector with retention legs, connector is temporarily secured onto pc boards prior to soldering.

With Thru-Holes for Board Mounting



Note: 40 Pos. Housing Dim. (Typ.)—1.480 [37.50] L x .677 [17.2] W x .306 [7.80] H

No. of Pos.	Part Numbers	
	.000008 [0.0002]	.000030 [0.00076]
30	173277-1	6-173277-1
34	173277-5	6-173277-5
40	173277-2	6-173277-2
48	—	6-173277-6
50	173277-3	6-173277-3
60	173277-4	6-173277-4
96	173277-8	6-173277-8

Note: To mount connector to pc board, use M2 screws and nuts (not supplied).

SOURCE: Catalog 82068

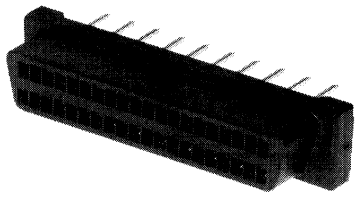
Specifications subject to change.

1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

Vertical Mount Receptacle Headers

With and Without Self-Retaining Solder Posts



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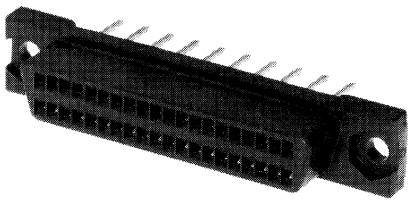
Note: 40 Pos. Housing Dim. (Typ.)—1.256 [31.90] L x .287 [7.30] W x .303 [7.70] H

No. of Pos.	Part Numbers			
	Without Self-Retaining Posts		With Self-Retaining Posts	
	.000008 [0.0002]	.000030 [0.00076]	.000008 [0.0002]	.000030 [0.00076]
20	174215-5	6-174215-5	175710-5	6-175710-5
30	174215-1	6-174215-1	175710-1	6-175710-1
40	174215-2	6-174215-2	175710-2	6-175710-2
50	174215-3	6-174215-3	175710-3	6-175710-3
60	174215-4	6-174215-4	175710-4	6-175710-4

With Thru-Holes for Board Mounting

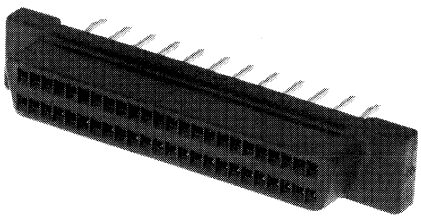


Note: 40 Pos. Housing Dim. (Typ.)—1.500 [38.10] L x .287 [7.30] W x .303 [7.70] H

No. of Pos.	Part Numbers	
	.000008 [0.0002]	.000030 [0.00076]
30	173279-1	6-173279-1
40	173279-2	6-173279-2
50	173279-3	6-173279-3
60	173279-4	6-173279-4

Note: To mount connector to pc board, use M2 screws and nuts (not supplied).

With Self-Retaining Solder Posts



Note: 48 Pos. Housing Dim. (Typ.)—1.590 [40.50] L x .287 [7.30] W x .303 [7.70] H

No. of Pos.	Part Numbers	
	.000008 [0.0002]	.000030 [0.00076]
34	174681-5	6-174681-5
48	174681-6	6-174681-6
68	174681-7	6-174681-7
96	174681-8	6-174681-8

SOURCE: Catalog 82068

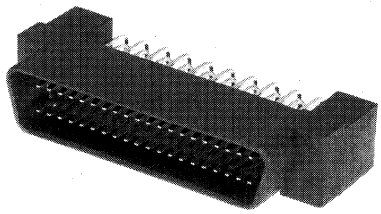
Specifications subject to change.

1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

Right-Angle Mount Plug Headers

With and Without Retention Legs

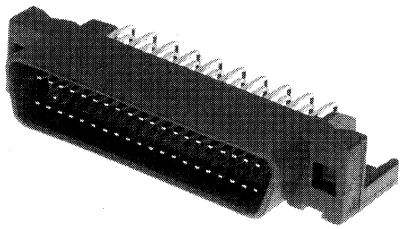


Note: 40 Pos. Housing Dim. (Typ.)—1.390 [35.40] L x .681 [17.3] W x .306 [7.80] H

No. of Pos.	Part Numbers			
	With Retention Legs		Without Retention Legs	
	.000008 [0.0002]	.000030 [0.00076]	.000008 [0.0002]	.000030 [0.00076]
30	174218-1	6-174218-1	174214-1	6-174214-1
40	174218-2	6-174218-2	174214-2	6-174214-2
50	174218-3	6-174218-3	174214-3	6-174214-3
60	174218-4	6-174218-4	174214-4	—

Note: Connector is secured by soldering contact posts. For connector with retention legs, connector is temporarily secured onto pc board prior to soldering.

With Thru-Holes For Board Mounting

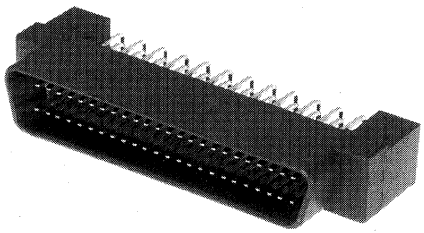


Note: 40 Pos. Housing Dim. (Typ.)—1.480 [37.50] L x .681 [17.3] W x .306 [7.80] H

No. of Pos.	Part Numbers	
	.000008 [0.0002]	.000030 [0.00076]
30	173278-1	6-173278-1
40	173278-2	6-173278-2
50	173278-3	6-173278-3
60	173278-4	6-173278-4

Note: To mount connector to pc board, use M2 screws and nuts (not supplied).

With Self-Retaining Solder Posts



Note: 48 Pos. Housing Dim. (Typ.)—1.590 [40.50] L x .681 [17.3] W x .287 [7.30] H

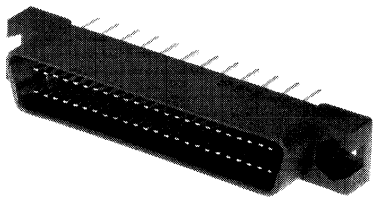
No. of Pos.	Part Numbers	
	.000008 [0.0002]	.000030 [0.00076]
34	174684-5	6-174684-5
48	174684-6	6-174684-6
68	174684-7	6-174684-7
96	174684-8	6-174684-8

SOURCE: Catalog 82068

Specifications subject to change.
1-800-522-6752 Product Information Center/ AMP FAX Service
1-800-722-1111 Tooling/Technical Assistance Center

Vertical Mount Plug Headers

With Thru-Holes For Board Mounting

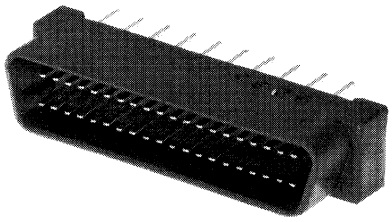


Note: 48 Pos. Housing Dim. (Typ.)—1.700 [43.20] L x .287 [7.30] W x .366 [9.30] H

No. of Pos.	Part Numbers	
	.000008 [0.0002]	.000030 [0.00076]
30	173280-1	6-173280-1
34	173280-5	6-173280-5
40	173280-2	6-173280-2
48	173280-6	6-173280-6
50	176302-3* 173280-3	6-173280-3
60	173280-4	6-173280-4
96	173280-8	6-173280-8

*Solder Tail Length .091 [2.3], all others .122 [3.1]
Note: To mount connector to pc board, use M2 screws and nuts (not supplied).

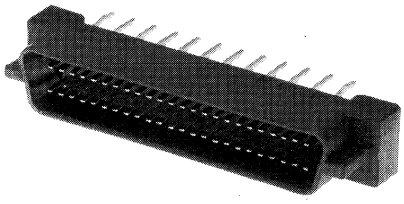
With and Without Self-Retaining Solder Posts (with flux drain holes)



Note: 40 Pos. Housing Dim. (Typ.)—1.260 [31.90] L x .287 [7.30] W x .366 [9.30] H

No. of Pos.	Part Numbers			
	Without Self-Retaining Posts		With Self-Retaining Posts	
	.000008 [0.0002]	.000030 [0.00076]	.000008 [0.0002]	.000030 [0.00076]
20	174216-5	6-174216-5	175711-5	6-175711-5
30	174216-1	6-174216-1	175711-1	6-175711-1
40	174216-2	6-174216-2	175711-2	6-175711-2
50	174216-3	6-174216-3	175711-3	6-175711-3
60	174216-4	6-174216-4	175711-4	—

With Self-Retaining Solder Posts (with flux drain holes)



Note: 48 Pos. Housing Dim. (Typ.)—1.590 [40.50] L x .287 [7.30] W x .366 [9.30] H

No. of Pos.	Part Numbers	
	.000008 [0.0002]	.000030 [0.00076]
34	174683-5	6-174683-5
48	174683-6	6-174683-6
68	174683-7	6-174683-7
96	174683-8	6-174683-8

SOURCE: Catalog 82068

Specifications subject to change.

1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

SCSI Terminator Applications

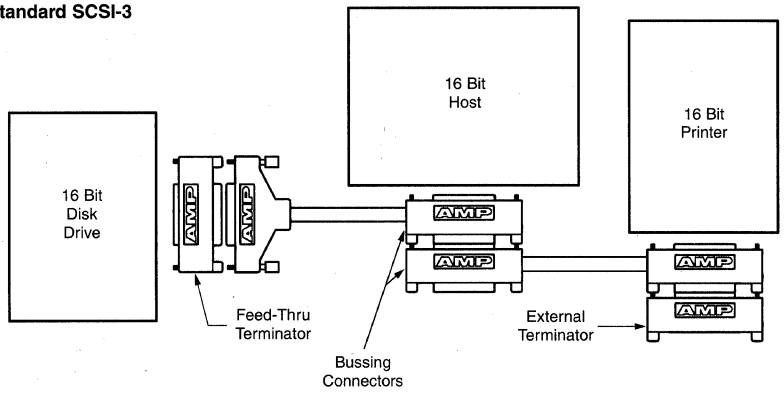
These diagrams illustrate typical daisy chain bus applications and indicate the various areas where terminators are an integral part of the system's integrity.

Data Width	Megabytes per Second	1,4 SCSI-1	2,5 SCSI-2	3,5,6 SCSI-3
8-Bit	4	—	—	—
8-Bit	5	—	A	A
16-Bit (Wide SCSI)	10	—	A&B	P
32-Bit (Wide SCSI)	20	—	—	P & Q
32-Bit (Fast SCSI)	40	—	—	P & Q (Differential)

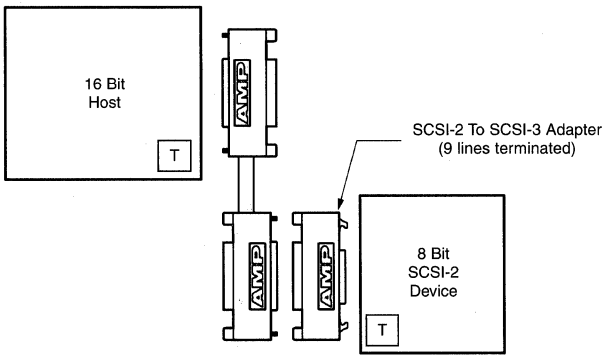
Notes: 1. SCSI-1—No cable designations.
2. SCSI-2—A cable connector is 50-position with spring latches.
B cable connector is 68-position with spring latches.
3. SCSI-3—P and Q cable connector is 68-poition wtih jackscrews.
4. SCSI-1—AMPMODU, AMPLIMITE HD-20, AMP-LATCH and CHAMP Terminators.
5. SCSI-2 and SCSI-3—AMPLIMITE .050 Series Connectors.
6. B cable has been removed from the SCSI-3 Draft Document.

SCSI Terminator Applications

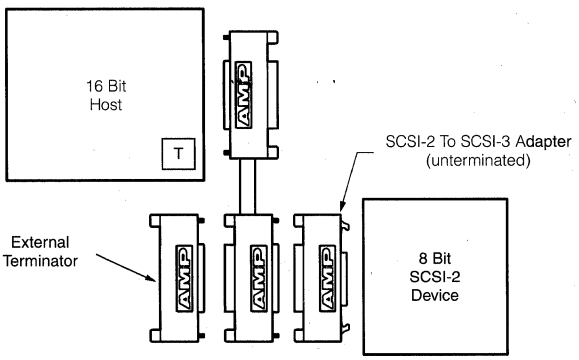
Feed-Thru Terminators
Standard SCSI-3



Feed-Thru Terminator
SCSI-2 to SCSI-3 Adapter
(9 Lines Terminated and Unterminated)

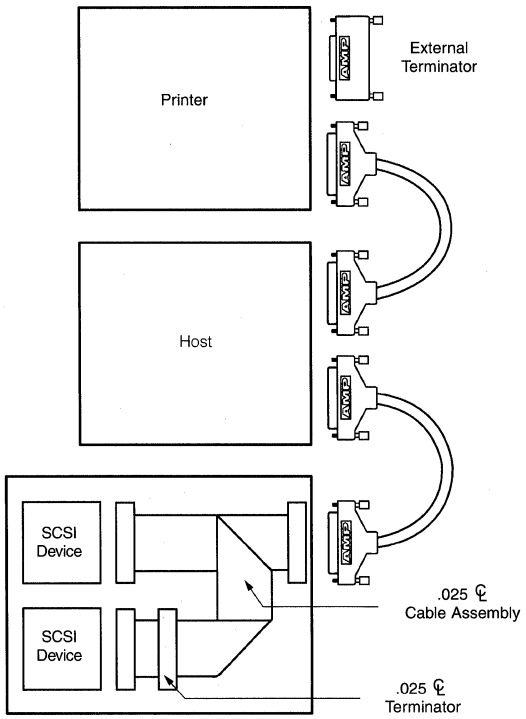


9 Lines Terminated



Unterminated

.025 Centerline
Ribbon Cable Terminators

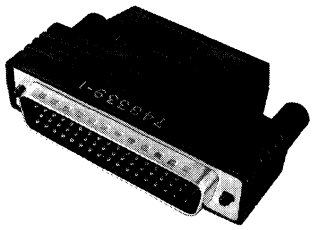


T = Internal Terminator

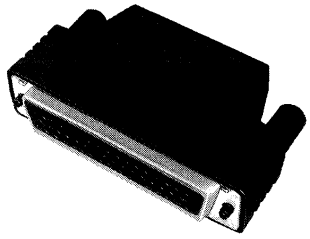
SOURCE: Catalog 82068

Shielded
HD-20, SCSI-1, -2
Low Density
Narrow Terminators

Note: 50 Pos. Housing Dim. (Typ.) — 2.900 [73.66] L x 1.742 [44.25] W x .770 [19.56] H



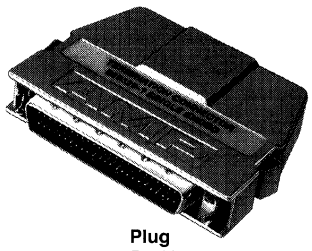
Plug
50-Position, Single-Ended
Part No. 748339-1



Receptacle
50-Position, Single-Ended
Part No. 869250-1

.050 Series, SCSI-2,
High Density Narrow
Terminators
With Die Cast Shield,
with Spring Latches

Note: 50 Pos. Housing Dim. (Typ.)— 1.965 [49.91] L x 1.480 [37.59] W x .495 [12.57] H

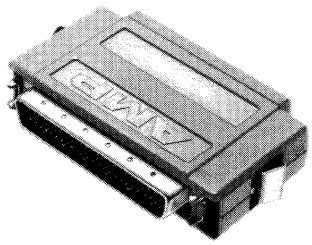


Plug
50-Position

"A" Cable Single-Ended, Active
Part No. 750381-1
"A" Cable Differential
Part No. 749541-1
"A" Cable Single-Ended
Part No. 749535-2
"A" Cable Single-Ended with Capacitor
Part No. 869329-1

With Internal Shield,
All-Plastic Cover,
Low Profile,
with Spring Latches

Note: 50 Pos. Housing Dim. (Typ.) — 1.935 [49.15] L x 1.228 [31.19] W x .458 [11.63] H

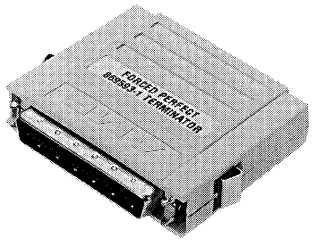


Plug
50-Position

"A" Cable Single-Ended
Part No. 750881-1
"A" Cable Single-Ended, Active
Part No. 869546-1
"A" Cable Differential
Part No. 869545-1

With Internal Shield,
All-Plastic Cover,
Standard Profile,
with Spring Latches

Note: 50 Pos. Housing Dim. (Typ.) — 1.935 [49.15] L x 1.70 [43.26] W x .474 [12.04] H



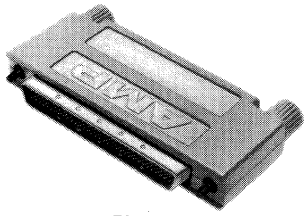
Plug
50-Position

50-Position, Forced Perfect
Part No. 869593-1

SCSI-3,
With Internal Shield,
All-Plastic Cover,
Low Profile,
with Jackscrews

Note: 68 Pos. Housing Dim. (Typ.)— 2.608 [66.24] L x 1.23 [31.19] W x .458 [11.63] H

Note: Request customer drawing for wiring schematic.



Plug
68-Position

Single-Ended, Active, "P and Q" Cable
Part No. 869516-1
Differential, "P and Q" Cable
Part No. 869515-1

SOURCE: Catalog 82068

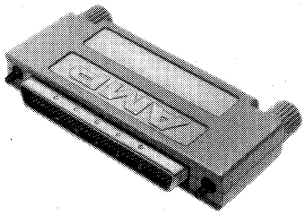
Specifications subject to change.

1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

.050 Series, SCSI-3, High Density Wide Terminators, Internal Shield, All-Plastic Cover, Low Profile, with Jackscrews

Note: 68 Pos. Housing Dim. (Typ.)— 2.608 [66.24] L x 1.23 [31.19] W x .458 [11.63] H

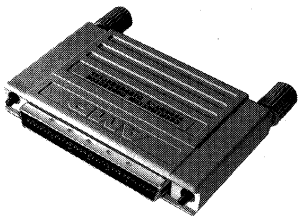


Plug
68-Position

Active Negation Compatible
Part No. 869725-1

SCSI-2, High Density Wide Terminators, Internal Shield, All-Plastic Cover,Standard Profile, with Spring Latches

Note: 68 Pos. Housing Dim. (Typ.) — 2.54 [64.39] L x 1.70 [43.26] W x .474 [12.04] H

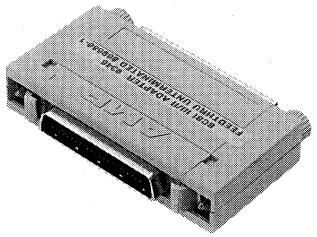


Plug
68-Position

Differential, "P & Q" Cable
Part No. 750897-1
"P" & "Q" Cable Single-Ended, Active with LED,
Part No. 869536-1
"P" & "Q" Cable Single-Ended, Active
Part No. 869535-1

SCSI Feed-Thru Adapters, High Density Wide to Narrow Internal Shield, All-Plastic Cover, Standard Profile, With Screw Latches and Jackscrews

Note: 50 Pos. Housing Dim. (Typ.) — 2.610 [66.29] L x 1.60 [40.61] W x .532 [13.51] H

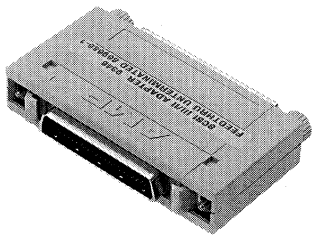


Feed-Thru Adapter
50-Position Plug to
68-Position Receptacle

50- to 68-Position, Feed-Thru Active
Part No. 869680-1

SCSI Feed-Thru Adapters, High Density Wide to Narrow Internal Shield, All-Plastic Cover, Standard Profile, With Screw Latches and Jackscrews

Note: 50 Pos. Housing Dim. (Typ.) — 2.610 [66.29] L x 1.60 [40.61] W x .532 [13.51] H



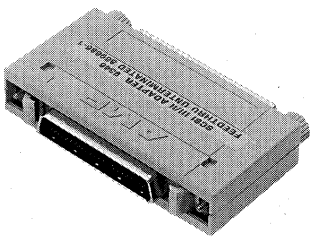
Feed-Thru Adapter
50-Position Plug to
68-Position Receptacle

50- to 68-Position, Feed-Thru Differential
Part No. 869678-1

SCSI Feed-Thru Adapters, High Density Wide to Narrow Internal Shield, All-Plastic Cover, Standard Profile, With Screw Latches and Jackscrews

Note: 50 Pos. Housing Dim. (Typ.) — 2.610 [66.29] L x 1.66 [42.16] W x .532 [13.51] H

Note: Request customer drawing for wiring schematic.



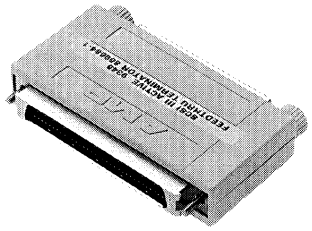
Feed-Thru Adapter
50-Position Plug to
68-Position Receptacle

50- to 68-Position Adapter, Feed-Thru, Unterminated
Part No. 869686-1

SOURCE: Catalog 82068

.050 Series, SCSI Feed-Thru Adapters, High Density Wide to Wide Internal Shield, All-Plastic Cover, Standard Profile, With Jackscrews

Note: 68 Pos. Housing Dim. (Typ.) — 2.610 [66.29] L x 1.66 [42.16] W x .532 [13.51] H

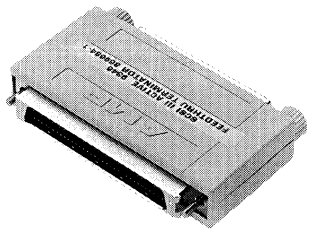


Feed-Thru Adapter
68-Position Plug to
68-Position Receptacle

68- to 68-Position, Feed-Thru Differential
Part No. 869682-1

SCSI Feed-Thru Adapters, High Density Wide to Wide Internal Shield, All-Plastic Cover, Standard Profile, With Jackscrews

Note: 68 Pos. Housing Dim. (Typ.) — 2.610 [66.29] L x 1.66 [42.16] W x .532 [13.51] H

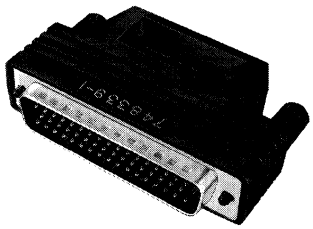


Feed-Thru Adapter
68-Position Plug to
68-Position Receptacle

68- to 68-Position, Feed-Thru Active
Part No. 869684-1

Shielded HD-20 IPI-1 Terminators

Note: 50 Pos. Housing Dim. (Typ.) — 2.900 [73.66] L x 1.742 [44.25] W x .770 [19.56] H



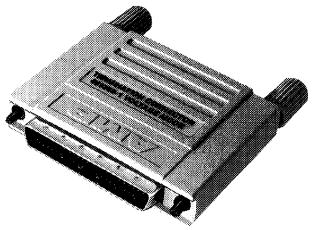
Plug

50-Position, Plug, Current Mode
Part No. 748159-1
50-Position, Plug, Voltage Mode
Part No. 748160-1

.050 Series, IPI-2 Terminators

Internal Shield, All-Plastic Cover Standard Profile, With Jackscrews

Note: 50 Pos. Housing Dim. (Typ.) — 2.090 [53.09] L x 1.703 [43.26] W x .474 [12.04] H



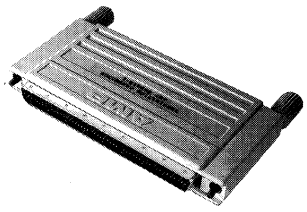
Plug
50 Position

IPI Voltage Mode
Part No. 869368-1

Internal Shield, All-Plastic Cover, Standard Profile, With Jackscrews

Note: 100 Pos. Housing Dim. (Typ.)— 3.360 [85.34] L x 1.703 [43.26] W x .474 [12.04] H

Note: Request customer drawing for wiring schematic.



Plug
100 Position

IPI Voltage Mode
Part No. 869412-1

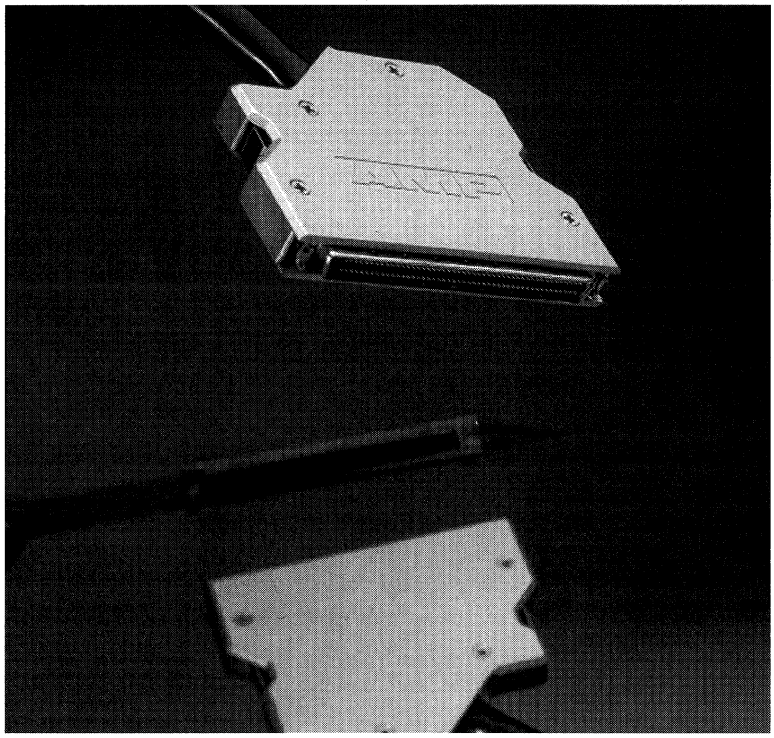
SOURCE: Catalog 82068

AMPLIMITE .050 Series High Performance Cable Assemblies

For Coax, Shielded Differential Pair and SCSI Cable

Product Facts

- **High Performance**
  - **High speed coax and shielded differential pair cable**
  - **Fully shielded interconnection**
- **High Reliablility**
- **Resistance weld and Self Regulating Temperature Source (SRTS) mass solder reflow termination technology**
- **High density AMPLIMITE .050 Series connectors**
- **High Versatility**
  - **Ground bus for multiple signal/ground patterns**



High Performance

Today's data transmission technology is requiring that cable assemblies be designed with considerations towards transmission line effects. In addition, customers are demanding more and more in less space. These .050 Series cable assemblies allow high speed signal transmission in a high density connector system. AMPLIMITE .050 Series connectors have been modified to allow termination, via resistance welding, to a variety of high performance, controlled impedance cables. In addition to all the proven performance characteristics of the AMPLIMITE .050 Series connectors, these assemblies have an integral ground bus to provide a variety of signal/ground patterns and ratios to meet your specific data transmission needs.

- **Resistance Weld Termination**
- **Coax and Shielded Differential Pair Cable**
- **Low Skew**
- **Low Crosstalk**
- **Integral Ground Bus**
- **Standard .050 Series Backshells**

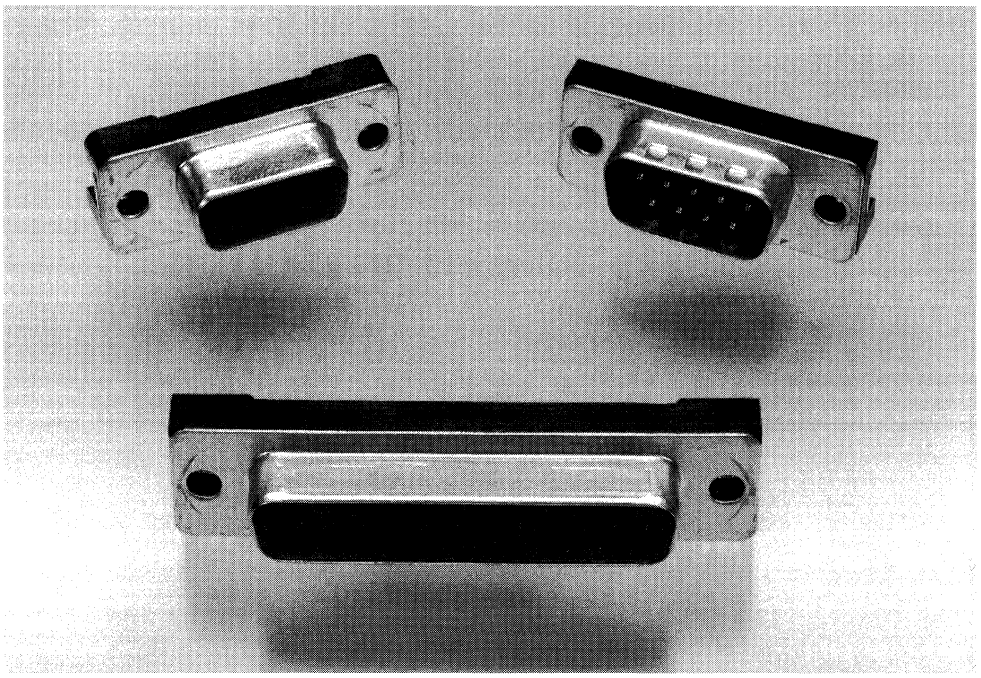
SCSI

The AMPLIMITE .050 Series connector system is a widely accepted interface for the SCSI-2, IPI-2 and HIPPI standards. In response to specific customer demands, these SRTS SCSI cable assemblies offer another level of reliability for termination to shielded and jacketed, twisted pair cable. In lieu of trying to hand solder wires in IDC slots, the .050 Series connectors have been modified and special components designed to allow twisted pair cable to be dressed into the connectors and terminated via the mass reflow solder process known as SRTS. The result is consistent quality of soldered wire joints. Daisy chaining of cables can also be provided with this process.

- **SRTS Solder Termination**
- **SCSI Style Cable**
- **Daisy Chain Capability**
- **Custom Backshells**

SOURCE: Catalog 65875

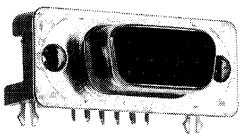
AMPLIMITE Ultraslim .197 [5.00] Connectors



Product Facts

- .197 [5.00] footprint (distance of first row contacts from shell)
- Available in standard and reversed D shape
- Available with ferrite tine plate for EMI shielding
- Housings made of high temperature, 94V-0 rated thermoplastic material, compatible with SMT
- Reduces Pc board height by .039 [1.00] to .079 [2.00]
- Accepts Pc board—.062-.047 [1.57-1.19]
- Contacts selectively gold plated
- Boardlocks provide secure positioning
- Recognized under the Component Program of Underwriters Laboratories Inc., File No. E28476
- Certified by Canadian Standards Association, File No. LR 7189

AMPLIMITE HD-22 Ultraslim Connectors .197 [5.00] with Boardlocks and 4-40 Threaded Inserts



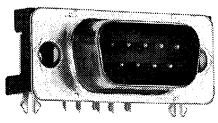
Receptacle Connector

Size 1, 15-Position

Part No. 177514-9
(Gold Plating)

Part No. 2-177514-9
(Gold Flash Plating)

AMPLIMITE HD-20 Ultraslim Connectors .197 [5.00] with Boardlocks and 4-40 Threaded Inserts

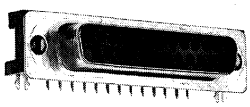


Plug Connector

Size 1, 9-Position

Part No. 177597-9
(Gold Plating)

Part No. 177597-3
(Gold Flash Plating)



Receptacle Connector

Size 3, 25-Position

Part No. 177596-9
(Gold Plating)

Part No. 177596-3
(Gold Flash Plating)

SOURCE: Catalog 65971

Specifications subject to change.

1-800-522-6752
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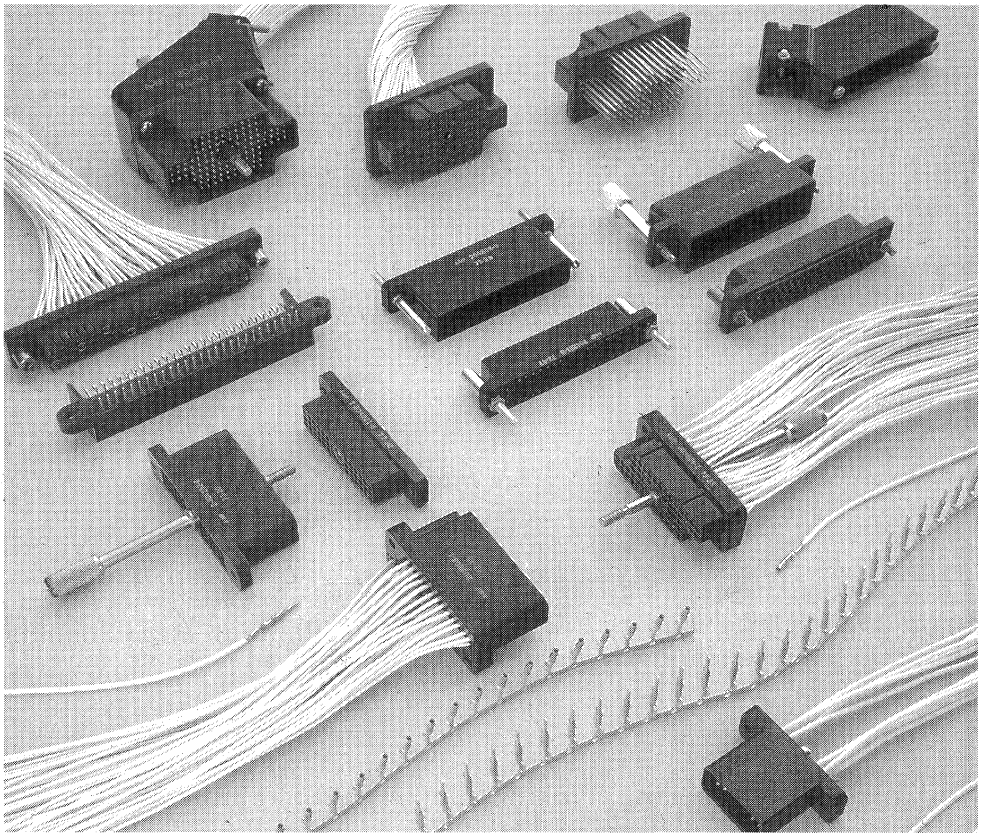
1-800-722-1111
Tooling/Technical Assistance Center

High Density Rectangular Connectors



Product Facts

- **Plug and receptacle connectors are molded plastic blocks categorized by the number of contact positions and type of material**
- **The pin body is fabricated from brass and conforms to MIL-C-50 or ASTM-B-36. The plating is gold per MIL-G-45204 over nickel per QQ-N-290. The retention spring sleeve is fabricated from stainless steel and conforms to QQ-S-766**
- **The socket body is made of brass per MIL-C-50 or ASTM-B-36. Plating is gold per MIL-G-45204 over nickel per QQ-N-290. The stainless steel retention spring sleeve conforms to QQ-S-766**
- **Shields and cable clamps are molded polysulfone components conforming to MIL-P-46120**
- **Brass keying pins and sockets conform to QQ-B-626 or ASTM-B-16, with zinc plating per QQ-Z-325 or stainless steel per QQ-S-763**
- **Locking rings, washers, bushings, retaining rings, nuts and screws are stainless steel conforming to QQ-S-763 or QQ-S-766**
- **Recognized under the Component Program of Underwriters Laboratories Inc., File No. E28476**

High Density Rectangular (HDR) connectors are designed in response to ever-increasing demands for miniaturization. The grid spacing of .100 x .100 [2.54 x 2.54] provides the greatest density on the market for a connector accommodating a 20 thru 30 AWG [0.6 thru 0.05 mm²] wire range.

A variety of contact configurations and platings permits great design flexibility. Machine terminated, crimp snap-in contacts are available for the entire wire range. Also available are .025 [0.64] square posts on pin and socket contacts suitable for wrap-type wiring.

This unique connector is available in 12, 24, 36, 48, 54 and 106 positions in a rectangular housing. A special 95-position connector rounds out this group of rack and panel configured connectors.

A two piece, 80-position connector has been developed for printed circuit boards.

Versatility is designed into this family of connectors. Housings are available with or without center fasteners. Housing material for most connectors is diallyl phthalate or phenolic. When mounting connectors with jackscrews, the receptacle half should be mounted to the chasssis or panel. The turnable jackscrews should be positioned on the plug half containing the cable assembly.

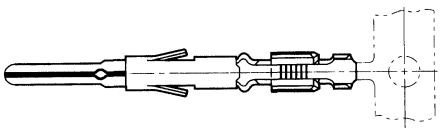
Tooling for terminating leads is also available to meet every production requirement. For limited production or prototype applications, the CERTI-CRIMP hand tool is ideal. Automatic machines are designed to fit various in-plant production needs.

SOURCE: Catalog 82036

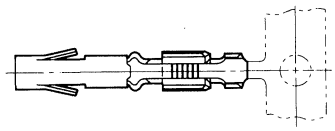
Contacts

Type XI Crimp Snap-In Contacts

Contact Size—20
Pin Diameter—.040 [1.02]
Plated as follows:
A—.000030 [0.00076] gold
B— Gold flash



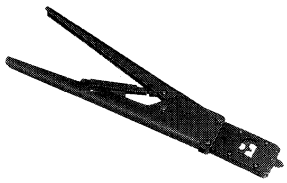
Pin



Socket

Wire Size Range AWG	Wire Size Range mm²	Ins. Dia. Max.	Contact Finish	Part Numbers Strip Form Pin	Part Numbers Strip Form Socket	Part Numbers Loose Piece Pin	Part Numbers Loose Piece Socket	CERTI-CRIMP Hand Tool No.	Quick-Change Applicator No. AMP-O-LECTRIC Machine Model G	Quick-Change Applicator No. AMP-O-MATIC Stripper/Crimper II Machine
20-24	0.6-0.2	.062	A	203816-1	203802-1	203816-3	203802-3	90260-1	—	466904-1
		1.57	B	203816-2	203802-2	203816-4	203802-4			
26-30	0.15-0.05	.048	A	203874-1	203875-1	203874-3	203875-3	90223-5	—	—
		1.22	B	203874-2	203875-2	203874-4	203875-4			

CERTI-CRIMP Hand Tool

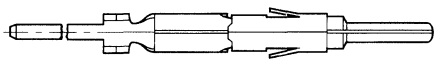


Insertion Tool

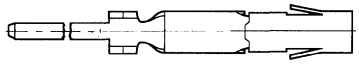
Part No. 91042-1

Wrap-Type Contacts with .025 x .025 [0.64 x 0.64] Posts

Contact Size—20
Pin Diameter—.040 [1.02]
Plated as follows:
A— .000030 [0.00076] gold
B— Gold flash

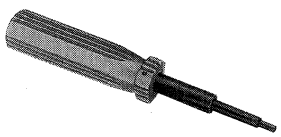


Pin



Socket

Extraction Tool



Part No. 91038-3

Max. Terminations Per Post	Contact Finish	Contact Part Numbers* Pin	Contact Part Numbers* Socket
1	A	1-205171-0	1-205172-0
	B	205171-7	205172-7
2	A	1-205171-1	1-205172-1
	B	205171-8	205172-8
3	A	1-205171-2	1-205172-2
	B	205171-9	205172-9

*Loose piece contacts for maintenance and repair only. Packaged 100 pieces per bag.

SOURCE: Catalog 82036

Specifications subject to change.
1-800-522-6752
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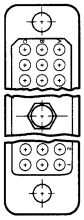
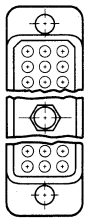
Plug and Receptacle Housings

12, 24, 36, & 48 Positions

Plug

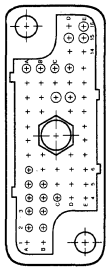


Receptacle

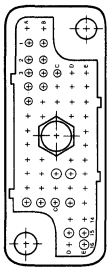


54 Position

Plug

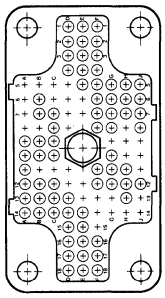


Receptacle

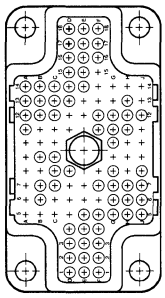


106 Position

Plug



Receptacle



Note: 48 Pos. Housing Dim. (Typ.)—Plug, 2.534 [64.36] L x .450 [11.43] W x .560 [14.22] H; Receptacle, .890 [22.61] H

Center Fastener	No. of Positions	Center Fastener Type	Part Numbers			
			Plug Half		Receptacle Half	
			Phenolic	Diallyl Phthalate	Phenolic	Diallyl Phthalate
With Center Fastener	12	Fixed Female	204727-1	204727-2	—	204728-2
		Long Male Turnable	—	—	204740-1	204740-2
	24	Fixed Female	204729-1	204729-2	—	—
		Long Male Turnable	—	204741-2	204742-1	204742-2
		Short Male Turnable	—	—	—	204742-4
	36	Fixed Female	204731-1	204731-2	—	204732-2
		Long Male Turnable	204743-1	204743-2	204744-1	204744-2
		Short Male Turnable	204743-3	—	—	—
	48	Fixed Female	204733-1	—	204734-1	204734-2
		Long Male Turnable	204745-1	204745-2	204746-1	204746-2
		Short Male Turnable	—	204745-4	—	—
	54	Fixed Female	204735-1	—	204736-1	—
		Long Male Turnable	204747-1	204747-2	204748-1	204748-2
		Short Male Turnable	—	204747-4	—	204748-4
	106	Fixed Female	204737-1	204737-2	204738-1	204738-2
		Long Male Turnable	204749-1	204749-2	204750-1	204750-2
		Short Male Turnable	—	204749-4	—	204750-4
Without Center Fastener	12	—*	204281-2	2-204281-2	204282-2	2-204282-2
	24	—*	204281-4	2-204281-4	204282-4	2-204282-4
	36	—*	204281-6	2-204281-6	204282-6	2-204282-6
	48	—*	204281-8	2-204281-8	204282-8	2-204282-8
	54	—*	203804-1	203804-2	203803-1	203803-2
	106	—*	204260-1	204260-2	204259-1	204259-2

*See page 2369 for jackscrews.

Specifications subject to change.
1-800-522-6752
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1-800-722-1111
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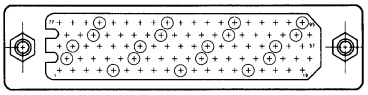
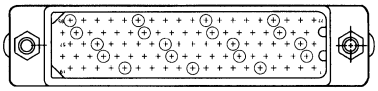
Plug and Receptacle Housings
(Continued)

95 Position Connector with Jackscrews

Housing Material: Diallyl Phthalate



Plug
Part No. 204694-1



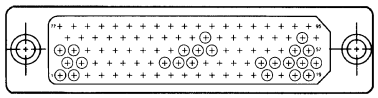
Receptacle
Part No. 204693-2

Note: 95 Pos. Housing Dim. (Typ.)—Plug, 2.710 [68.83] L x .490 [12.45] W x .615 [15.62] H

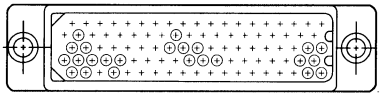
95 Position Connector with Floating Bushings

Housing Material: Diallyl Phthalate

Note: Marking on receptacles are on wiring side only.



Plug
Part No. 204030-1



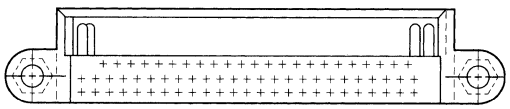
Receptacle
Part No. 204027-2

Note: 95 Pos. Housing Dim. (Typ.)—2.710 [68.83] L x .540 [13.72] W x .615 [15.62] H

Printed Circuit Board Connectors

80 Position Right-Angle Pin Header

Housing Material: Diallyl Phthalate

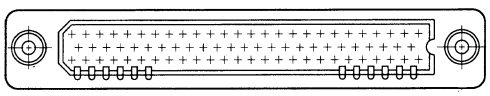


Part No. 204818-4

Note: 80 Pos. Housing Dim. (Typ.)— 3.300 [83.82] L x .650 [16.51] W x .465 [11.81] H

80 Position Plug with Floating Bushings

Housing Material: Diallyl Phthalate



Part No. 204819-1

Note: 80 Pos. Housing Dim. (Typ.)— 3.500 [88.9] L x .560 [14.22] W x .525 [13.34] H

SOURCE: Catalog 82036

Specifications subject to change.
1-800-522-6752
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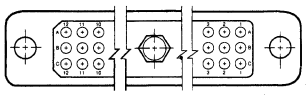
1-800-722-1111
Tooling/Technical Assistance Center

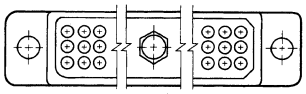
Preloaded Housings .025 x .025 [0.64 x 0.64] Posted Contacts for Automatic Wiring

Contact Size—20
Pin Diameter—.040 [1.02]
Plated as follows:
A— .000030 [0.00076] gold
B— Gold flash

12, 24, 36, & 48 Positions

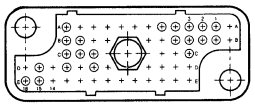


Plug Assembly

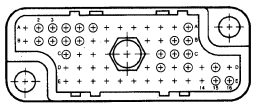


Receptacle Assembly

54 Position

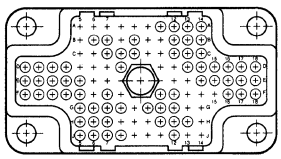


Plug Assembly

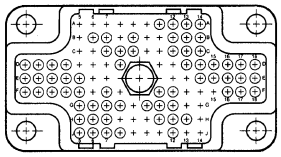


Receptacle Assembly

106 Position



Plug Assembly



Receptacle Assembly

Note: 36 Pos. Housing Dim. (Typ.)—Plug, 2.134 [54.20] L x .450 [11.43] W x .560 [14.22] H; Receptacle, .890 [22.61] H

No. of Positions	Contact Finish	Max. Termination Per Post	Part Numbers			
			Plug Assembly Socket Contacts		Receptacle Assembly Pin Contacts	
			Phenolic	Diallyl Phthalate	Phenolic	Diallyl Phthalate
12	A	1	—	—	—	2-204682-8
		3	—	—	—	3-204682-0
24	A	1	—	6-204683-4	1-204684-9	—
		3	—	6-204683-6	2-204684-1	3-204684-0
	B	1	6-204683-1	7-204683-0	—	—
		3	6-204683-3	—	2-204684-7	—
36	A	1	—	—	1-204686-9	2-204686-8
		3	5-204685-7	6-204685-6	—	3-204686-0
	B	1	—	—	—	3-204686-4
		3	6-204685-3	7-204685-2	—	3-204686-6
48	A	1	5-204687-5	—	—	2-204688-8
		3	5-204687-7	6-204687-6	—	3-204688-0
	B	1	—	7-204687-0	—	—
		3	6-204687-3	7-204687-2	—	—
54	A	1	5-204689-5	6-204689-4	1-204690-9	—
		2	5-204689-6	6-204689-5	—	—
		3	5-204689-7	6-204689-6	2-204690-1	3-204690-0
	B	1	6-204689-1	—	—	—
		3	—	7-204689-2	2-204690-7	—
106	A	1	5-204691-5	—	—	2-204692-8
		3	5-204691-7	6-204691-6	2-204692-1	3-204692-0
	B	1	6-204691-1	7-204691-0	—	3-204692-4
		3	6-204691-3	7-204691-2	2-204692-7	3-204692-6

Notes: 1. Markings on receptacle assembly are on wiring side only.
2. In addition to combinations listed, all sizes are available with or without female jackscrews. Plugs are available with pins, and receptacles are available with sockets. Consult AMP for details.
3. Fixed female jackscrews are included with these assemblies.

SOURCE: Catalog 82036

Specifications subject to change.
1-800-522-6752
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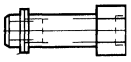
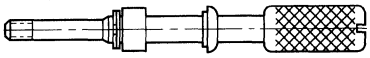
1-800-722-1111
Tooling/Technical Assistance Center

Accessories

Center Fasteners



Fixed Female Jackscrew



Male Turnable Jackscrew

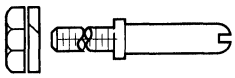
No. of Positions	Type	Part No.
12, 24 36, 48	Fixed Female	204299-1
	Short Male Turnable	204298-1
	Long Male Turnable	204298-2
54, 106	Fixed Female	203879-1
	Short Male Turnable	203880-1
	Long Male Turnable	203880-2

Note: Short male jackscrews cannot be used with shield and cable clamp assemblies.

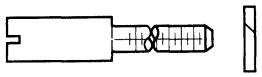
Keying

Keying Plug
Part No. 205120-1

Long Guide Pin
Zinc Plated Brass—Part No. 205694-1
Stainless Steel—Part No. 205694-2



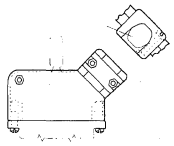
Guide Pin



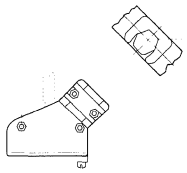
Guide Socket

Material	Pin Part No.	Socket Part No.
Zinc Plated Brass	203881-1	203882-1
Stainless Steel	203881-2	203882-2

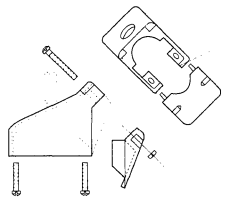
45° Shield and Cable Clamps



12, 24, 36 & 48 Position
Accommodates Cable to
.500 [12.7] Dia., Assembled



54 Position
Accommodates Cable to
.500 [12.7] Dia., Assembled



106 Position
Accommodates Cable to
.686 [17.42] Dia., Assembled

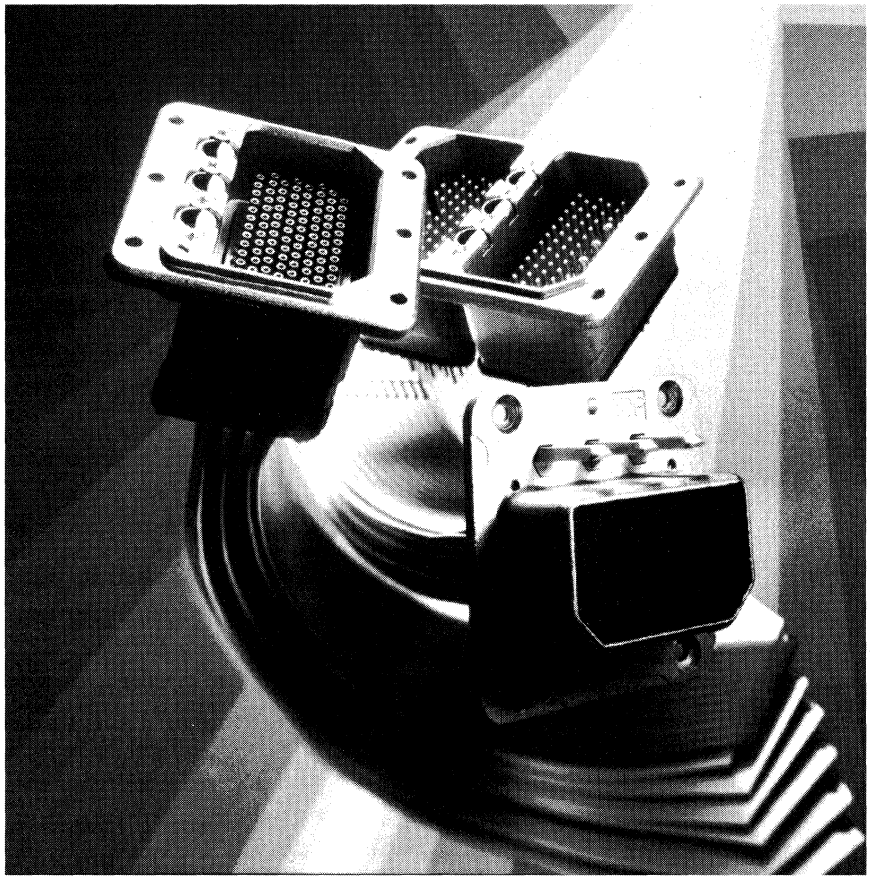
No. of Positions	Part No.
12	205083-1
24	205083-2
36	205083-3

No. of Positions	Part No.
48	205083-4
54	203814-1
106	204337-1

SOURCE: Catalog 82036

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

ARINC 404 Rack and Panel Connectors



Performance Characteristics

Environmentally sealed RME series connectors are designed per Military Specification MIL-C-81659 and all signal pin and socket contacts per MIL-C-39029. M, MM and MME series connectors are qualified and 100 percent inspected for conformation to MIL-C-81659.

AMP Rack and Panel Connectors offer a wide range of shell configurations, contact arrangements, contacts and shell modifications to meet ARINC Specification 404 and MIL-C-81659.

Connectors are available in three standard commercial series, three MIL qualified series, and additional special versions.

Commercial series are R, unsealed; RM, standard, with interface seal on pin inserts; and RME, environmentally sealed.

Military qualified series M, MM and MME are equivalent to the R, RM and RME series, but each is 100% inspected and coded with a color stripe. All six of these standard connector series are intermateable.

Special series include the miniature, unsealed RA and the sealed RE, and the standard size RMA which is similar to the R series but offers no keying provision.

These ARINC Connectors are commonly described and ordered from AMP by the descriptive part numbering system explained on the following page. Each component of the part number indicates a certain portion of the connector, starting with the connector shell series, size and configuration; followed by contact insert style and configuration, keying and modifications.

Special connectors with posts for wrap-type termination, with solder cups or with terminals for flexible flat cable are catalogued with individual AMP part numbers. Numerous additional special configurations can be made available for special applications.

Contact inserts

All these ARINC Connectors employ a rear-release system for contact loading and retention. Connector inserts are available in various contact arrangements to accommodate size-22, -20, -16, and -12 contacts for terminating a wire size range of 30 through 12 AWG [0.05-3 mm^2]. Inserts also accept size-1, -3, -5, -7, -9 and -15 COAXICON contacts.

Pin and socket contacts (non-coax) are of the crimp, snap-in type and are top quality, precision screw-machined parts. They are supplied loose-piece for 8-indent crimping in standard M22520 hand tools or tape mounted for high speed application using an AMP-TAPEMATIC Stripper/Crimper machine. Coax contacts also are crimp, snap-in for high speed termination superior to older, solder types.

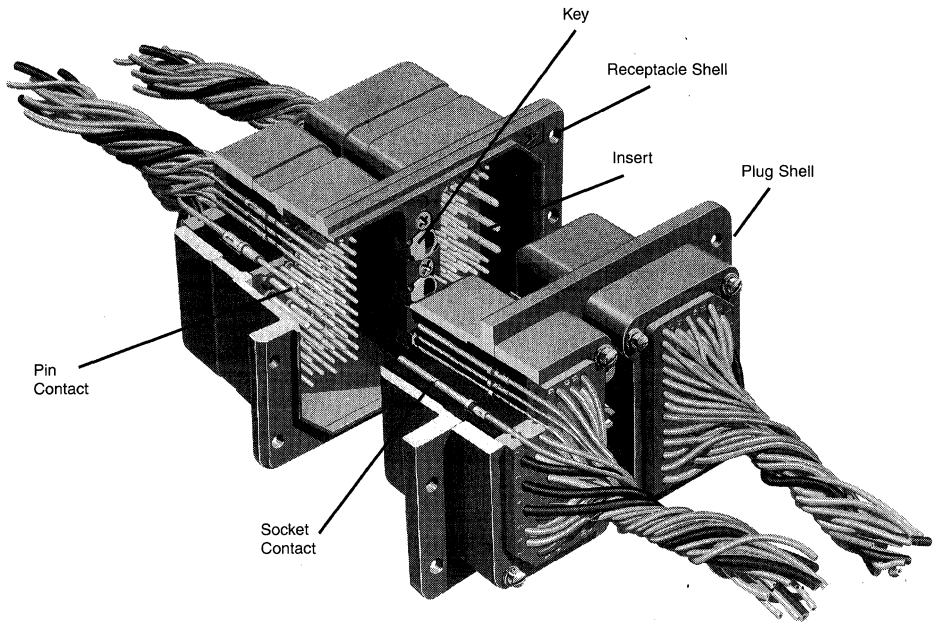
Field Repairable

All commercial and military connectors have field replaceable inserts which are designed and manufactured to precise tolerances to meet cavity position requirements in MIL-C-81659.

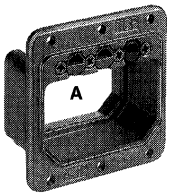
SOURCE: Catalog 82010

Descriptive Part Numbering System

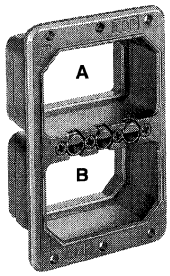
Use this page as a guide to construct part numbers for complete connector packages. Contacts must be ordered separately, except as specified in the Custom Order Code.



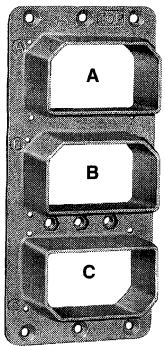
One-Insert Shells



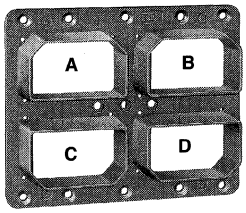
Two-Insert Shells



Three-Insert Shells



Four-Insert Shells



Note: Two-Insert Recept. Shell Dim. (Typ.)—3.075 [78.11] L x 2.000 [50.8] W x 1.665 [42.29] Depth

Sample Descriptive Part Number

RME 2 P 57 S 57 S—00 01 (201)

Shell
Series designator:
R, M—no seals
RM, MM—interface seal on receptacle inserts
RME, MME—environmentally sealed
RMA—standard insert size, no keying
RA—miniature, unsealed
RE—miniature, environmentally sealed
Shell size
1, 2, 3 or 4 inserts, modules A, B, C, D
Shell configuration
P—Plug
R—Receptacle
Contact inserts
Contact arrangement (Module A)
Contact type (Module A)
P—Pin
S—Socket
Contact arrangement (Module B)
Contact type (Module B)
Modifications to shell mounting
Keying
Custom order instructions
Contacts (see page 2376 for ordering details)
Sealing boots

SPECIAL CONNECTORS
Wrap-type assemblies
Assemblies for flexible flat cable
RA, RE shells and inserts
RMA shell

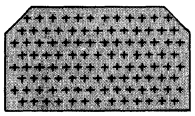
SOURCE: Catalog 82010

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

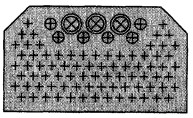
Contact Inserts

Inserts for Series R, RM, RME; M, MM, MME, and RMA

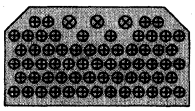
Example: RME 2 P 57S 67S—**00** 01 (201)



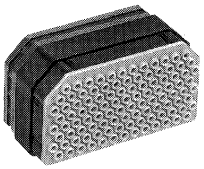
Arrangement 106
106 size-22 contacts



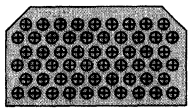
Arrangement 88
79 size-22 contacts,
6 size-20 contacts,
3 size-16 contacts or
3 size-15 COAXICON contacts



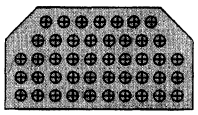
Arrangement 67
64 size-20 contacts,
3 size-16 contacts or
3 size-15 COAXICON contacts



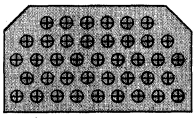
Arrangement 106
(shown)



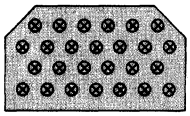
Arrangement 57
57 size-20 contacts



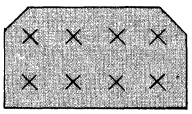
Arrangement 45
45 size-20 contacts



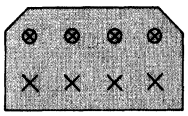
Arrangement 40
40 size-20 contacts



Arrangement 26
26 size-16 contacts or
26 size-15 COAXICON contacts



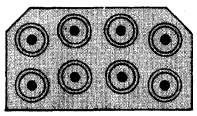
Arrangement 8
8 size-12 contacts



Arrangement D8
4 size-12 contacts,
4 size-16 contacts or
4 size-15 COAXICON contacts

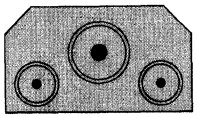
Legend

- Size-22 contact cavity
- Size-20 contact cavity
- Size-16 contact or size-15 COAXICON contact cavity
- Size-12 contact cavity
- COAXICON contact cavity, except size-15

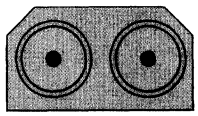


Arrangement C8
8 size-9 COAXICON contacts
For unsealed connectors only

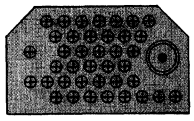
Notes: 1. Size 22 socket contacts extend beyond the mating face of inserts; size 22 pin contacts are recessed. Size 20, 16 and 12 pins are exposed; size 20, 16 and 12 sockets are recessed.
2. Mating face of pin-contact insert is shown. Socket-contact insert face is mirror image.



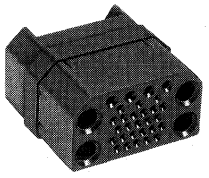
Arrangement C3
1 size-3 COAXICON contact,
2 size-7 COAXICON contacts
For unsealed connectors only
(Consult AMP for availability.)



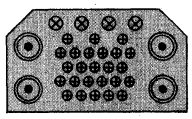
Arrangement C2
2 size-1 COAXICON contacts
For unsealed connectors only
(Consult AMP for availability.)



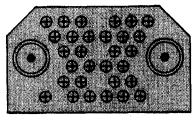
Arrangement 40C1
39 size-20 contacts,
1 size-5 COAXICON contact



Arrangement 33C 4
(shown)



Arrangement 33C4
25 size-20 contacts
4 size-16 contacts or
4 size-15 COAXICON contacts,
4 size-5 COAXICON contacts

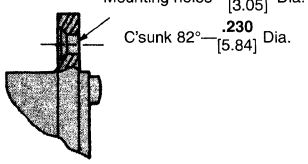


Arrangement 32C2
30 size-20 contacts,
2 size-5 COAXICON contacts

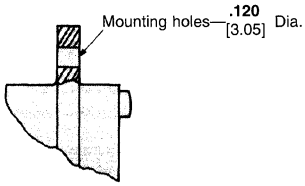
SOURCE: Catalog 82010

Modifications

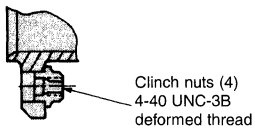
Example: RME 2 P 57S 57S—**00** 01 (201)



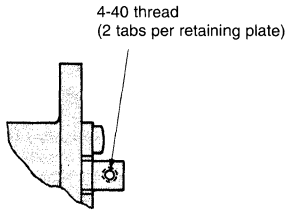
Modification 00
(no modification, plug)



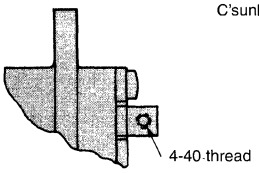
Modification 00
(no modification, receptacle)



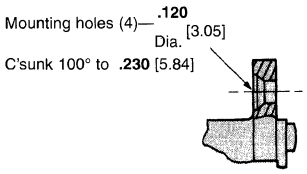
Modification 01



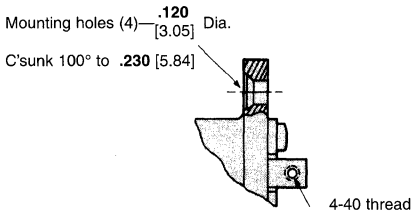
Modification 02
(R, RM, M, MM—attaching tabs)



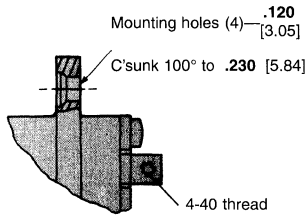
Modification 02
(RME, MME—threaded holes)



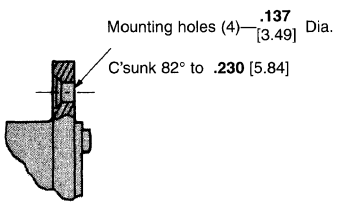
Modification 03



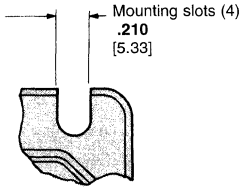
Modification 04
(R, RM, M, MM—attaching tabs)



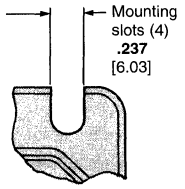
Modification 04
(RME, MME—threaded holes)



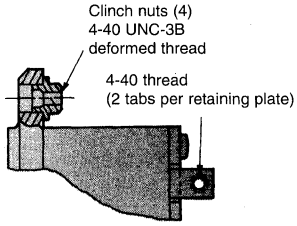
Modification 08



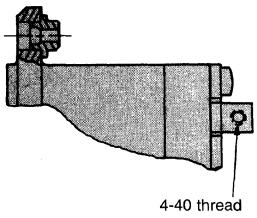
Modification 12



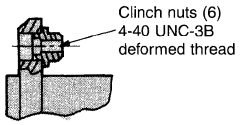
Modification 13



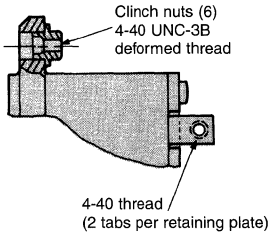
Modification 17
(R, RM, M, MM—attaching tabs)



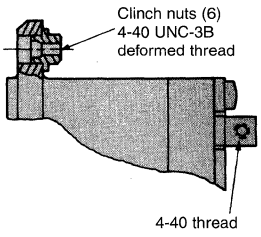
Modification 17
(RME, MME—threaded holes



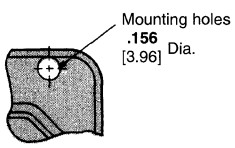
Modification 18



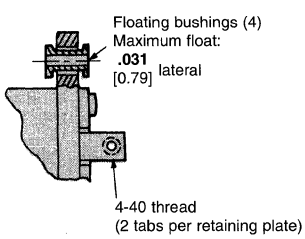
Modification 19
(R, RM, M, MM—attaching tabs)



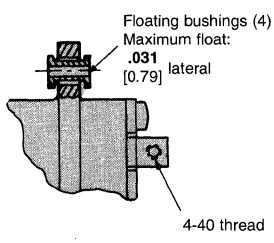
Modification 19
(RME, MME—threaded holes)



Modification 20



Modification 22
(R, RM, M, MM—attaching tabs)



Modification 22
(RME, MME—threaded holes)

SOURCE: Catalog 82010

Specifications subject to change.
1-800-522-6752
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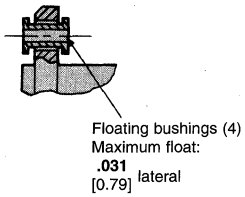
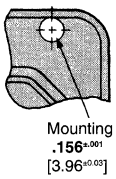
1-800-722-1111
Tooling/Technical Assistance Center

Modifications
(Continued)

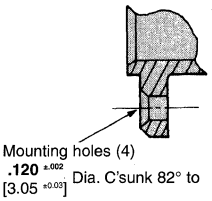
Example: RME 2 P 57S 57S—**39** 01 (201)



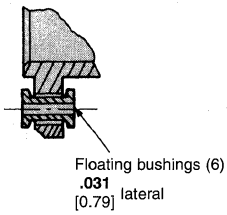
Modification 23



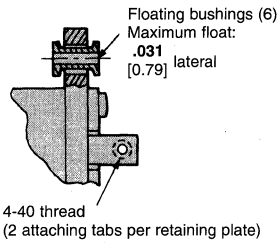
Modification 25



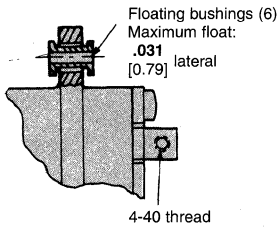
Modification 26



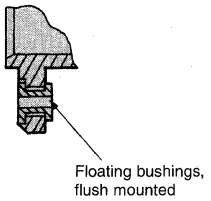
Modification 29



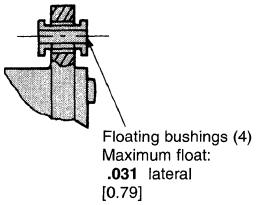
Modification 30
(R, RM, M, MM—attaching tabs)



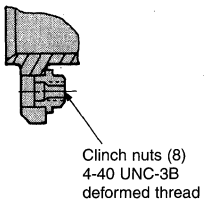
Modification 30
(RME, MME—threaded holes)



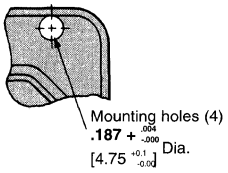
Modification 33



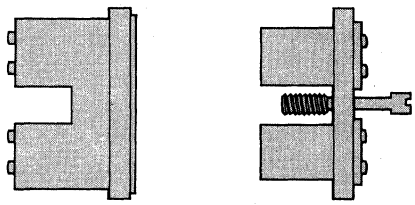
Modification 39



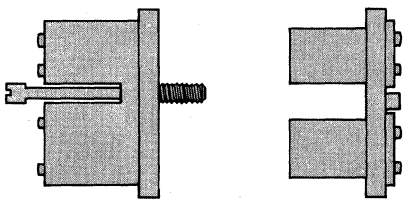
Modification 42
(4-Insert Shells)



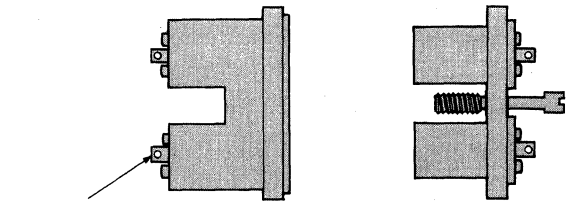
Modification 46



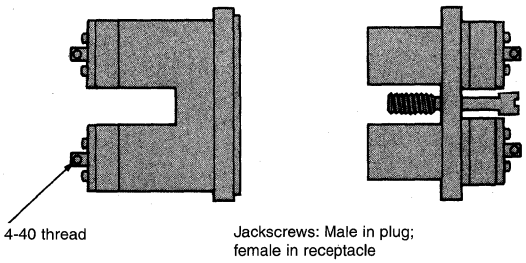
Modification 50



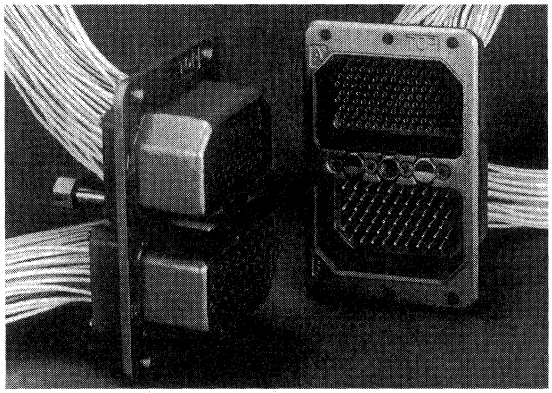
Modification 51



Modification 52
(R, RM, M, MM—attaching tabs)



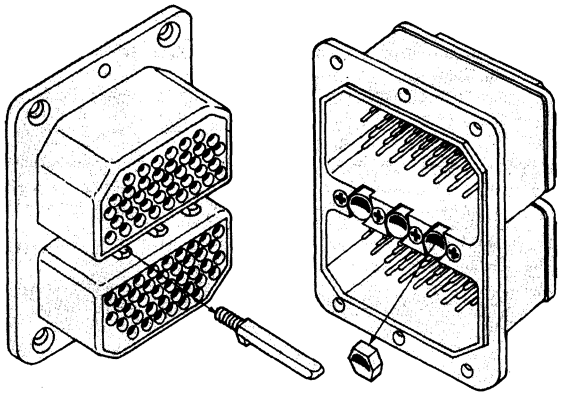
Modification 52
(RME, MME—threaded holes)

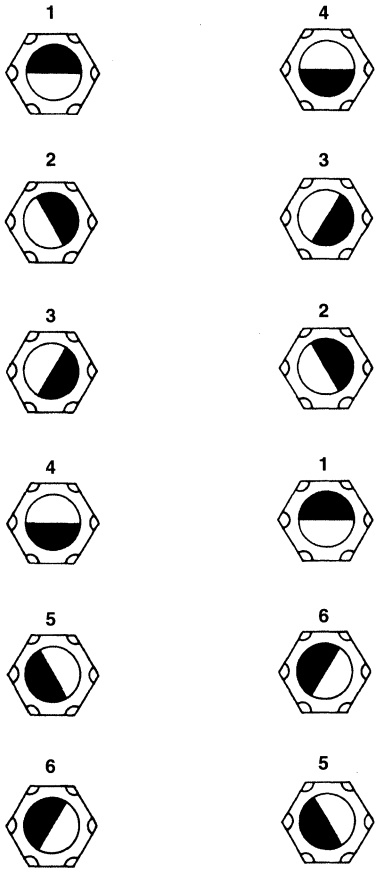


SOURCE: Catalog 82010

Keying

Example: RME 2 P 57S 57S—00 **01** (201)





Notes: 1. Darkened portion of diagram indicates extended post of plug key, light portion indicates key hole in receptacle insert.
2. Keying code stamped on housing.
3. If keying code is not specified, key inserts are supplied in 01 position; code is not stamped on housing.
4. If code 00 is specified, keys are omitted and must be ordered separately; code is not stamped on housing.
5. Key diagrams show mating face of connector "TOP" up.

Keying Code	Plug			Receptacle		
	Left Post	Center Post	Right Post	Left Key	Center Key	Right Key
00	—	—	—	—	—	—
01	1	1	1	4	4	4
02	2	1	1	4	4	3
03	3	1	1	4	4	2
04	4	1	1	4	4	1
05	5	1	1	4	4	6
06	6	1	1	4	4	5
07	1	1	6	5	4	4
08	2	1	6	5	4	3
09	3	1	6	5	4	2
10	4	1	6	5	4	1
11	5	1	6	5	4	6
12	6	1	6	5	4	5
13	1	1	5	6	4	4
14	2	1	5	6	4	3
15	3	1	5	6	4	2
16	4	1	5	6	4	1
17	5	1	5	6	4	6
18	6	1	5	6	4	5
19	1	1	4	1	4	4
20	2	1	4	1	4	3
21	3	1	4	1	4	2
22	4	1	4	1	4	1
23	5	1	4	1	4	6
24	6	1	4	1	4	5

Keying Code	Plug			Receptacle		
	Left Post	Center Post	Right Post	Left Key	Center Key	Right Key
25	1	1	3	2	4	4
26	2	1	3	2	4	3
27	3	1	3	2	4	2
28	4	1	3	2	4	1
29	5	1	3	2	4	6
30	6	1	3	2	4	5
31	1	1	2	3	4	4
32	2	1	2	3	4	3
33	3	1	2	3	4	2
34	4	1	2	3	4	1
35	5	1	2	3	4	6
36	6	1	2	3	4	5
37	1	2	1	4	3	4
38	2	2	1	4	3	3
39	3	2	1	4	3	2
40	4	2	1	4	3	1
41	5	2	1	4	3	6
42	6	2	1	4	3	5
43	1	2	6	5	3	4
44	2	2	6	5	3	3
45	3	2	6	5	3	2
46	4	2	6	5	3	1
47	5	2	6	5	3	6
48	6	2	6	5	3	5
49	1	2	5	6	3	4

SOURCE: Catalog 82010

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

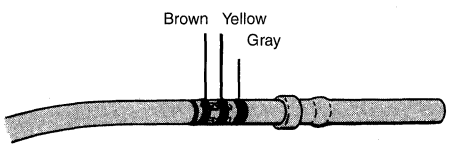
Custom Order Code

Example: RME 2 P 57S 57S—00 01 (201)

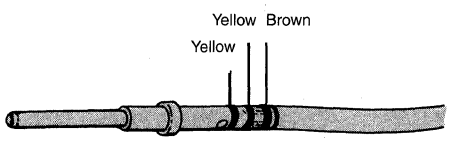
Code	Description
200	Standard connector kit, **including signal contacts;** order coaxial contacts separately. See pages 2378 and 2379. Shell finish: cadmium plated per QQ-P-416 with yellow chromate conversion.
201	200 Custom Order Code **without contacts,** contacts must be ordered separately by AMP part number. See below and pages 2377-2379.
202	201 Custom Order Code with assembled connector, keying unassembled and packaged in a separate container, contacts must be ordered separately by AMP part number. See below and pages 2377-2379.
203	200 Custom Order Code with inserts and retainer plates unassembled.
204	200 Custom Order Code with spare contacts—3% of contact population per connector per contact size.
205	200 Customer Order Code with size-22 contacts for a wire range of 30-28 [.05-.09 mm²].
206	200 Custom Order Code with keying unassembled and packaged in a separate container.
220	200 Custom Order Code with connector kit unassembled.
250	200 Custom Order Code, except shell and retainer plates plated electroless nickel.
400	200 Custom Order Code, except contacts are low insertion force, ARINC 600.

Size-22 Contacts
Pin Diameter .030 [0.76]

Standard Contacts



Socket
M39029/12-148



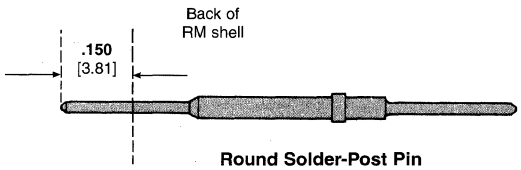
Pin
M39029/11-144

Contact Type	Wire Size AWG mm²	Insulation Diameter (Max.)	Tape Mounted Contacts		Loose Piece Contacts		Hand Crimping Tool		AMP-TAPETRONIC Stripper-Crimper	
			Pin	Socket	Pin	Socket	Tool	Positioner	Machine	Funnel
MIL-C-39029	**26-22** 0.12-0.4	**.054** 1.37	204873-3	—	204873-4	205103-3	M22520/2-01	M22520/2-23	599406-7	1-125905-2
Low Force, ARINC 600 connector contacts, suitable for use in ARINC 404 connectors										
Low Force ARINC 600*	**26-22** 0.12-0.4	**.054** 1.37	—	—	208262-3	208264-2	M22520/2-01	M22520/2-23	—	—

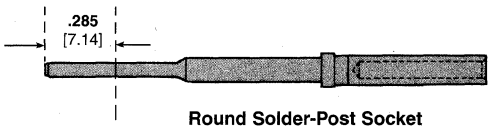
*Color coding, two bands: orange and green.

Round Solder-Post Contacts,
Solder Post Diameter .031 [0.79]

Note: Round solder-post contacts are for use in RM series connectors.



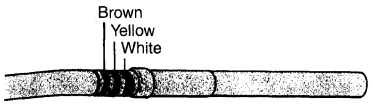
Round Solder-Post Pin
Part Number 205753-2 (Loose Piece)



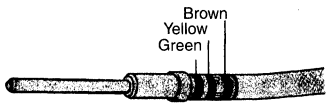
Round Solder-Post Socket
Part Number 205544-1 (Loose Piece)

SOURCE: Catalog 82010

Size-20 Contacts
Pin Diameter .040 [1.02]
Standard Contacts



Socket
M39029/12-149

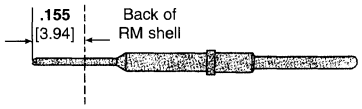


Pin
M39029/11-145

Contact Type	Wire Size AWG mm²	Insulation Diameter (Max.)	Tape Mounted Contacts Pin	Tape Mounted Contacts Socket	Loose Piece Contacts Pin	Loose Piece Contacts Socket	Hand Crimping Tool Tool	Hand Crimping Tool Positioner	AMP-TAPETRONIC Stripper-Crimper Machine	AMP-TAPETRONIC Stripper-Crimper Funnel
MIL-C-39029	**24-20** 0.2-.06	**.071** 1.80	204938-4	205116-2	204938-3	205116-1	M22520/2-01	M22520/2-08	599406-7	125905-1
Type XVII	**30-26** 0.05-0.15	**.071** 1.80	205791-4	—	205791-3	206887-1	M22520/2-01	M22520/2-08	599406-7	2-125905-4
Low Force, ARINC 600 connector contacts, suitable for use in ARINC 404 connectors										
Low Force ARINC 600*	**24-20** 0.2-0.6	**.071** 1.80	208265-4	—	208265-3	208267-2	M22520/2-01	M22520/2-08	599406-7	125905-1

*Color coding, two bands: orange and red.

Round Solder-Post Contact,
Solder Post Diameter .031 [0.79]



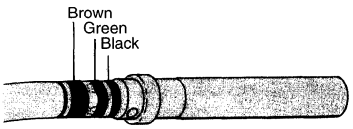
Round Solder-Post Pin
Part Number 205547-2 (Loose Piece)

Wrap-Type Posted Pin,
.025 [0.64] Square Post

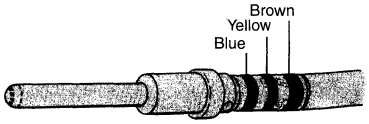
A	Part Number
.430 10.92	206210-2
.685 17.4	206210-4
.185 4.7	206210-6

Insertion and Extraction Tool for all size-20 contacts:
MS81969/1-02
AMP **Part Number 91067-2**

Size-16 Contacts
Pin Diameter .062 [15.75]
Standard Contacts



Socket
M39029/12-150

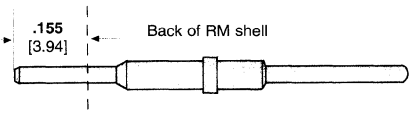


Pin
M39029/11-146

Contact Type	Wire Size AWG mm²	Insulation Diameter (Max.)	Tape Mounted Contacts Pin	Tape Mounted Contacts Socket	Loose Piece Contacts Pin	Loose Piece Contacts Socket	Hand Crimping Tool Tool	Hand Crimping Tool Positioner	AMP-TAPETRONIC Stripper-Crimper Machine	AMP-TAPETRONIC Stripper-Crimper Funnel
MIL-C-39029	**20-16** 0.5-1.4	**.103** 2.62	—	205117-2	204978-3	205117-1	M22520/1-01	M22520/1-02	599406-5	125905-6
Low Force, ARINC 600 connector contacts, suitable for use in ARINC 404 connectors										
Low Force ARINC 600*	**20-16** 0.5-1.4	**.103** 2.62	—	—	208268-3	208270-2	M22520/1-01	M22520/1-02	—	—

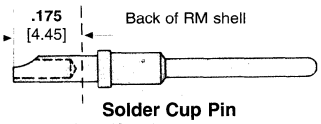
*Color coding, two bands: orange and blue.

Round Solder-Post Contact
Solder Post
Diameter .062 [15.75]



Round Solder-Post Pin
Part Number 205548-2 (Loose Piece)

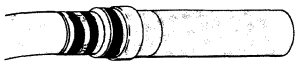
Solder Cup Pin



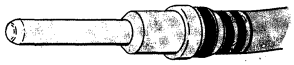
Solder Cup Pin
Part Number 206211-2*

*These contacts are preloaded in special application connectors. See page 2380.
Insertion and Extraction Tool for all size-16 contacts: MS81969/1-03, AMP **Part Number 91066-3**

Size-12 Contacts
Pin Diameter .096 [2.39]



Socket



Pin

Contact Type	Wire Size AWG mm²	Insulation Diameter (Max.)	Part Numbers Loose Piece Contacts Pin	Part Numbers Loose Piece Contacts Socket	Part Numbers Hand Crimping Tool Tool	Part Numbers Hand Crimping Tool Positioner
MIL-C-39029	**14-12** 2-3	**.190** 4.83	205763-3	205851-2	M22520/1-01	M22520/1-11
Low Force, ARINC 600 connector contacts, suitable for use in ARINC 404 connectors						
Low Force ARINC 600*	**14-12** 2-3	**.190** 4.83	208271-3	208273-2	M22520/1-01	M22520/1-11

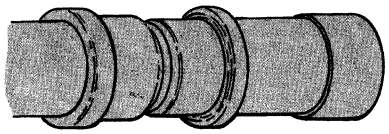
*Color coding, two bands: orange and yellow.
Insertion and Extraction Tool for all size-12 contacts: AMP **Part Number 445147-1**

SOURCE: Catalog 82010

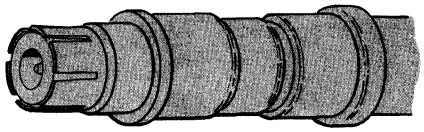
Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

COAXICON Contacts

Size-1 COAXICON Contacts (Captivated)



Socket Assembly



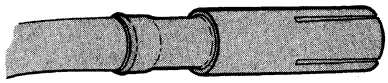
Pin Assembly

Size-3 COAXICON Contacts (Captivated)

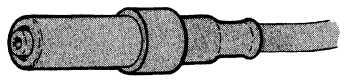
Straight Pin Assembly

Socket Assembly

Size-5 COAXICON Contacts



Socket Assembly



Pin Assembly

These contacts must be ordered separately using part numbers shown here. Balance of connector must be ordered separately, using descriptive part numbering system, explained on page 2371.

Contact Size	RG/U Cable	Part Number		Center Contact Crimping Tool		Ferrule Crimping Tool
		Pin	Socket	Tool	Positioner	
1 Straight Exit	141 Semi-Rigid	225837-1	—	M22520/2-01 601966-1	—	220066-1 or -2
	214	—	225831-1	220015-1	—	220015-1
3 Straight Exit	214	—	225792-1	220015-1	—	220015-1
	58C	226053-1	—	M22520/2-01 601966-1	1-601966-8 (Pin)	220066-1 or -2
		—	225792-3			
	225	—	225792-5	220015-1	—	220015-1
5 Straight	58C, 58A	225790-1	225791-1	M22520/2-01 601966-1	1-601966-6	220066-1 or -2
	141A	225790-1	225791-1	220066-2	—	220066-1 or -2
	223	225790-2	225791-2	M22520/2-01 601966-1	1-601966-6	220066-1 or -2
	142A, 142B	225790-2	225791-2	220066-2	—	220066-1 or -2
	141 Semi-Rigid	225790-3	225791-6	220066-2	—	220066-1 or -2
	174, 188, 316	225790-5	225791-3	M22520/2-01 601966-1	1-601966-6	220066-1 or -2 or 220009-1
	180, 195	225790-4	225791-8	M22520/2-01 601966-2	1-601966-6	220066-1 or -2
	179, 187	225790-6	225791-4	M22520/2-01 601966-1	1-601966-6	220066-1 or -2 or 220009-1
	178, 196	225790-7	225791-5	M22520/2-01 601966-1	1-601966-6	220020-1

SOURCE: Catalog 82010

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

COAXICON Contacts
(Continued)

Size-7 COAXICON Contacts (Captivated)

Straight Pin Assembly

Socket Assembly

Size-9 COAXICON Contacts

Pin Assembly

Socket Assembly

Size-15 COAXICON Contacts

Pin Assembly

Socket Assembly

Contact Size	RG/U Cable	Part Number		Center Contact Crimping Tool		Ferrule Crimping Tool
		Pin	Socket	Tool	Positioner	
7 Straight	58C	—	225796-1	M22520/2-01 601966-1	1-601966-6	220066-1 or -2
	141A	—	225796-1	220066-2	—	220066-1 or -2
	223	—	225796-2	M22520/2-01 601966-1	1-601966-6	220066-1 or -2
	142A, 142B	—	225796-2	220066-2	—	220066-1 or -2
9 Straight	58C	225935-1	225936-2	M22520/2-01 601966-1	1-601966-6	220066-1 or -2
	141A	225935-1	225936-2	220066-2	1-601966-6	220066-1 or -2
	174, 188, 316	225935-4	225936-3	M22520/2-01 601966-1	1-601966-6	220066-1 or -2
	142A, 142B	225935-5	225936-5	220066-2	1-601966-6	220066-1 or -2
15 Straight	188, 316	226782-1	226781-1	M22520/2-01 601966-1	M22520/4-01 601963-2	—
	179, 187	226782-2	226781-2	M22520/2-01 601966-1	M22520/4-01 601963-2	—
	178, 196	226782-3	226781-3	M22520/2-01 601966-1	M22520/4-01 601963-2	—

Extraction Tools

Size-5 and -9—
AMP **Part Number 91074-1**
Size-15—
AMP **Part Number 91066-3**

SOURCE: Catalog 82010

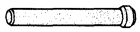
Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

Sealing Plugs

Size 22
Part Number 204760-1
White Teflon

Size 16
Part Number 203839-2
Blue thermoplastic

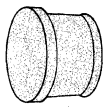
Size 20
Part Number 203839-1
Red thermoplastic



Size 12
Part Number 205574-1
Yellow thermoplastic

Coaxial Sealing Plug and Boot

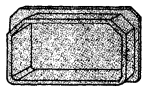
Size 5
Plug—Part Number 205975-1



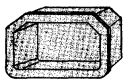
Boot for RG-58C cable—
Part Number 205402-2
Boot for RG-180, -190 cable—
Part Number 205402-3

Dust Covers

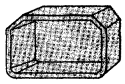
Conductive Receptacle Cap
Part Number 445918-1



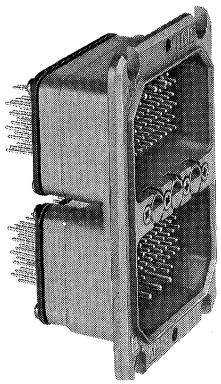
Plug Cap
Part Number 205282-1



Receptacle Cap
Part Number 205283-1



Preassembled Posted Connectors



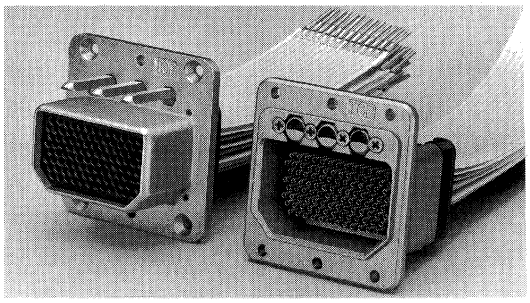
The special connectors tabulated here are assembled from components described elsewhere in this catalog. They represent a brief overview of the wide variety of connectors which can be preassembled by AMP.

All these preassembled connectors mate with corresponding R, RM and RME connectors with complementary contact insert arrangements.

Shell	Description	Post Shape	Post Extension	Part Number
Single Receptacle	Shell has clinch nuts; 67-position insert with 64 size-20 pin contacts only	**.025** 0.64 round	**.235** 5.97	208799-1
Dual Receptacle (Shown)	106-position inserts with size-22 pin contacts	**.025** 0.64 round	**.170** 4.32	208382-2
	Shell has clinch nuts; 32C2 pin insert in location A; 57-position pin insert in location B; no coaxial contacts included	**.030** 0.76 round	**.175** 4.45	208391-1

Consult AMP for information concerning fabrication of connectors for specific requirements.

106-Contact Inserts for Flexible Flat Cable



These custom-made assemblies use AMP Flexible Flat Conductor Cable which has .050 [1.27] wide conductors, .003 [0.08] thick, on .100 [2.54] centers (or similar, customer-specified cable). The inserts mate with 106-contact inserts, shown on page 2372, with size-22 contacts.

The adaptability of flexible flat cable to many uses, the wide variety of contact styles available, and the high quality of AMP assembled harnesses make these inserts particularly attractive. Among their outstanding features are that they require no soldering, welding or potting, and the inserts are repairable by replacement of individual cables.

Flexible Flat Conductor Cable

■ Recognized under the Component Program of Underwriters Laboratories Inc., File No. E53793

Specifications:

Temperature Rating: -55°C to +105°C
Voltage Rating: 300 volts per UL Style No. 2646
Current Rating: 3 amperes, equivalent 27 AWG [0.1 mm²]
Insulation Resistance: 5000 megohms (min.)
Insulation Material: Polyester
Flammability: Self-extinguishing per applicable UL requirement

Cable Size (No. of Conductors)	Cable Width	Part No.
12	**1.100** 27.94	1-88586-1
13	**1.200** 30.48	1-88586-2
14	**1.300** 33.01	1-88586-3

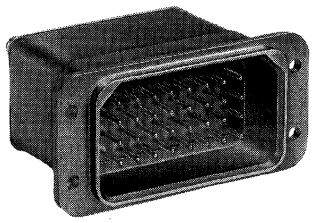
SOURCE: Catalog 82010

Special Shells and Inserts

Example: RA 1 P 32S 00 **200**

Miniature Connectors

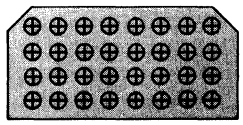
RA Series (unsealed)
Plug [RA 1P]
Receptacle [RA 1R]



RE Series (environmentally sealed)
Plug [RE 1P]
Receptacle [RE 1R]

Contact Inserts for Miniature Connectors

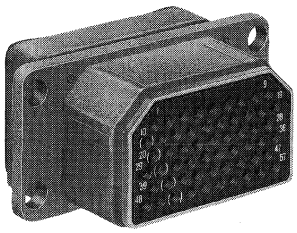
These inserts accept standard contacts shown on pages 2376-2379.



Arrangement 32
32 Size-20 Contacts

Standard Size, Unkeyed Connectors

RMA Series (unsealed)
Plug (shown)
Receptacle



RMAE Series (environmentally sealed)
Plug (shown)
Receptacle

These connectors use inserts shown on page 2372. The shells are similar to standard series shells, except they are lighter weight and offer no keying provision.

Available Contact Arrangements*
C2, C3
106
8, D8, 26, 40, 45, 57, 67
C8, 32C2, 33C4, 40C1

*Consult AMP.

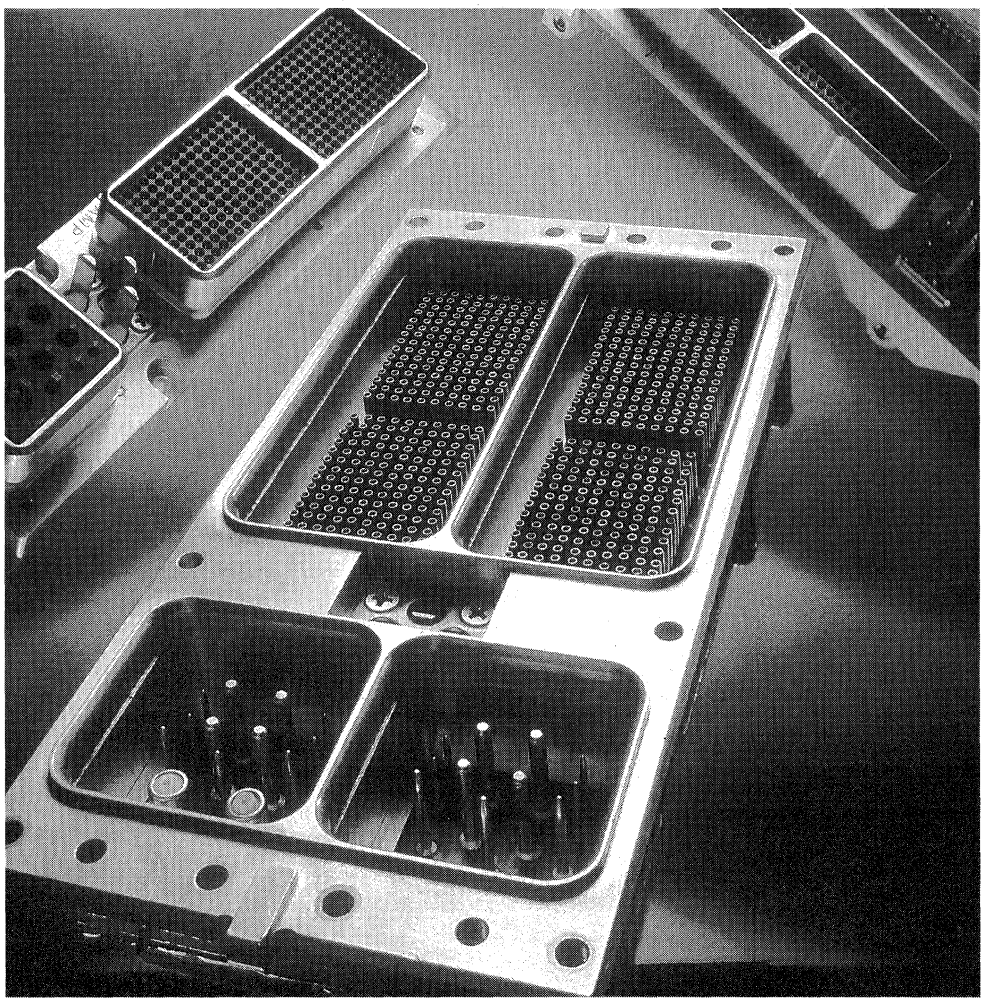
SOURCE: Catalog 82010

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

ARINC 600 Connectors

Product Facts

- **Designed to meet all relevant ARINC 600 Connector specifications**
- **Available in all three sizes**
- **Low mating-force contacts—suitable for ARINC 404 Connectors**
- **Automatic terminating equipment available for high speed applications**
- **Full range of contact inserts**
- **Timely delivery schedule**
- **Competitive pricing**
- **Designed and manufactured by AMP—largest supplier in the industry**



ARINC 600 connectors represent a new generation of standardized rack and panel connectors for aircraft applications. Compared to the preceding ARINC 404 standard, the new avionics connectors feature significantly reduced mating forces; increased numbers of contacts in housings proportioned to thinner black-box shapes; and floating, front-release keying.

AMP ARINC 600 Connectors capitalize on the new design by adding unique features while maintaining intermateability. For instance, AMP contact inserts are field replaceable and manufactured to precise tolerances so that when they are installed they are within .006 [0.15] of true position.

AMP contacts for ARINC 600 Connectors are applied with standard crimping tools—the same ones used for ARINC 404 contacts. Automatic crimping equipment is available for higher productivity and lower applied costs. The benefits of reduced mating forces, averaging 1.5 ounces [0.42 N] for the old 404 contacts, can be realized in ARINC 600 Connectors through fitting of these new, interchangeable contacts. ARINC 600 coaxial contacts also are crimp applied for reliable, solder-free installation.

It is easy to specify ARINC 600 Connectors by descriptive part numbers. An example of a descriptive part number is shown on page 2383, with an explanation of each component of the part number and page references for complete information.

Traffic Alert and Collison Avoidance System (TCAS) Connectors

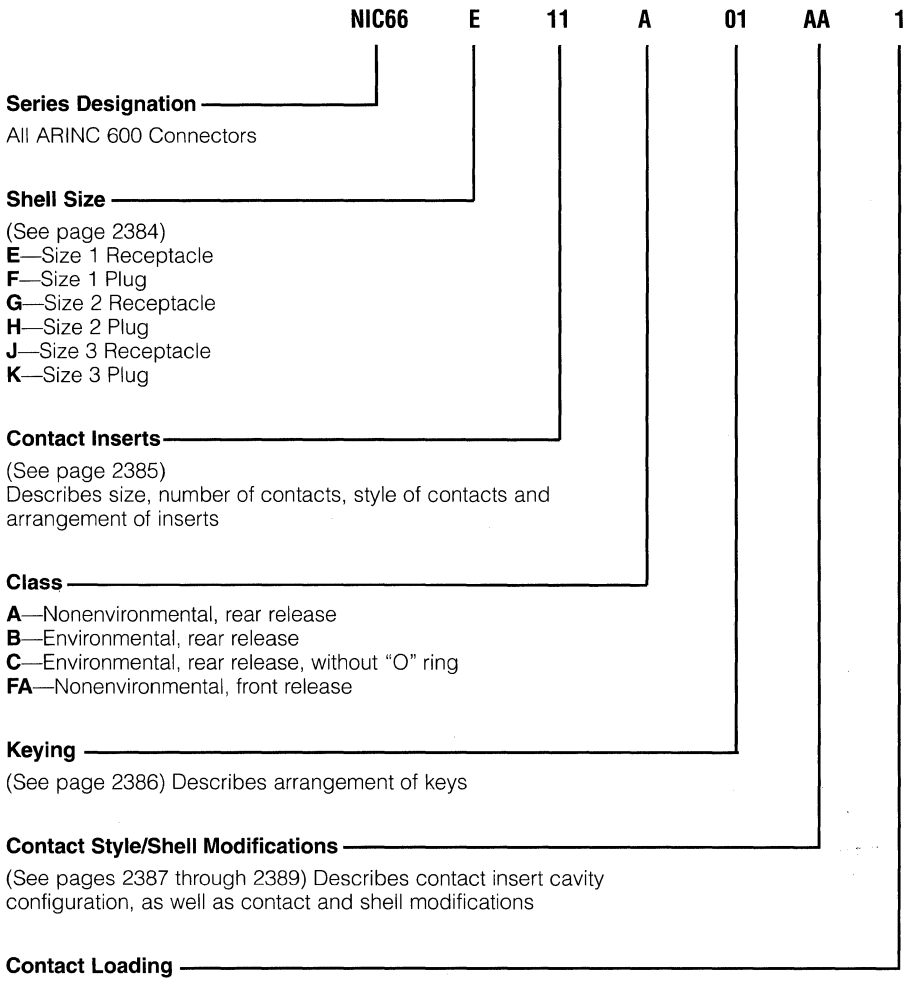
The Federal Aviation Administration (FAA) has mandated that all commerical aircraft capable of carrying 31 passengers or more must be equipped with TCAS. The system alerts the pilot that a plane is within a 15-mile radius and advises that pilot of appropriate action to avoid an imminent collision.

SOURCE: Catalog 82106

Descriptive Part Numbering

Use this guide to construct descriptive part numbers for ARINC 600 Connectors. Consult the referenced pages for additional information.

Sample Descriptive Part Number



Series Designation
All ARINC 600 Connectors

Shell Size
(See page 2384)
E—Size 1 Receptacle
F—Size 1 Plug
G—Size 2 Receptacle
H—Size 2 Plug
J—Size 3 Receptacle
K—Size 3 Plug

Contact Inserts
(See page 2385)
Describes size, number of contacts, style of contacts and arrangement of inserts

Class
A—Nonenvironmental, rear release
B—Environmental, rear release
C—Environmental, rear release, without "O" ring
FA—Nonenvironmental, front release

Keying
(See page 2386) Describes arrangement of keys

Contact Style/Shell Modifications
(See pages 2387 through 2389) Describes contact insert cavity configuration, as well as contact and shell modifications

Contact Loading
0—Contacts included with connector, as indicated in contact style code above (no digit in this space also indicates connector includes contacts). COAXICON contacts must always be ordered separately.
1—Contacts not included with connector; must be ordered separately by AMP Part Number.

SOURCE: Catalog 82106

Specifications subject to change.
1-800-522-6752 Product Information Center/ AMP FAX Service
1-800-722-1111 Tooling/Technical Assistance Center

Shells

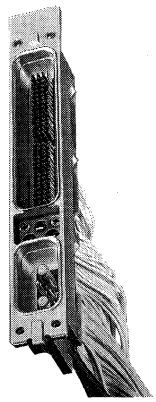
Shell Size 1

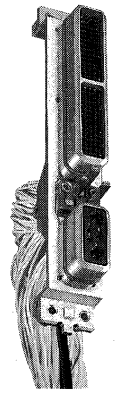
Overall Dimensions—
Receptacle, 7.455 [189.36] L x
1.221 [31.01] W x 1.010 [25.65] H;
Plug, 6.995 [177.67] L x
1.272 [32.31] W x 1.100 [27.94] H

Example: NIC66 E 11 A 01 AA 1

Receptacle (Code E)

Plug (Code F)





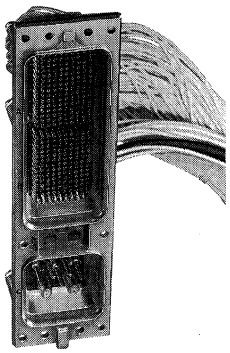
Shell Size 2

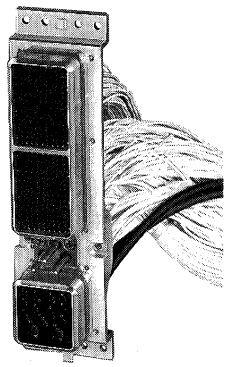
Overall Dimensions—
Receptacle, 6.975 [177.16] L x
1.810 [45.97] W x 1.317 [33.45] H;
Plug, 6.995 [177.67] L x
1.198 [30.43] W x 1.810 [45.97] H

Example: NIC66 G 21 A 01 AA 1

Receptacle (Code G)

Plug (Code H)





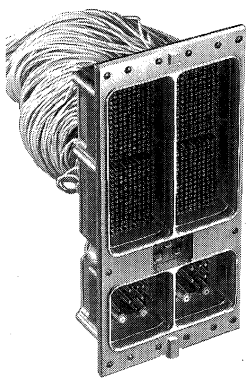
Shell Size 3

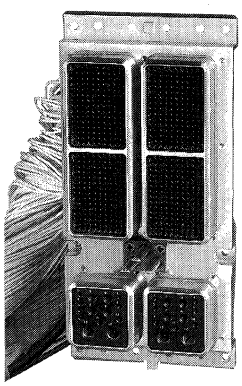
Overall Dimensions—
Receptacle, 6.975 [177.16] L x
1.317 [33.45] W x 3.275 [83.18] H;
Plug, 6.995 [177.67] L x
1.198 [30.43] W x 3.275 [83.18] H

Example: NIC66 J 31 A 01 AA 1

Receptacle (Code J)

Plug (Code K)

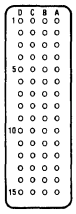




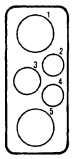
SOURCE: Catalog 82106

Contact Inserts

Shell Size 1



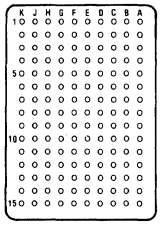
Insert 60
(60) Size 22 Contacts



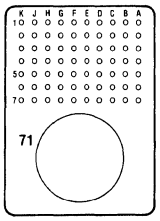
Insert 5C2
(1) Size 12 Contact
(2) Size 16 Contacts
(2) Size 5 COAXICON Contacts

Example: NIC66 E 11 A 01 AA 1

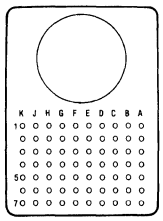
Shell Size 2 or 3



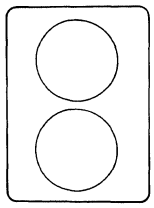
Insert 150
(150) Size 22 Contacts
Available in front and rear release



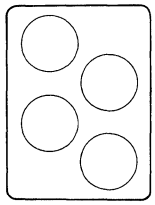
Insert 71C1
(70) Size 22 Contacts
(1) Size 1 COAXICON Contact



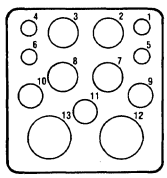
Insert 71C1A
(70) Size 22 Contacts
(1) Size 1 COAXICON Contact



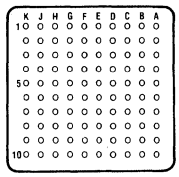
Insert C2
(2) Size 1 COAXICON Contacts



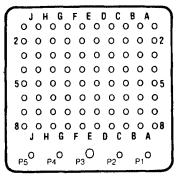
Insert C4
(4) Modified Size 1 Contacts



Insert 13C2
(4) Size 12 Contacts
(3) Size 16 Contacts
(4) Size 20 COntacts
(2) Size 5 COAXICON Contacts



Insert 100
(100) Size 22 Contacts
Available in front or rear release



Insert 85
(80) Size 22 Contacts
(4) Size 20 Contacts
(1) Size 16 Contacts

Note: Engaging faces of pin inserts are shown

Insert Arrangement Code	Shell Size	Shell Positions A	B	C	D	E	F
11	1	60	60	5C2	—	—	—
12	1	60	Blank	Blank	—	—	—
13	1	Blank	60	Blank	—	—	—
14	1	Blank	60	Blank	—	—	—
20	2	71C1A	71C1	13C2	—	—	—
21	2	150	150	13C2	—	—	—
22	2	71C1	150	13C2	—	—	—
23	2	71C1	71C1	13C2	—	—	—
25	2	150	71C1	13C2	—	—	—
26	2	150	150	100	—	—	—
27	2	C2	71C1	13C2	—	—	—
28	2	C2	71C1A	85	—	—	—
29	2	150	150	Blank	—	—	—
30	2	71C1A	71C1A	13C2	—	—	—
31	3	150	150	13C2	150	150	13C2
32	3	150	150	100	150	150	13C2
33	3	150	150	13C2	150	150	100
34	3	150	150	100	150	150	100
36	3	C4	C4	13C2	Blank	150	100
50	2	71C1	71C1A	13C2	—	—	—
51	2	Blank	150	13C2	—	—	—
52	2	150	150	85	—	—	—
53	2	C4	150	13C2	—	—	—
55	2	150	Blank	13C2	—	—	—
56	2	150	C2	13C2	—	—	—

Note: Consult AMP for different arrangements.

Class Codes

A—Unsealed Insert
B—Sealed Insert
C—Sealed Insert
FA—Front Release

Note: The style of insert is further modified by the contact style specified in the section marked **AA** in the example code. The appropriate code must be used in the **AA** section, even when connectors are ordered unloaded, so that contacts fit properly. These inserts are field replaceable.

SOURCE: Catalog 82106

Specifications subject to change.

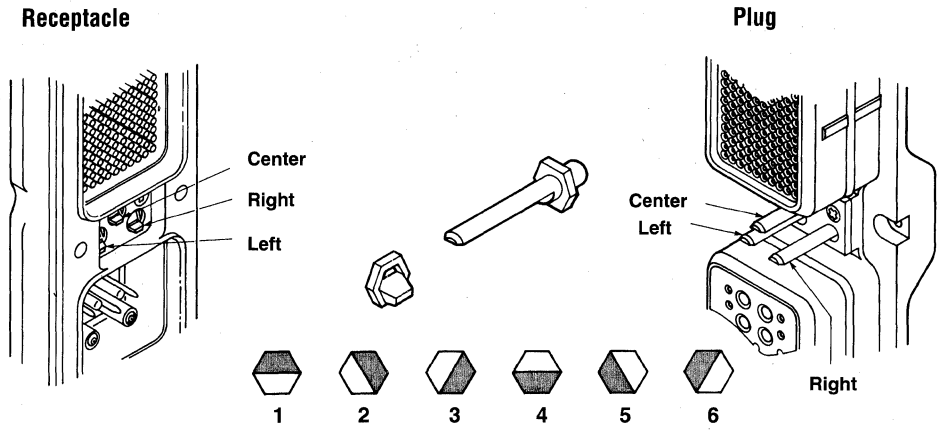
1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

Keying

Example: NIC66 E 21 A 01 AA 1

Notes:
1. Darkened portion of diagram indicates extended post of plug key; light portion indicates key hole in receptacle keyway.
2. If the keying code is omitted, keying is assembled in the **01** arrangement; the keying code is not stamped on the connector.
3. If the keying code is **00**, keying is supplied unassembled.
4. Other keying combinations are available as needed.
5. Diagrams show mating face of connector, "Top" up.



Keying Components

Item	Quantity Required Per Connector	Part Numbers	
		Receptacle	Plug
Male Key Post	3	—	208018-1
Female Keyway	3	208019-1	—
Plate	1	208020-1	208020-1
Screw	2	208021-1	208021-1

Keying Code	Plug			Receptacle		
	Left Post	Center Post	Right Post	Left Post	Center Post	Right Post
00	—	—	—	—	—	—
01*	1	1	1	4	4	4
02	2	1	1	4	4	3
03	3	1	1	4	4	2
04	4	1	1	4	4	1
05	5	1	1	4	4	6
06	6	1	1	4	4	5
07	1	1	6	5	4	4
08	2	1	6	5	4	3
09	3	1	6	5	4	2
10	4	1	6	5	4	1
11	5	1	6	5	4	6
12	6	1	6	5	4	5
13	1	1	5	6	4	4
14	2	1	5	6	4	3
15	3	1	5	6	4	2
16	4	1	5	6	4	1
17	5	1	5	6	4	6
18	6	1	5	6	4	5
19	1	1	4	1	4	4
20	2	1	4	1	4	3
21	3	1	4	1	4	2
22	4	1	4	1	4	1
23	5	1	4	1	4	6
24	6	1	4	1	4	5

Keying Code	Plug			Receptacle		
	Left Post	Center Post	Right Post	Left Post	Center Post	Right Post
25	1	1	3	2	4	4
26	2	1	3	2	4	3
27	3	1	3	2	4	2
28	4	1	3	2	4	1
29	5	1	3	2	4	6
30	6	1	3	2	4	5
31	1	1	2	3	4	4
32	2	1	2	3	4	3
33	3	1	2	3	4	2
34	4	1	2	3	4	1
35	5	1	2	3	4	6
36	6	1	2	3	4	5
37	1	2	1	4	3	4
38	2	2	1	4	3	3
39	3	2	1	4	3	2
40	4	2	1	4	3	1
41	5	2	1	4	3	6
42	6	2	1	4	3	5
43	1	2	6	5	3	4
44	2	2	6	5	3	3
45	3	2	6	5	3	2
46	4	2	6	5	3	1
47	5	2	6	5	3	6
48	6	2	6	5	3	5
49	1	2	5	6	3	4

***01** keying is most readily available

SOURCE: Catalog 82106

Contact Modification Codes

Example: NIC66 E 11 A 01 AA 1

AA Crimp, Snap-In Contacts, Rear Release, Standard Mounting
AB .025 [0.64] Square Post Contacts, 1-Wrap High, Snap-In, Standard Mounting
AC .025 [0.64] Square Post Contacts, 2-Wrap High, Snap-In, Standard Mounting
AD .025 [0.64] Square Post Contacts, 3-Wrap High, Snap-In, Standard Mounting
BA (4) Floating Bushings

#6-32 Clinch Nuts
CA (10) #6-32 Clinch Nuts
CB (4) #6-32 Clinch Nuts
CC (6) #6-32 Clinch Nuts
CD (8) #6-32 Clinch Nuts

Captivated Contact Codes
DF 208275-7 (.150 [3.81] Extension), Standard Mounting
DG 208275-3 (.190 [4.83] Extension), Standard Mounting
DH 208275-4 (.250 [6.35] Extension), Standard Mounting

Clinch Nuts with Captivated Contacts
EA (4) #6-32 Clinch Nuts, and 208275-7 Signal Contacts
EB (4) #6-32 Clinch Nuts, and 208275-3 Signal Contacts
EC (4) #6-32 Clinch Nuts, and 208275-4 Signal Contacts

Front Release
FA Indicates front release inserts without contacts
FB Standard Mounting, 211245-2 Contacts
FC Standard Mounting, 211245-4 Contacts
FD Standard Mounting, 211245-6 Contacts
FE Standard Mounting, 211431-2 Contacts
FF Standard Mounting, 211431-4 Contacts
FG Standard Mounting, 211431-6 Contacts
FH Standard Mounting, 211431-8 Contacts

Front Release Contacts and Clinch Nuts
GA (4) #4-40 Clinch Nuts, 211431-4 Contacts
GB (6) #4-40 Clinch Nuts, 211431-4 Contacts
GC (6) #4-40 Clinch Nuts, 211431-6 Contacts
GD (6) #6-32 Clinch Nuts, 211431-4 Contacts
GE (10) #4-40 Clinch Nuts, 211431-8 Contacts

#4-40 Clinch Nuts
SA (4) #4-40 Clinch Nuts
SB (6) #4-40 Clinch Nuts
SC (10) #4-40 Clinch Nuts
SD (8) #4-40 Clinch Nuts

SOURCE: Catalog 82106

Specifications subject to change.
1-800-522-6752 Product Information Center/ AMP FAX Service
1-800-722-1111 Tooling/Technical Assistance Center

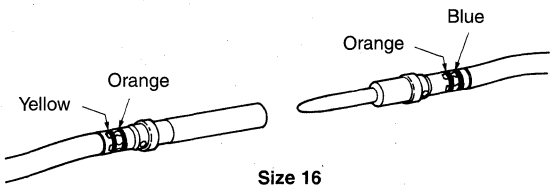
Crimp, Snap-In Contacts

Example: NIC66 E 11 A 01 AA 1

Contact Loading Codes

0 (or blank)—Contacts included

1—Contacts not included; must be ordered separately by AMP Part Number.



Size 16

Note: When connectors are ordered with contacts, the contact style section (**AA** in the example code at the top of this page) must be specified so that the proper, unloaded inserts are included. COAXICON contacts are not supplied in connector kits and must be ordered separately.

Crimp, Snap-In, Rear-Release Contacts

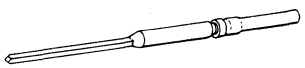
Average Contact Size	Wire Size AWG	Wire Size mm²	Color Code	Average Engagement Force	Part Numbers Pin Contact	Part Numbers Socket Contact	Part Numbers Crimp Tool	Tooling Part Numbers Positioner	Tooling Part Numbers Insertion/ Extraction Tool	Tooling Part Numbers Color Code
22	26-22	0.12-0.4	Green	1.5 oz. [.42 N]	208262-3	208264-2	M22520/2-01	M22520/2-23	91066-1	Green
20	20-22	0.2-0.6	Red	2.0 oz. [.56 N]	208265-3	208267-2	M22520/2-01	M22520/2-08	91066-4	Red
16	20-16	0.5-1.4	Blue	3.0 oz. [.83 N]	208268-3	208270-2	M22520/1-01	M22520/1-02	91066-3	Blue
12	14-12	2-3	Yellow	12.0 oz. [3.34 N]	208271-3	208273-2	M22520/1-01	M22520/1-11	445147-1	—

Size 22 Posted Contacts

Contact Loading

0 (or blank)— Contacts included

1—Contacts not included; must be ordered separately by AMP Part Number.



Square or Rounded Posts

Size 22, Snap-In, Rear-Release Socket Contacts

with .025 [0.64] Square Posts

Number of Wraps	Post Extension from Rear of Insert	Post Length (Ref.)	Part Numbers
1	**.275** [6.98]	**.375** [9.52]	208215-1
2	**.390** [9.91]	**.490** [12.45]	208215-2
3	**.520** [13.21]	**.620** [15.75]	208215-3

with .025 [0.64] Diameter Posts

Post Extension (Min.) from Rear of Insert	Part Number
.190 [4.83]	445814-1

Size 22, Snap-In, Front-Release Socket Contacts

with .025 [0.64] Square Posts

Number of Wraps	Post Extension from Rear of Insert	Part Numbers
1	**.250** [6.35]	211245-2
2	**.375** [9.52]	211245-4
3	**.500** [12.7]	211245-6

Note: Extraction Tool **Part No. 445815-1** (for Front-Release Socket Contacts)

with .025 [0.64] Diameter Posts

Post Extension (Min.) from Rear of Insert	Part Numbers
.150 [3.81]	211431-2
.250 [6.35]	211431-4
.375 [9.52]	211431-6
.500 [12.7]	211431-8

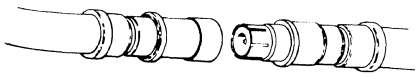
Size 22, Printed Circuit (Non-Snap-In) Socket Contacts

with .025 [0.64] Diameter Posts

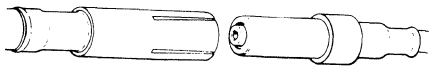
Post Extension (Min.) from Rear of Insert	Part Numbers
.150 [3.81]	208275-7
.190 [4.83]	208275-3
.250 [6.35]	208275-4

COAXICON Contacts

COAXICON Contacts are not supplied in connector kits; they must be ordered separately.



Size 1



Size 5

Contact Size	RG/U Cable	Contact Part Numbers			Tooling Part Numbers		
		Pin	Socket				
			without Mounting Hardware	with Mounting Hardware*	Center Contact Tool	Crimp Tool Positioner	Ferrule Crimping Tool
AMP 'O' Crimp							
1 Straight Exit	402 Semi-Rigid **.141** [3.58]	225837-1	—	—	M22520/2-01	—	220066-1 or -2
	214	—	225831-1	211229-1	220015-1	—	220015-1
	142, 142A, 142B	—	225831-3	446709-1	220045-2	—	220045-2
	393	—	225831-6	446709-3	220015-1	—	220015-1
5 Straight Exit	58C	225790-1	225791-1	—	M22520/2-01	K345	220066-1 or -2
	141A	225790-1	225791-1	—	220066-2	—	220066-1 or -2
	223	225790-2	225791-2	—	M22520/2-01	K345	220066-1 or -2
	142, 142A, 142B	225790-2	225791-2	—	220066-2	—	220066-1 or -2
	402 Semi-Rigid **.141** [3.58]	225790-3	225791-6	—	220066-2	—	220066-1 or -2
	174, 188, 316	225790-5	225791-3	—	M22520/2-01	K345	220066-1 or -2 or 220009-1
	180, 195	225790-4	225791-8	—	M22520/2-01	K345	220066-1 or -2
	179, 187	225790-6	225791-4	—	M22520/2-01	K345	220066-1 or -2 or 220009-1
	178, 196	225790-7	225791-5	—	M22520/2-01	K345	220020-1
Military Hex Crimp					Hand Tool	Die for Ferrule Crimp	Crimp/Die for Center Contact Crimp
1 Straight Exit	214	447095-1	447087-1	446709-4	M22520/5-01**	M22520/5-25	M22520/5-25
	213	447095-2	447087-2	446709-5	M22520/5-01**	M22520/5-25	M22520/5-25
	142	447095-3	447087-3	446709-6	M22520/5-01**	M22520/5-11	M22520/5-11
	393	447095-4	447087-4	446709-7	M22520/5-01**	M22520/5-25	M22520/5-25
	ESC 311201	—	447087-5	446709-2	M22520/5-01**	M22520/5-29	M22520/5-29
Modified 1 Straight Exit	214	—	—	446549-3	M22520/5-01**	M22520/5-25	M22520/5-25
	142	—	—	446540-1	M22520/5-01**	M22520/5-11	M22520/5-11
	393	—	—	446549-5	M22520/5-01**	M22520/5-25	M22520/5-25
	Times AA5886	—	—	446549-6	M22520/5-01**	M22520/5-25	M22520/5-04
	Times AA5887	—	—	446549-2	M22520/5-01**	M22520/5-29	M22520/5-29
	ESC 311201	—	—	446549-4	M22520/5-01**	M22520/5-29	M22520/5-29
	SMA ADAPTER	446748-1	—	—	—	—	—

* Mounting hardware for Size 1 Straight Exit Contacts includes: backup plate, spring, retaining ring, O-ring, washers and screws. Hardware for Modified Size 1 Contacts includes the spring and retaining ring.

** AMP does not sell Hand Tool **Part No. M22520/5-01**. However, it can be purchased from:
Daniels Manufacturing Corp.
6103 Anno Ave.
Orlando, FL 32809
800-327-2432

Notes:

1. Hardware for Modified Size 1 COAXICON Socket Contacts (used on C4 insert) include:
   Spring—**Part No. 446921-1**
   Retaining Ring—**Part No. 985184-1**
2. Hardware Kit **Part No. 447118-1** for Size 1 COAXICON Socket Contacts (used on T1C1 or C2 inserts) includes all mounting hardware required (retention plate, washers, O-ring, spring, screws and retention clip).

Insertion and Extraction Tool For size 5 Coaxial Contacts

Part Number 91074-1

SOURCE: Catalog 82106

Specifications subject to change.

1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

Traffic Alert and Collision Avoidance System (TCAS) Connectors and Mode S Transponder Connectors

Product Facts

Plug Connector

- **AMP modified Size 1 coaxial contacts use standard military crimp tooling for reliable connections without the need for special tooling**
- **AMP plug allows repair or replacement of the coaxial contacts without connector disassembly. Two front-release captivated screws release the backup plate**
- **AMP connector conforms to the ARINC 600 specification, which guarantees connector intermateability and contact interchangeability**

Receptacle Connector

- **AMP modified Size 1 coaxial contact incorporates an SMA jack for easy assembly**
- **AMP connector conforms to the ARINC 600 specification, which guarantees connector intermateability and contact interchangeability**

The TCAS System includes one mated pair of Size 3 ARINC 600 connectors, called TCAS Connectors. The plug connector is mounted in the rack, and the receptacle connector is in the avionics box.

The TCAS System also includes one or two mated pairs of Size 2 ARINC 600 Connectors, called Mode S Transponder Connectors. The plug connectors are mounted in the rack, and the receptacle connectors are in the avionics box.

Connector	Description	Part Numbers	Descriptive Part Number
TCAS Plug	Semi-environmental w/o contacts	445717-1	NIC66 K 36 C 40 AA 1
	Semi-environmental w/contacts, w/o coaxial contacts	445717-2	NIC66 K 36 C 40 AA 0
	Non-environmental w/o contacts	445717-3	NIC66 K 36 A 40 AA 1
	Non-environmental w/contacts, w/o coaxial contacts	445717-4	NIC66 K 36 A 40 AA 0
	Non-environmental w/o contacts, (8) #6-32 clinch nuts	445717-5	NIC66 K 36 A 40 CD 1
	Semi-environmental w/o contacts, (10) #4-40 clinch nuts	445717-6	NIC66 K 36 A 40 SC 1
TCAS Receptacle	Front release w/o contacts	445718-1	NIC66 J 36 FA 40 FA 1
Mode S Plug	Non-environmental w/contacts, w/o coaxial contacts	208972-5	NIC66 H 23 A 01 AA 0
	Non-environmental w/o contacts	208972-7	NIC66 H 23 A 01 AA 1
	Environmental w/contacts, w/o coaxial contacts	208973-5	NIC66 H 23 B 01 AA 0
	Semi-environmental w/o contacts	208973-6	NIC66 H 23 C 01 AA 1
Mode S Receptacle	Front release w/o contacts	211991-1	NIC66 G 23 FA 01 FA 1

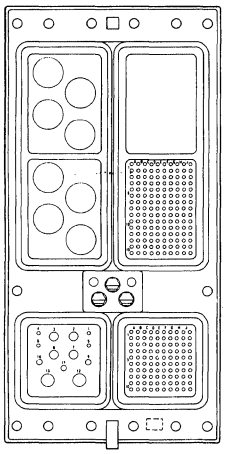
Note: All standard ARINC 600 shell modifications are available.

Specifications subject to change.
1-800-522-6752 Product Information Center/ AMP FAX Service
1-800-722-1111 Tooling/Technical Assistance Center

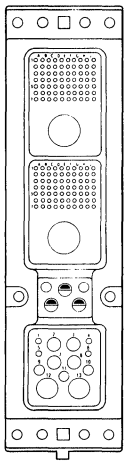
TCAS Connectors and Mode S Transponder Connectors

(Continued)

Contact Requirements



TCAS Connector Insert Arrangement
(Receptacle Mating Face Shown)



Mode S Transponder Insert Arrangement

Plug Contacts

No. of Contacts	Contact Size	Contact Sex	Part Numbers
250	22	pin	208262-3
4	20	socket	208267-2
3	16	socket	208270-2
4	12	socket	208273-2
2	5 coax	socket	*
8	1 coax-Mod.	socket	*

Receptacle Contacts

No. of Contacts	Contact Size	Contact Sex	Part Numbers
250	22	socket	**
4	20	pin	208265-3
3	16	pin	208268-3
4	12	pin	208271-3
2	5 coax	pin	*
8	1 coax-Mod.	pin	*

* See page 2389 for part numbers.
** See page 2388 for part numbers.

Plug Contacts

No. of Contacts	Contact Size	Contact Sex	Part Numbers
140	22	pin	208262-3
4	20	socket	208267-2
3	16	socket	208270-2
4	12	socket	208273-2
2	5 coax	socket	*
2	1 coax	socket	*

Receptacle Contacts

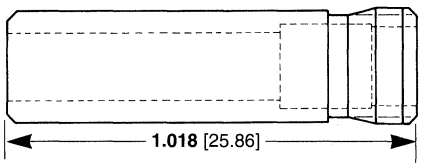
No. of Contacts	Contact Size	Contact Sex	Part Numbers
140	22	socket	**
4	20	pin	208265-3
3	16	pin	208268-3
4	12	pin	208271-3
2	5 coax	pin	*
2	1 coax	pin	*

* See page 2389 for part numbers.
** See page 2388 for part numbers.

ARINC 600 Connector Accessories

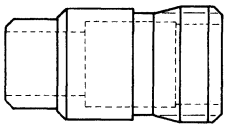
Cavity Reducer Socket

Part Number 446744-1

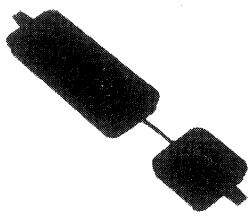


Cavity Reducer Pin

Part Number 446743-1



Dust Covers, Conductive



Connector Size(s)	Part Number
1	211600-1
2 & 3	211600-2

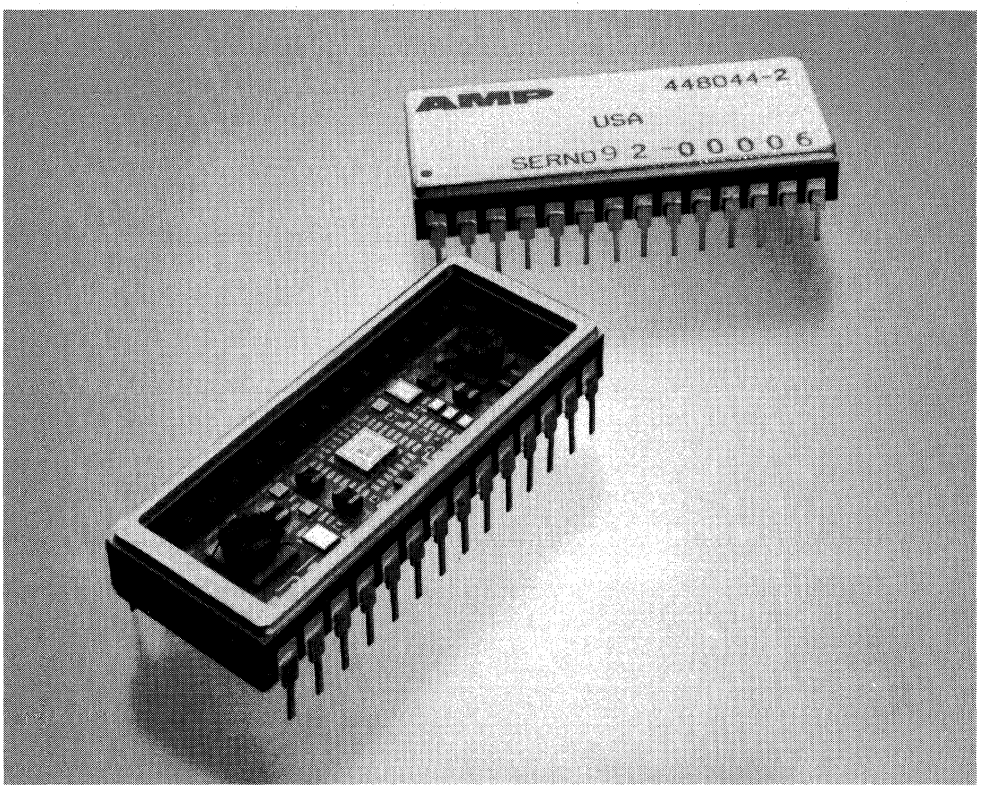
SOURCE: Catalog 82106

Specifications subject to change.

1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

Serial Interface Module (SIM)



Part Number 448044-2

On January 28, 1993, Boeing granted Production Approval to the AMP Serial Interface Module (SIM) for use in equipment installed on the 777-200 airplane. This is the first such approval of an ARINC 629 component and represents a major milestone in development of the new generation data bus. The AMP SIM successfully completed a long list of requirements including extensive component and system testing and First Article Inspection procedures prior to the issuance of this approval.

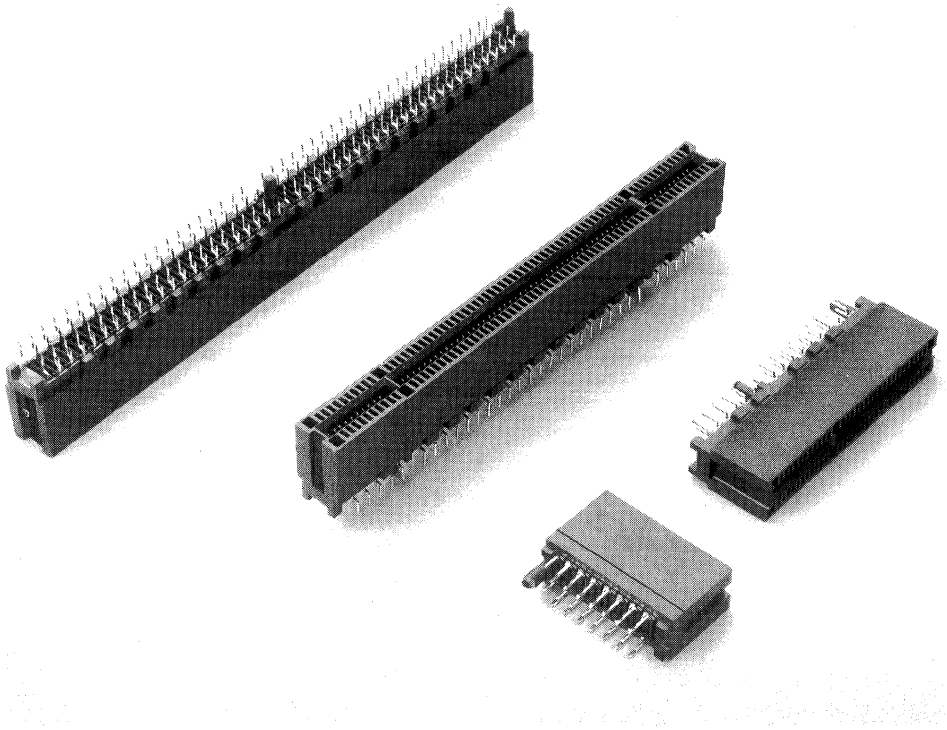
The only difference between Part Number 448044-1, which was granted Flight Test Approval on 1-6-93, and the Production Approval 448044-2 version is the inclusion of a more comprehensive Acceptance Test Plan (ATP).

SOURCE: Catalog 65593

One-Piece Printed Circuit Board Connectors

(Board-to-Board)

Standard Edge .050 Series Connectors



Product Facts

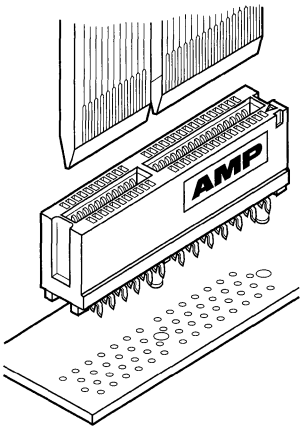
- **High density .050 [1.27] centerline spacing of contacts**
- **Easy mating of high-circuit count daughter boards**
- **Compatible with infrared reflow (IR) soldering techniques**
- **Polarizing web for positive board-to-connector registration**
- **Choice of plastic pylons or metal hold-downs**
- **Recognized under the Component Program of Underwriter Laboratories Inc., File No. E28476**
- **Certified by Canadian Standards Association, File No. LR 7189**

The need to conserve space and pack more function into a given area has demanded that .050 [1.27] centerline spacing become a reality. AMP Standard Edge .050 Series connectors are the perfect vehicle for mother/daughter board applications requiring this real estate.

These rugged connectors have two rows of contacts on .050 [1.27] centerlines. Polarizing webs provide positive board-to-connector registration, while insertion force allows even high circuit-count daughter boards to mate easily. The connectors accept .054 to .070 [1.37 to 1.78] thick daughter boards and feature an overstress protected contact design.

AMP Standard Edge .050 Series connectors are ideal for fast automated robotic assembly with registration features and dimensional tolerancing for accurate pickup and placement, and are packaged in robotics-compatible trays.

Guide posts align the connector with the mother board and retain it for soldering. To make circuit routing easy, connector solder posts are arranged in a four-row .100 [2.54] staggered grid. High-temperature tolerant materials ensure that these connectors withstand infrared reflow (IR) soldering, while standoffs ease flux cleaning.



High Density for Data Bus Applications

SOURCE: Catalog 82619

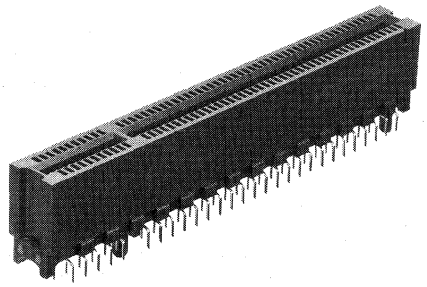
Specifications subject to change.

1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

Standard Edge .050 Series Connectors

Configuration; 1 Key—2 Pylons



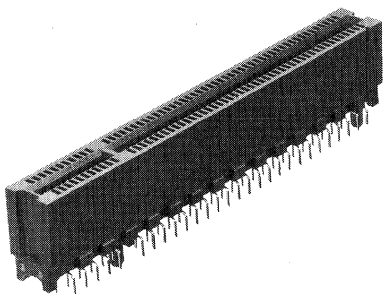
Note: 30 Pos. Housing Dim. (Typ.)—1.840 [46.74] L x .350 [8.89] W x .610 [15.49] H

No. of Dual Positions	Post Length	Contact Plating	Connector Part Numbers
23	**.100** [2.54]	A	650090-7
	.140 [3.56]	A	650181-3
30	**.100** [2.54]	A	650090-6
40	**.100** [2.54]	A	650090-3
	.140 [3.56]	A	650181-2
45	**.100** [2.54]	A	650090-2
56	**.100** [2.54]	A	650090-1
		B	536775-1
	.140 [3.56]	A	650181-1
80	**.100** [2.54]	A	650090-9
91	**.100** [2.54]	A	650092-1
	.140 [3.56]	A	650092-2

Contacts—Phosphor bronze, duplex plated as follows:
A—.000030 [0.00076] min. gold in mating area, .000100 [0.00254] min. tin-lead on solder posts, with entire contact underplated .000050 [0.00127] min. nickel
B—.000015 [0.00038] min. gold in mating area, .000100 [0.00254] min. tin-lead on solder posts, with entire contact underplated .000050 [0.00127] min. nickel

VESA LOCAL BUS (VL) Connectors

Configuration; 1 Key—2 Pylons



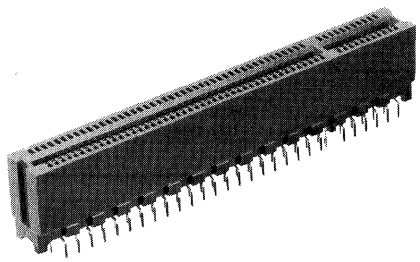
No. of Dual Positions	Post Length	Contact Plating	Connector Part Numbers
56	**.100** 2.54	A	650090-1
		B	536775-1

Contacts—Phosphor bronze, duplex plated as follows:
A—.000030 [0.00076] min. gold in mating area, .000100 [0.00254] min. tin-lead on solder posts, with entire contact underplated .000050 [0.00127] min. nickel
B—.000015 [0.00038] min. gold in mating area, .000100 [0.00254] min. tin-lead on solder posts, with entire contact underplated .000050 [0.00127] min. nickel

SOURCE: Catalog 82619

Standard Edge .050 Series Connectors, (Continued)

Configuration;
1 Key—2 Hold-downs



Note: 45 Pos. Housing Dim. (Typ.)—2.590 [65.79] L x .350 [8.89] W x .610 [15.49] H

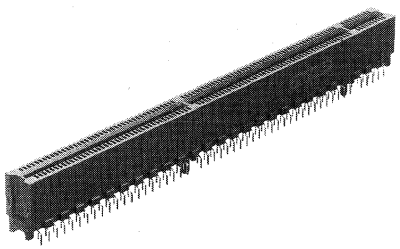
No. of Dual Positions	Post Length	Connector Part Numbers
45	**.100** 2.54	145020-3
	.125 3.18	145020-5
56	**.100** 2.54	145020-2
80	**.140** 3.56	145020-4
91	**.100** 2.54	145020-1
	.125 3.18	145020-6
	.140 3.56	145020-7

SOURCE: Catalog 82619

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

Standard Edge
.050 Series Connectors
(Continued)

Configuration;
1 Key/1 Web—2 Pylons



Note: 66 Pos. Housing Dim. (Typ.)— 3.740 [95.00] L x .350 [8.89] W x .610 [15.49] H

No. of Dual Positions	Post Length	Connector Part Numbers
66	.100 2.54	650091-1
	.140 3.56	650091-2
70	.100 2.54	650231-5
97	.100 2.54	650706-1
	.140 3.56	650706-2
101	.100 2.54	650707-1
	.140 3.56	650707-2
120*	.100 2.54	650231-2
	.140 3.56	650231-1
	.100 2.54	650231-4
	.100 2.54	650231-6
	.140 3.56	650231-7

*Order customer drawing for pc board layout difference.

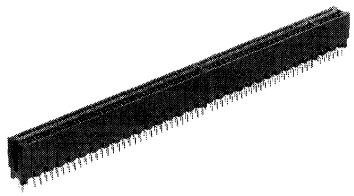
Configuration;
1 Key/1 Web—2 Hold-downs

Note: 66 Pos. Housing Dim. (Typ.)— 3.740 [95.00] L x .350 [8.89] W x .610 [15.49] H

No. of Dual Positions	Post Length	Connector Part Numbers
66	.100 2.54	145037-1
70	.100 2.54	145019-2
101	.100 2.54	145038-1
106	.140 3.56	145019-1

Note: Other connector sizes can be made available, consult AMP.

Standard Edge
.050 Series Connectors
(Continued)



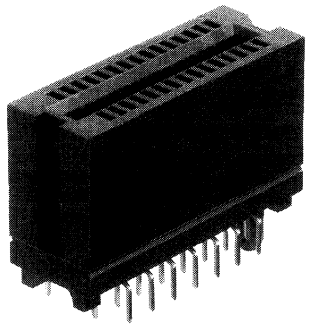
Configuration;
1 Key/1 Web—3 Hold-downs

Note: 120 Pos. Housing Dim. (Typ.)—6.440 [163.58] L x .350 [8.89] W x .610 [15.49] H

No. of Dual Positions	Post Length	Connector Part Numbers
120	**.100** 2.54	145031-1
	.125 3.18	145031-2
	.140 3.56	145031-3

Note: Other connector sizes can be made available, consult AMP.

Configuration;
End Key



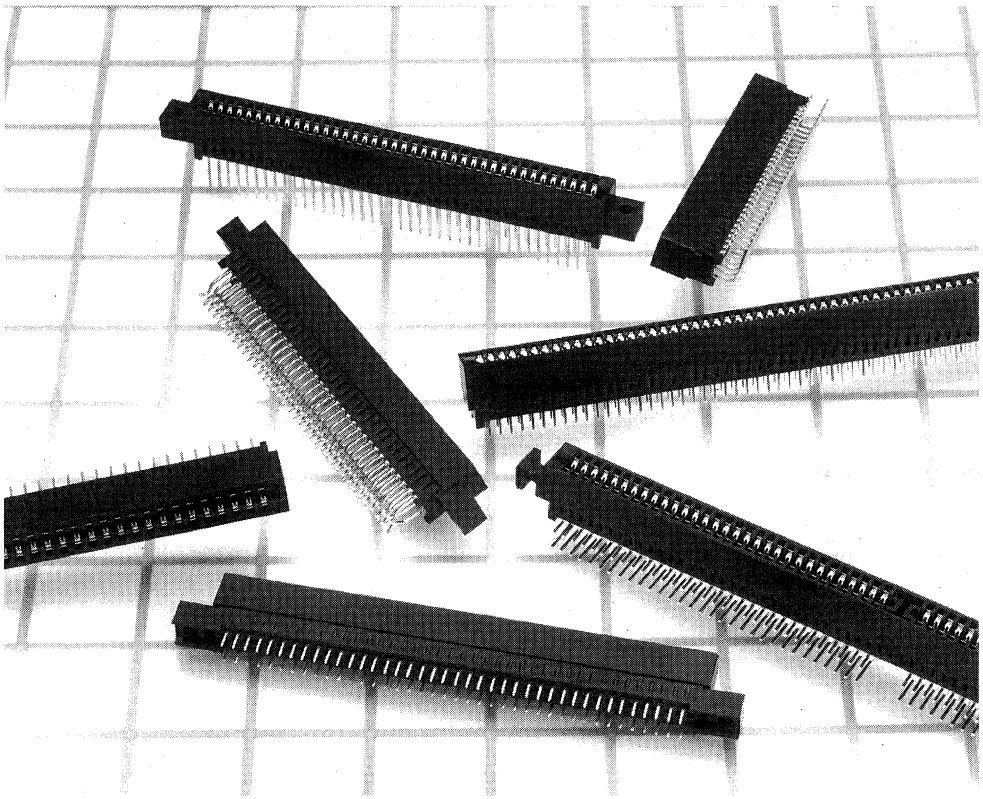
Note: 15 Pos. Housing Dim. (Typ.)—.980 [24.89] L x .350 [8.89] W x .610 [15.49] H

No. of Dual Positions	Post Length	Connector Part Numbers
15	**.100** 2.54	650712-1
25	**.100** 2.54	650719-1

SOURCE: Catalog 82619

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

Standard Edge II Connectors



Product Facts

- **Maximum number of dual positions: .100 [2.54] centerlines—70, .125 [3.18] centerlines—50**
- **Selective gold plating of contacts for high performance at low cost**
- **.025 [0.64] square solid posts meet standard wrap-type specifications**
- **.028 [0.71] diameter solid posts for flow solder applications**
- **Glass-filled polyester housings are 94V-0 rated**
- **Accepts double sided pc boards, .054-.070 [1.27-1.78] thick**
- **High temperature connectors with EKTAR CG907 housings**
- **Recognized under the Component Program of Underwriters Laboratories Inc., File No. E28476**
- **Certified by Canadian Standards Association, File No. LR 7189**

AMP Standard Edge II Connectors provide high reliability and economy in packages compatible with industry standards for double sided printed circuit boards.

AMP offers Standard Edge II Connectors with or without mounting ears, for rack mounting and soldering. Contacts are arranged on .100 [2.54] centers, .200 [5.08] row-to-row; and .125 [3.18] centers, .250 [6.35] row-to-row.

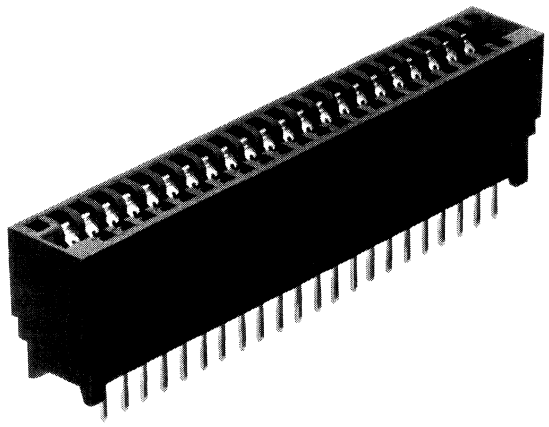
Card extenders with contacts on .100 [2.54] and .125 [3.18] centers also are available.

Precision formed phosphor bronze contacts are selectively gold plated. Phosphor bronze has excellent strength characteristics which help the connector absorb load deflection movement of a pc board while maintaining sufficient contact force for good electrical connection. Bifurcated cantilever beam contacts provide redundant contact.

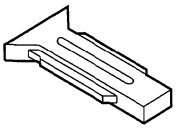
SOURCE: Catalog 82619

Standard Edge II Connectors
(Continued)

.100 [2.54] Centerline, Vertical Solder Posts, Without Mounting Ears



Intercontact Keying Plug



Part No. 650025-2

Note: 25 Pos. Housing Dim. (Typ.)—2.760 [70.10] L x .368 [9.35] W x .610 [15.49] H

No. of Dual Positions	Post Length	Part Numbers	
		.000030 [0.00076] Gold Plate	.000015 [0.00038] Gold Plate
3	**.125** [3.18]	7-530843-7	—
6	**.125** [3.18]	7-530843-5	—
	.187 [4.75]	7-530843-6	—
10	**.125** [3.18]	5-530843-0	—
	.187 [4.75]	4-530843-9	—
12	**.125** [3.18]	530843-1	2-530843-5
	.187 [4.75]	1-530843-2	—
15	**.125** [3.18]	530843-2	2-530843-6
	.187 [4.75]	1-530843-3	—
17	**.125** [3.18]	5-530843-3	—
18	**.125** [3.18]	530843-3	—
	.187 [4.75]	1-530843-4	—
20	**.125** [3.18]	5-530843-4	—
22	**.125** [3.18]	530843-4	2-530843-8
	.187 [4.75]	1-530843-5	—
25	**.125** [3.18]	530843-5	2-530843-9
	.187 [4.75]	1-530843-6	—
28	**.125** [3.18]	530843-6	—
30	**.125** [3.18]	530843-7	—
	.187 [4.75]	1-530843-8	4-530843-2
31	**.125** [3.18]	6-530843-5	7-530843-0
	.187 [4.75]	6-530843-3	—
35	**.125** [3.18]	2-530843-3	—
	.187 [4.75]	2-530843-4	—
36	**.125** [3.18]	530843-8	—
	.187 [4.75]	1-530843-9	—
40	**.125** [3.18]	530843-9	—
	.187 [4.75]	2-530843-0	—
43	**.125** [3.18]	1-530843-0	—
	.187 [4.75]	2-530843-1	—
50	**.125** [3.18]	1-530843-1	—
	.187 [4.75]	2-530843-2	—
52	**.125** [3.18]	7-530843-8	—
52	See page 3011 for Special 18/31 connector housing configuration.		
60	**.125** [3.18]	5-530843-5	5-530843-7
	.187 [4.75]	5-530843-6	—
70	**.125** [3.18]	5-530843-9	—

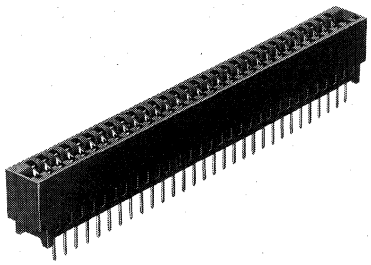
SOURCE: Catalog 82619

Specifications subject to change.

1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

Standard Edge II Connectors
(Continued)

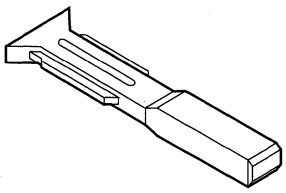


.125 [3.18] Centerline, Vertical Solder Posts, Without Mounting Ears

Note: 18 Pos. Housing Dim. (Typ.)—2.535 [64.39] L x .368 [9.35] W x .610 [15.49] H

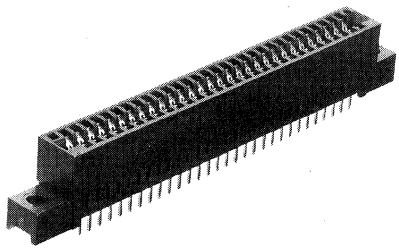
No. of Dual Positions	Post Length	Part Numbers
6	**.125** [3.18]	530844-1
	.187 [4.75]	1-530844-2
10	**.125** [3.18]	530844-2
	.187 [4.75]	1-530844-3
18	**.187** [4.75]	1-530844-5
22	**.187** [4.75]	1-530844-6
28	**.187** [4.75]	1-530844-7
30	**.187** [4.75]	1-530844-8
36	**.187** [4.75]	1-530844-9
40	**.187** [4.75]	2-530844-0
43	**.125** [3.18]	1-530844-0
50	**.125** [3.18]	1-530844-1
	.187 [4.75]	2-530844-2

Intercontact Keying Plug



Part No. 650025-1

.100 [2.54] and .125 [3.18] Centerlines, Vertical Solder Posts, Low Mounting Ears

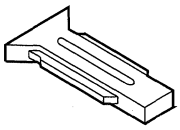


Note: 30 Pos. Housing Dim. (Typ.)—3.845 [97.66] L x .368 [9.35] W x .610 [15.49] H

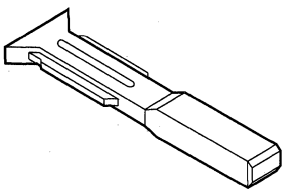
.100 [2.54] Centerline

No. of Dual Positions	Post Length	Part Numbers
15	**.125** [3.18]	530841-2
22	**.125** [3.18]	530841-4
25	**.125** [3.18]	530841-5
	.187 [4.75]	1-530841-6
30	**.125** [3.18]	530841-7
	.187 [4.75]	1-530841-8
36	**.125** [3.18]	530841-8
	.187 [4.75]	1-530841-9
40	**.125** [3.18]	530841-9
50	**.125** [3.18]	1-530841-1
	.187 [4.75]	2-530841-2
60	**.125** [3.18]	5-530841-3

Intercontact Keying Plugs



Part No. 650025-2
.100 [2.54] Centerline



Part No. 650025-1
.125 [3.18] Centerline

.125 [3.18] Centerline

No. of Dual Positions	Post Length	Part Numbers
28	**.125** [3.18]	3-530842-0
	.187 [4.75]	1-530842-7
36	**.187** [4.75]	1-530842-9
50	**.125** [3.18]	1-530842-1

SOURCE: Catalog 82619

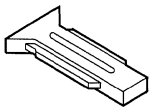
Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

Standard Edge II Connectors
(Continued)

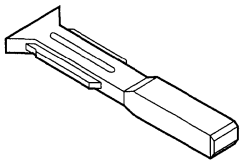
.100 [2.54] and .125 [3.18] Centerlines, Vertical

Wrap-Type Posts, Mid-High Mounting Ears

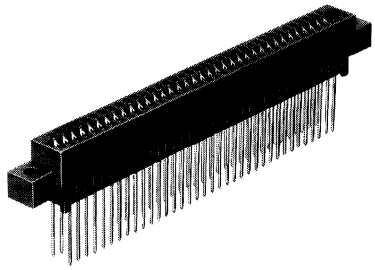
Intercontact Keying Plugs



Part No. 650025-2
.100 [2.54] Centerline



Part No. 650025-1
.125 [3.18] Centerline



Note: 36 Pos. Housing Dim. (Typ.)—4.445 [112.90] L x .368 [9.35] W x .610 [15.49] H

.100 [2.54] Centerline

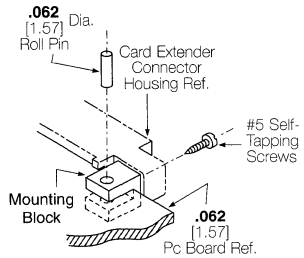
No. of Dual Positions	Part Numbers
30	4-530396-3
36	4-530396-4
40	3-530396-4
52	See page 3011 for Special 18/31 connector housing configuration.

.125 [3.18] Centerline

No. of Dual Positions	Part Numbers
22	4-530825-5
28	4-530825-6
50	5-530825-2

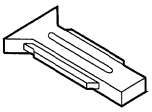
.100 [2.54] and .125 [3.18] Centerlines, Card Extender Contacts

Mounting Block
Kit Part No. 531250-4

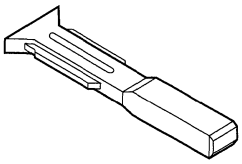


Each kit includes 2 mounting blocks
2 self-tapping screws, #5 x .437 [11.10]
2 roll pins, .075 x .250 [1.57 x 6.35]

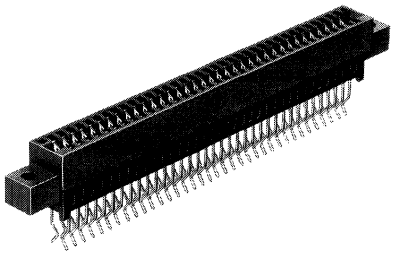
Intercontact Keying Plugs



Part No. 650025-2
.100 [2.54] Centerline



Part No. 650025-1
.125 [3.18] Centerline



Note: 36 Pos. Housing Dim. (Typ.)—4.445 [112.90] L x .368 [9.35] W x .610 [15.49] H

.100 [2.54] Centerline

No. of Dual Positions	Part Numbers
30	1-530826-0
30	530897-2[1]
36	530826-1
50	530826-3
52	See page 3011 for Special 18/31 connector housing configuration.

[1]No mounting ears.

.125 [3.18] Centerline

No. of Dual Positions	Part Numbers
18	530384-8
22	530384-4
30	530384-1
36	530384-2
50	530384-3

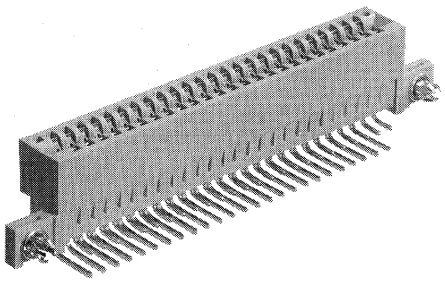
SOURCE: Catalog 82619

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

Standard Edge II Connectors
(Continued)

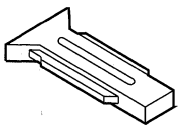
.100 [2.54] Centerline

Right-Angle Solder Posts, With Low Mounting Ears and Boardlock Retention



Note: 25 Pos. Housing Dim. (Typ.)—3.345 [84.96] L x .610 [15.49] W x .368 [9.35] H

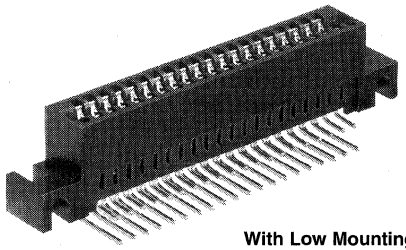
Intercontact Keying Plug



Part No. 650025-2

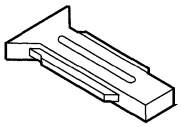
No. of Dual Position	Post Length	Housing Material	Packaging Method	Quantity	Part Numbers
25	.090 2.29	Glass-Filled Polyester	Tape	500	650081-7
			Tubes	18	650081-5
		EKTAR CG907	Tape	500	650081-3
25	.135 3.43	Glass-Filled Polyester	Tape	500	650081-1
			Tubes	18	650081-2
		EKTAR CG907	Tubes	18	650081-4

Right-Angle Solder Posts, With Mid-High, Low and No Mounting Ears



With Low Mounting Ears

Intercontact Keying Plug



Part No. 650025-2

Note: 20 Pos. Housing Dim. (Typ.)—2.845 [72.30] L x .610 [15.49] W x .368 [9.35] H

Mid-High and Low Mounting Ears

No. of Dual Positions	Housing Material	Part Numbers	
		Mid-High Mtg. Ears .000015 [0.00038] Gold Plate	Low Mtg. Ears .000030 [0.00076] Gold Plate
18	Glass-Filled Polyester	—	645384-1
20		—	645384-3
40		—	645384-2
43		—	645384-4
50		532632-1	—

Note: .090 [2.29] post length.

No Mounting Ears

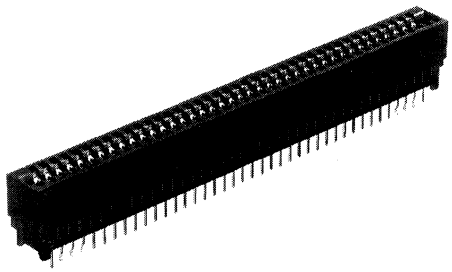
No. of Dual Positions	Housing Material	Part Numbers	
		.000015 [0.00038] Gold Plate	.000030 [0.00076] Gold Plate
15	Glass-Filled Polyester	—	650118-1
17		—	650187-1
25		532600-2	650261-1
25	EKTAR CG907	—	145005-1
31	Glass-Filled Polyester	532600-4	—

Note: .090 [2.29] post length.

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

Standard Edge II Connectors
(Continued)

.100 [2.54] Centerline Vertical Solder Posts, Retention Feature, Without Mounting Ears

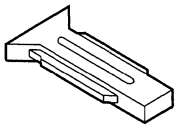


Note: 35 Pos. Housing Dim. (Typ.)—3.760 [95.50] L x .368 [9.35] W x .610 [15.49] H

No. of Dual Positions	Retention Feature	Part Numbers
3	All	1-645235-4
12	3-6,19-22	645235-6
13	3-6, 21-24	645235-9
18	3-6, 31-34	645235-4
25	3-6, 45-48	1-645235-0
30	3-6, 55-58	1-645235-3
31	3-6, 29-32 or 31-34, 57-60	645235-1
35	3-6, 65-68	1-645235-1
40	3-6, 73-78	645235-5
50	3-6, 49-52, 95-98	645235-3
52	3-6, 47-50, 55-58, 99-102	1-645235-2
52	See below for special 18/31 connector housing configuration.	
60	3-6, 55-58, 63-66, 115-118	645235-8

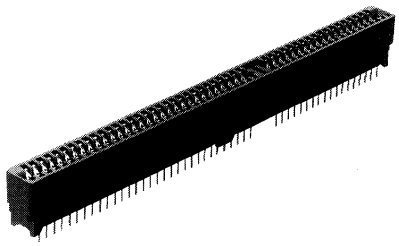
Notes: 1. Other connector sizes can be made available, consult AMP.
2. .125 [3.18] post length.

Intercontact Keying Plug



Part No. 650025-2

.100 [2.54] Centerline Special 18/31 Dual Combination Connector, Vertical Solder Posts, Wrap-Type Posts or Card Extender Contacts, Without Mounting Ears

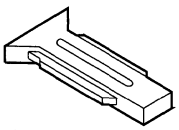


Note: 52 Pos. Housing Dim. (Typ.)—5.460 [138.68] L x .368 [9.35] W x .610 [15.49] H

No. of Dual Positions	Post Type	Post Length	Housing Material	Retention Feature	Part Numbers
52	Solder Posts	**.125** [3.18]	Glass-Filled Polyester	3-6, 41, 42, 51, 52, 93-96	645169-2
52	Solder Posts	**.125** [3.18]	EKTAR CG907	3-6, 41, 42, 51, 52, 93-96	536128-2
52	Solder Posts	**.125** [3.18]	Glass-Filled Polyester	None	645169-3
52	Solder Posts	**.125** [3.18]	EKTAR CG907	None	536128-1
52	Solder Posts	**.125** [3.18]	Glass-Filled Polyester	3-14, 41, 42, 51, 52, 85-96	645169-4
52	Solder Posts	**.125** [3.18]	Glass-Filled Polyester	None	1-645169-3*
52	Solder Posts	**.187** [4.75]	Glass-Filled Polyester	None	650616-1
52	Wrap-Type Posts	**.570** [14.48]	Glass-Filled Polyester	None	650015-1
52	Card Extender Contacts	**.340** [8.63]	Glass-Filled Polyester	None	645405-1

* Same as **Part No. 645169-3**, except in slide pack.
Note: Other connector sizes can be made available, consult AMP.

Intercontact Keying Plug



Part No. 650025-2

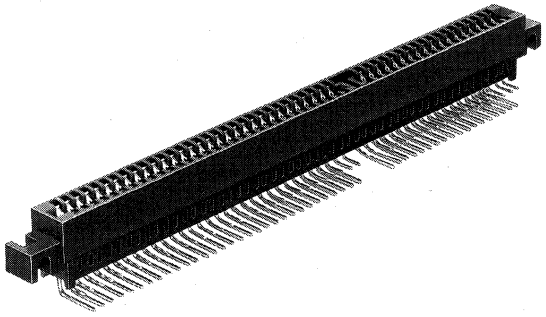
SOURCE: Catalog 82619

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

Standard Edge II Connectors
(Continued)

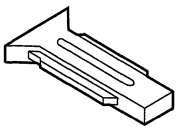
.100 [2.54] Centerline Special 31/18 Dual Combination Connector, Right-Angle Solder Posts, With Mounting Ears

Part No. 650732-1



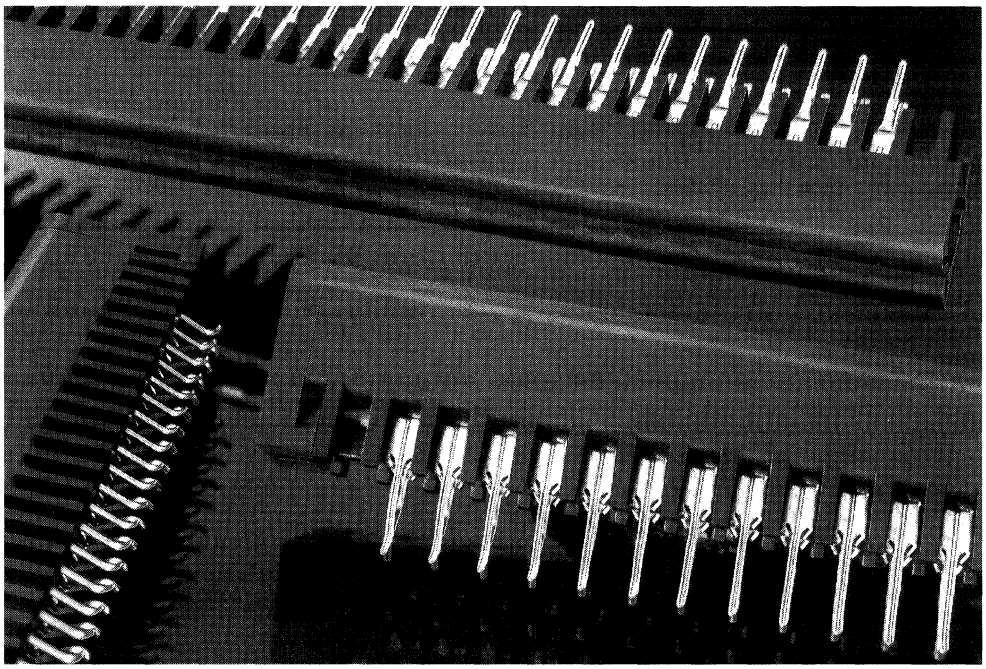
Note: 52 Pos. Housing Dim. (Typ.)—6.045 [153.54] L x .610 [15.49] W x .368 [9.35] H

Intercontact Keying Plug



Part Number 650025-2

Twin Leaf Mother Board Connectors



Product Facts

- **Wide variety of sizes available from 3 dual positions and up – no initial tooling investment required for new versions**
- **Connectors can be selectively loaded with contacts in custom patterns**
- **Connectors tooled on all standard centerlines – .100 [2.54], .125 [3.18], .150 [3.81], .156 [3.96], and .200 [5.08]**

  Note: .200 [5.08] centerline capabilities provided by loading every-other dual position of .100 [2.54] centerline housings.

- **Closed card entry protects contacts and daughter board pads**
- **Adapts to a wide range of mother board thicknesses to .104 [2.64] maximum**
- **Phosphor bronze contacts selectively plated for top performance and maximum economy**
- **Protective channel prevents overstress of contacts**
- **Daughter board keying available in intercontact or on-contact styles**
- **Recognized under the Component Program of Underwriters Laboratories Inc., File No. E28476**
- **Certified by Canadian Standards Association, File No. LR 7189**

The AMP Twin Leaf Connector is a highly reliable, low-cost mother/daughter board connector designed for solid-state circuitry. The one-piece, multicontact connector requires no front-end tooling.

This versatile connector for double-sided printed circuit boards uses preloaded contacts and selective plating to give lowest applied cost. Critical contact areas are gold-over-nickel plated to assure positive electrical connection between contacts and daughter board pads. Contact posts are tin plated for efficient dip soldering to mother boards up to .104 [2.64] thick.

The Twin Leaf Connector delivers high reliability because the contacts possess superior tolerance of environmental stresses including shock, vibration and variations of temperature and humidity. Other characteristics such as high insulation resistance, low termination resistance, long life and moderate contact separation force meet industry requirements for reliability. Connectors are tooled in sizes from 3 through 80 dual-contact positions with contacts on .100 [2.54], .125 [3.18], .150 [3.81], .156 [3.96] or .200 [5.08] centers. Other sizes and custom-loaded contact patterns are available on request.

The connector housing, made of glass-filled polyester with a UL 94V-0 rating, features a standoff which facilitates the use of a probe for electrical continuity checks without risk of damage to the contacts. A closed card-entry design of the housing protects the contacts and daugher board pads. Housings accept daughter boards ranging from .055 [1.40] to .070 [1.78] in thickness.

Intercontact and on-contact keys are available for polarization of the housings.

Card guides or end caps make alignment of daughter board pads with Twin Leaf Connector contacts quick and easy.

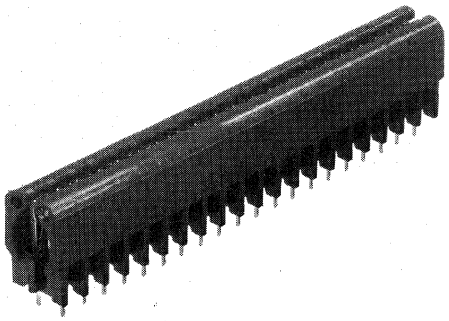
SOURCE: Catalog 82619

Specifications subject to change.
1-800-522-6752 Product Information Center/ AMP FAX Service
1-800-722-1111 Tooling/Technical Assistance Center

Twin Leaf Mother Board Connectors
(Continued)

Without End Caps

.100 [2.54], .125 [3.18], .150 [3.81] and .156 [3.96] Centerlines, With Solder Posts



Note: 15 Pos. Housing Dim. (Typ.)—2.400 [60.96] L x .400 [10.16] W x .610 [15.49] H

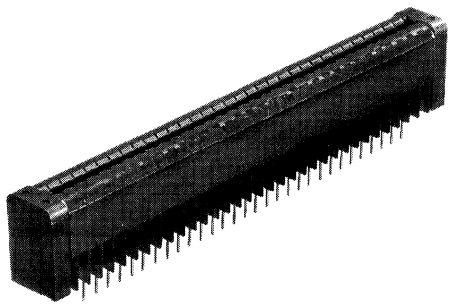
No. of Dual Positions	Part Numbers			
	.100 [2.54] Centerline Spacing[2]	.125 [3.18] Centerline Spacing[2]	.150 [3.18] Centerline Spacing[3]	.156 [3.96] Centerline Spacing[3]
3	583485-6	—	—	4-583486-8
4	—	—	583407-5	—
5	583485-7	—	583407-6	—
8	—	—	583407-9	—
9	—	583533-7	—	—
10	—	—	—	4-583486-1
14	1-583485-6	—	—	—
15	—	—	1-583407-5	—
18	—	—	1-583407-8	3-583486-3
20	—	—	2-583407-0	—
28	—	—	583407-1	2-583486-3
30	—	—	—	2-583486-1
33	—	—	—	1-583486-8
35	—	—	—	1-583486-6
40	4-583485-0	3-583533-8	3-583407-8	1-583486-1
43	—	—	—	583486-8
50	—	5-583533-0[1]	4-583407-8	583486-1
56	—	—	—	5-583486-0
80	5-583485-5	—	—	—

[1] Contacts are plated .000030 [0.00076] gold in contact area, tin on posts, with entire contact underplated .000030 [0.00076] nickel; all others are .000015 [0.00038] gold in contact area.
[2] .170 [4.32] post length.
[3] .135 [3.43] post length.
Note: Other connector sizes can be made available, consult AMP.

Twin Leaf Mother Board Connectors
(Continued)

With End Caps

.100 [2.54], .125 [3.18], .150 [3.81] and .156 [3.96] Centerlines, With Solder Posts

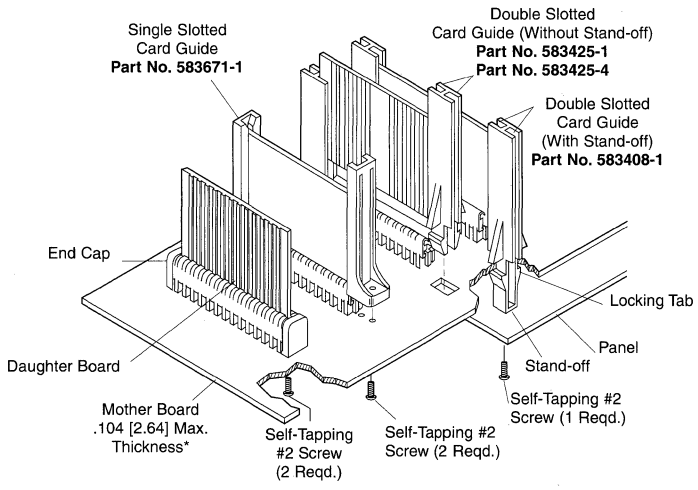


Note: 15 Pos. Housing Dim. (Typ.)—2.058 [52.28] L x .400 [10.16] W x .610 [15.49] H

No. of Dual Positions	Part Numbers			
	.100 [2.54] Centerline Spacing[1]	.125 [3.18] Centerline Spacing[1]	.150 [3.18] Centerline Spacing[2]	.156 [3.96] Centerline Spacing[2]
3	583715-1	—	—	—
5	583715-3	—	—	—
6	583715-4	583679-5	—	583660-6
7	583715-5	—	583692-6	—
9	583715-7	—	—	—
10	583715-8	—	—	1-583660-0
12	1-583715-0	1-583679-1	1-583692-1	1-583660-2
13	1-583715-1	—	—	—
14	—	—	1-583692-3	1-583660-4
15	1-583715-3	—	1-583692-4	583660-2
17	1-583715-5	1-583679-6	—	—
18	1-583715-6	1-583679-7	—	1-583660-7
19	1-583715-7	—	—	—
20	1-583715-8	1-583679-9	—	—
22	—	—	—	2-583660-1
25	2-583715-3	2-583679-4	2-583692-4	2-583660-4
26	2-583715-4	—	—	—
28	2-583715-6	2-583679-6	—	2-583660-7
30	2-583715-8	2-583679-8	583692-1	2-583660-9
31	2-583715-9	—	—	—
32	3-583715-0	—	—	3-583660-1
33	—	—	3-583692-1	—
34	3-583715-2	—	—	—
35	3-583715-3	—	3-583692-3	3-583660-4
36	3-583715-4	3-583679-4	3-583692-4	583660-1
40	3-583715-8	3-583679-8	3-583692-8	—
41	3-583715-9	—	—	—
43	—	—	—	4-583660-1
44	—	—	—	4-583660-2
50	4-583715-8	4-583679-8	4-583692-8	4-583660-8
80	5-583715-7	—	—	—

[1].170 [4.32] post length.
[2].135 [3.43] post length.

Typical Connector and Card Guide Assembly



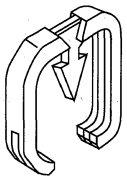
*Must be .063 [1.59] thick for use with Double Slotted Card Guides.

SOURCE: Catalog 82619

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

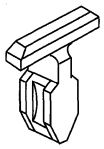
Twin Leaf Mother Board Connectors
(Continued)

Keying Plugs


Type A

Type B

Intercontact


On-Contact

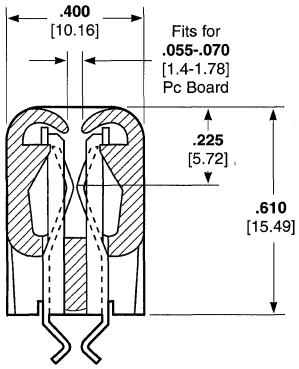
In-Row Contact Spacing	Type of Contact	Connector Style* with End Caps	Connector Style* without End Caps	Intercontact Keying Plug Type A Part Numbers	Intercontact Keying Plug Type B Part Numbers	Intercontact Keying Plug Insertion/Extraction Tool	On-Contact Keying Plug Part Numbers	On-Contact Keying Plug Insertion/Extraction Tool
.100 2.54	Solder Post	583715	583485	530286-3	—	91081-2	583714-1	91088-1
	Card Extender	530268	—					
.125 3.18	Solder Post	583679	583533	530286-2	530030-1	91081-1	583714-1	91088-1
.150 3.81	Solder Post	583692	583407	530286-2	530030-1	91081-1	583714-2	91088-2
	Card Extender	530278	—					
.156 3.96	Solder Post	583660	583486	530286-2	530030-1	91081-1	583714-2	91088-2
	Card Extender	530267	—					

*Refer to pages 3014 and 3015, as applicable, for specific connector sizes.

Other Twin Leaf Mother Board Connectors

For more information on the connectors shown here, consult AMP.

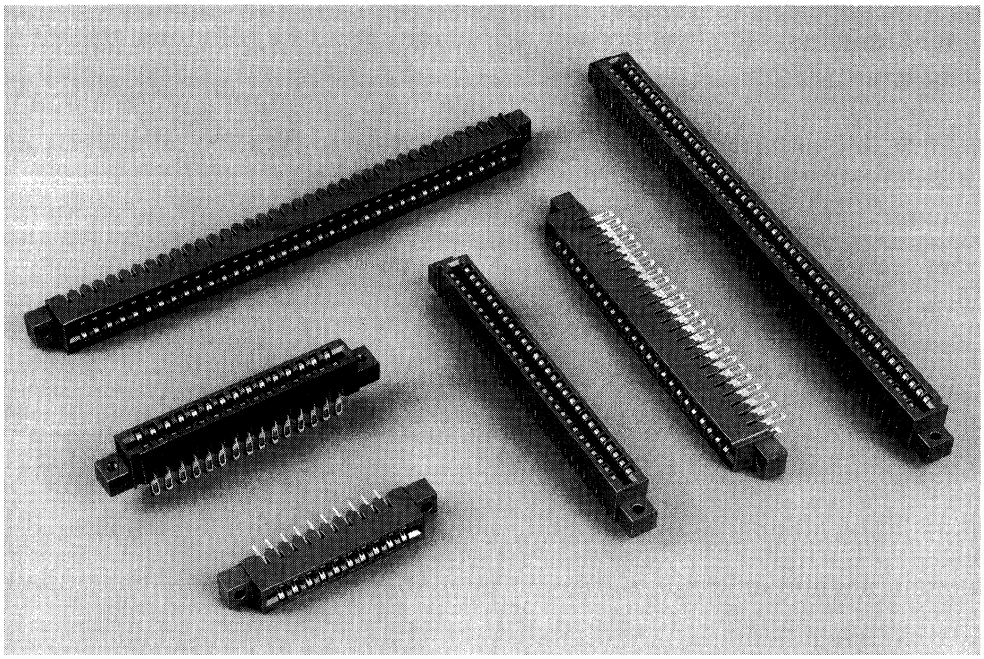
Card Extender Connectors



Connectors With End Caps

Centerlines	Part Numbers
.100 2.54	530268
.150 3.81	530278
.156 3.96	530267

Low Profile Edge Connectors



Product Facts

- **Low profile housing is .460 [11.68] deep**
- **6 through 43 dual positions on .156 [3.96] centerline; 6 though 50 dual positions on .125 [3.18] centerline**
- **Solder eyelet for wire-to-board or solder post for mother-daughter board application**
- **Selective gold plating of contact area for high performance at low cost**
- **Contacts bifurcated for redundancy**
- **Tin plate for high solderability of solder eyelets and posts**
- **Accepts .055-.070 [1.40-1.78] thick printed circuit boards**
- **Housings available with or without mounting ears**
- **Intercontact keying available**
- **UL 94V-0 rated, glass-filled polyester housings**
- **Variety of solder post lengths**
- **5 ampere current rating per contact***
- **Recognized under the Component Program of Underwriters Laboratories Inc., File No. E28476**

For printed circuit board packaging, AMP Low Profile Edge Connectors provide high performance, low cost connections on .125 [3.18] and .156 [3.96] centerline spacings.

Mounted connector housings extend only .460 [11.68] from the mother board to allow efficient use of available space.

These low profile connectors are available in 6 through 43 dual position sizes on .156 [3.96] centerline spacing and with 6 through 50 dual positions on .125 [3.18] centers. Connectors are supplied with either solder posts for mother-daughter board applications or solder eyelet contacts for wire-to-board use.

Low Profile Edge Connectors feature clear slot entry and accept .055-.070 [1.40-1.78] thick double-sided printed circuit boards. Solder posts are available with .150 [3.18] and .180 [4.57] long tails on .140 [3.56] or .200 [5.08] row-to-row spacing.

Impact-resistant thermoplastic housing, UL rated 94V-0, have molded-in cavity identification and are available with or without mounting ears. Additional features of the housings include intercontact and wrap-around keying provisions, probe slots and identification of number one position.

The precision formed contacts made of phosphor bronze are gold plated on the contact mating surface only. This selective plating provides high reliability while maintaining low cost. Solder eyelets and posts are tin plated for excellent solderability. The contact is bifurcated for redundancy. Shorting contacts are available.

All connector configurations are furnished preloaded. Selectively loaded connectors can be made available for added economy.

***Consult AMP engineering when paralleling contacts for power applications.**

SOURCE: Catalog 82619

Specifications subject to change.

1-800-522-6752
Product Information Center/ AMP FAX Service

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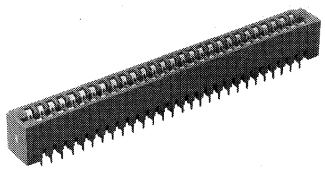
Tooling/Technical Assistance Center

Low Profile Edge Connectors
(Continued)

.125 [3.18] Centerline



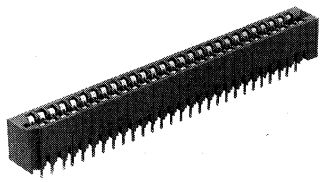
Note: 24 Pos. Housing Dim. (Typ.)—3.285 [83.44] L x .370 [9.40] W x .460 [11.68] H

Flow Solder Post .200 [5.08] Row-to-Row Spacing

No. of Dual Positions	Post Length	Part Numbers	
		With Mounting Ears	Without Mounting Ears
6	**.150** [3.81]	—	2-530671-1
10	**.150** [3.81]	—	2-530671-2
	.180 [4.57]	2-530663-2	—
15	**.150** [3.81]	2-530662-3	2-530671-3
18	**.150** [3.81]	—	2-530671-4
	.180 [4.57]	2-530663-4	—
22	**.150** [3.81]	2-530662-5	2-530671-5
24	**.150** [3.81]	—	3-530671-3
28	**.150** [3.81]	2-530662-6	2-530671-6
30	**.150** [3.81]	—	2-530671-7
36	**.150** [3.81]	—	2-530671-9
	.180 [4.57]	2-530663-9	—
40	**.150** [3.81]	—	3-530671-0
50	**.150** [3.81]	3-530662-2	—

Note: Other connector sizes can be made available, consult AMP.

Flow Solder Post .140 [3.56] Row-to-Row Spacing

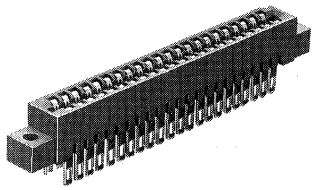


Note: 28 Pos. Housing Dim. (Typ.)—3.785 [96.14] L x .370 [9.40] W x .460 [11.68] H

No. of Dual Positions	Post Length	Part Numbers	
		With Mounting Ears	Without Mounting Ears
15	**.150** [3.81]	—	2-530673-3
	.180 [4.57]	—	—
28	**.150** [3.81]	—	2-530673-6
	.180 [4.57]	—	2-530674-6
50	**.180** [4.57]	3-530659-2	—

Note: Other connector sizes can be made available, consult AMP.

Solder Eyelet Contact .235 [5.97] Row-to-Row Spacing



Note: 22 Pos. Housing Dim. (Typ.)—
3.555 [90.30] L x .370 [9.40] W x .460 [11.68] H

Keying Plugs Intercontact Key Part No. 650025-2

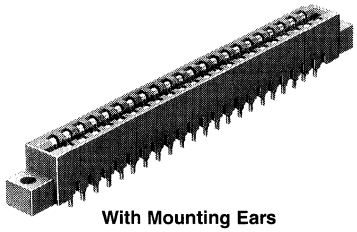
No. of Dual Positions	Part Numbers With Mounting Ears
6	2-530664-1
15	2-530664-3
22	2-530664-5
28	2-530664-6
40	3-530664-0
50	3-530664-2

Note: Other connector sizes can be made available, consult AMP.

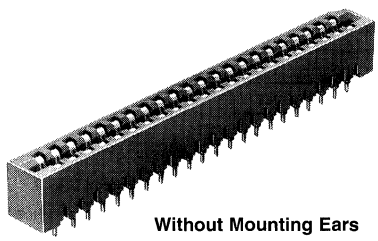
SOURCE: Catalog 82619

Low Profile Edge Connectors
(Continued)

.156 [3.96] Centerline



With Mounting Ears



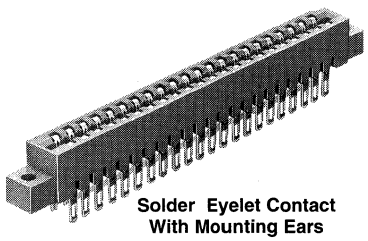
Without Mounting Ears

Flow Solder Post
.200 [5.08]
Row-to-Row Spacing

Note: 22 Pos. Housing Dim. (Typ.)—4.281 [108.74] L x .370 [9.40] W x .460 [11.68] H

No. of Dual Positions	Post Length	Part Numbers		
		With Mounting Ears	With Mounting Ears and Inserts	Without Mounting Ears
6	**.150** [3.81]	2-530655-1	2-530677-1	2-530666-1
10	**.150** [3.81]	2-530655-2	2-530677-2	2-530666-2
	.180 [4.57]	2-530656-2	—	2-530667-2
12	**.150** [3.81]	2-530655-3	—	2-530666-3
15	**.150** [3.81]	2-530655-4	2-530677-4	2-530666-4
18	**.150** [3.81]	2-530655-5	—	2-530666-5
	.180 [4.57]	—	—	2-530667-5
22	**.150** [3.81]	2-530655-6	—	2-530666-6
	.180 [4.57]	2-530656-6	2-530678-6	2-530667-6
25	**.150** [3.81]	2-530655-8	—	2-530666-8
	.180 [4.57]	2-530656-8	—	—
28	**.150** [3.81]	3-530655-2	—	3-530666-2
	.180 [4.57]	3-530656-2	—	—
30	**.150** [3.81]	2-530655-9	2-530677-9	2-530666-9
	.180 [4.57]	—	—	2-530667-9
36	**.150** [3.81]	3-530655-0	—	3-530666-0
	.180 [4.57]	3-530656-0	—	3-530667-0
43	**.150** [3.81]	3-530655-3	3-530677-3	3-530666-3
	.180 [4.57]	3-530656-3	—	3-530667-3

Flow Solder Post
.140 [3.56] Row-to-Row Spacing and
Solder Eyelet Contact
.235 [5.97]
Row-to-Row Spacing



Solder Eyelet Contact
With Mounting Ears

Note: 22 Pos. Housing Dim. (Typ.)—4.281 [108.74] L x .370 [9.40] W x .460 [11.68] H

No. of Dual Positions	Post Length	Part Numbers		
		Flow Solder Post		Solder Eyelet Contact
		With Mounting Ears	Without Mounting Ears	With Mounting Ears
6	**.150** [3.81]	2-530657-1	2-530668-1	2-530654-1
10	**.150** [3.81]	2-530657-2	—	2-530654-2
12	**.150** [3.81]	—	2-530668-3	2-530654-3
15	**.150** [3.81]	2-530657-4	—	2-530654-4
	.180 [4.57]	—	2-530669-4	
18	**.150** [3.81]	2-530657-5	2-530668-5	2-530654-5
	.180 [4.57]	—	2-530669-5	
22	**.150** [3.81]	2-530657-6	2-530668-6	2-530654-6
	.180 [4.57]	2-530658-6	—	
24	—	—	—	2-530654-7
25	—	—	—	2-530654-8
28	**.150** [3.81]	3-530657-2	—	3-530654-2
30	—	—	—	2-530654-9
36	**.150** [3.81]	3-530657-0	—	3-530654-0
	.180 [4.57]	—	3-530669-0	
43	**.150** [3.81]	3-530657-3	3-530668-3	3-530654-3
	.180 [4.57]	—	3-530669-3	

Keying Plugs
Intercontact Wrap-Around Key
Part No. 531455-2

Intercontact Key
Part No. 650025-2

SOURCE: Catalog 82619

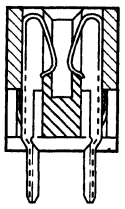
Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

Low Profile Edge Connectors (Continued)

Other Connector Styles

Flow Solder Post .200 [5.08] Row-to-Row Spacing with Deep Card Slot

Flow Solder Post

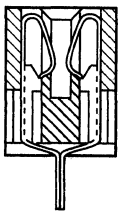


Note: 22 Pos. Housing Dim. (Typ.)—4.281 [108.74] L x .370 [9.40] W x .460 [11.68] H

No. of Dual Positions	Part Number	
	With Mounting Ears	Without Mounting Ears
22	2-530691-6	—

Flow Solder Post Single Readout

Single Readout Solder Post

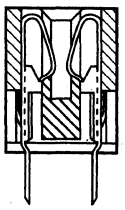


Note: 22 Pos. Housing Dim. (Typ.)—
With Mounting Ears, 4.281 [108.74] L x .370 [9.40] W x .460 [11.68] H

No. of Dual Positions	Part Numbers	
	With Mounting Ears	Without Mounting Ears
10	2-530692-2	2-530693-2
15	2-530692-4	2-530693-4
18	—	2-530693-5
22	2-530692-6	2-530693-6

Solder Post .200 [5.08] Row-to-Row Spacing for .040 [1.02] Diameter Hole

Solder Post



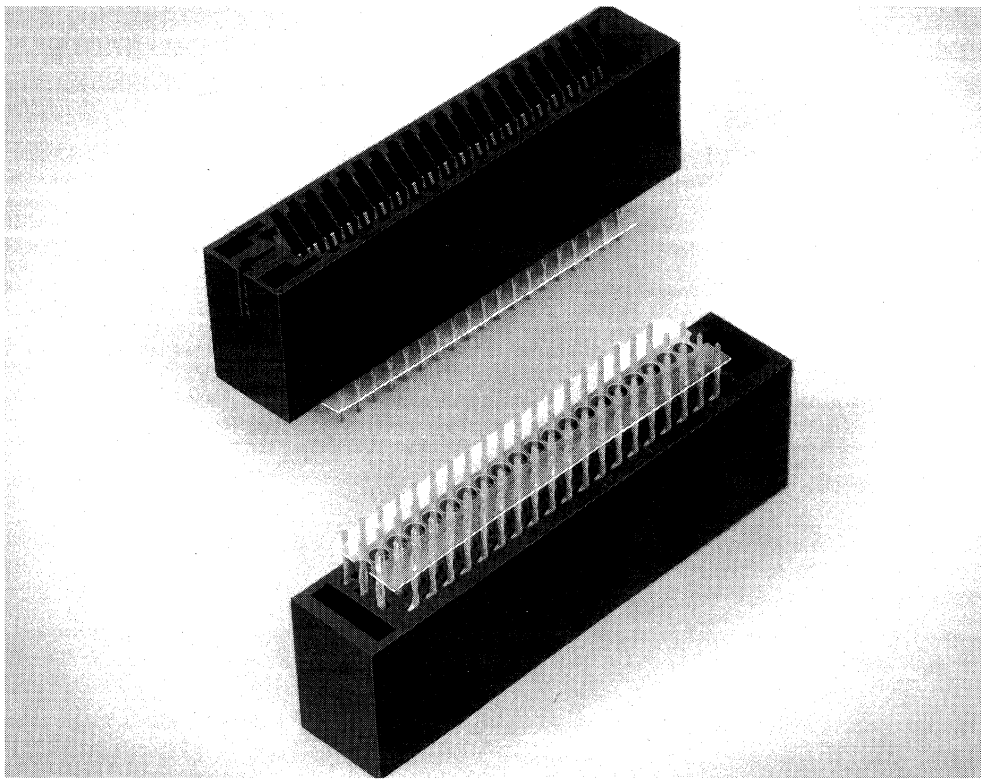
Note: 22 Pos. Housing Dim. (Typ.)—
With Mounting Ears, 4.281 [108.74] L x .370 [9.40] W x .460 [11.68] H

No. of Dual Positions	Part Numbers	
	With Mounting Ears	Without Mounting Ears
22	2-530689-6	531433-4

TELEDENSITY Connectors

Product Facts

- **High density – .0625 [1.586] contact centerlines**
- **Compliant ACTION PIN contacts press-fit into plated-through holes for solderless application**
- **Individually replaceable contacts**
- **Accommodates up to three levels of daughter card pads for sequencing**
- **.125 [3.18] square grid post arrangement**

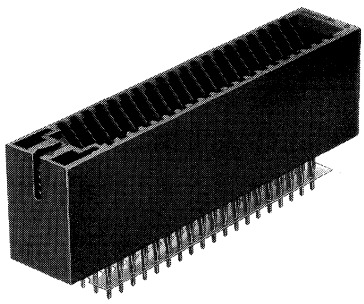


The high performance TELEDENSITY connector is a high density, card edge, telecommunications connector. It features compliant ACTION PIN contacts for solderless application to multi-layer printed circuit boards with plated-through or bare copper holes.

These connectors accept .054 to .072 [1.37 to 1.83] thick daughter cards. To satisfy the broadest range of application needs, the contacts are plated with 30 microinches of gold in the mating area and tin-lead on the posts. A plastic locating strip keeps posts positioned correctly for board insertion.

For high-density needs, TELEDENSITY connectors offer a .0625 [1.586] daughter card contact centerline spacing in 39- or 99-dual positions. The connector's .330 [8.38] slot depth accommodates up to three levels of daughter card pads for sequencing, while a biasing wedge maintains proper pad alignment during card extraction. Posts are arranged in a .125 [3.18] square grid to ease circuit routing.

.0625 [1.586] Centerline



Note: 39 Pos. Housing Dim. (Typ.)—3.168 [80.47] L x .600 [15.24] W x .910 [23.11] H

No. of Dual Positions	Connector Part Numbers	Seating Tool Numbers
39	650281-1*	58084-1
99	650150-1	58084-2

*Contacts in this connector are underplated .000150 [0.00381] nickel.
Note: ACTION PIN posts require .093 [2.36] min. thickness pc board.

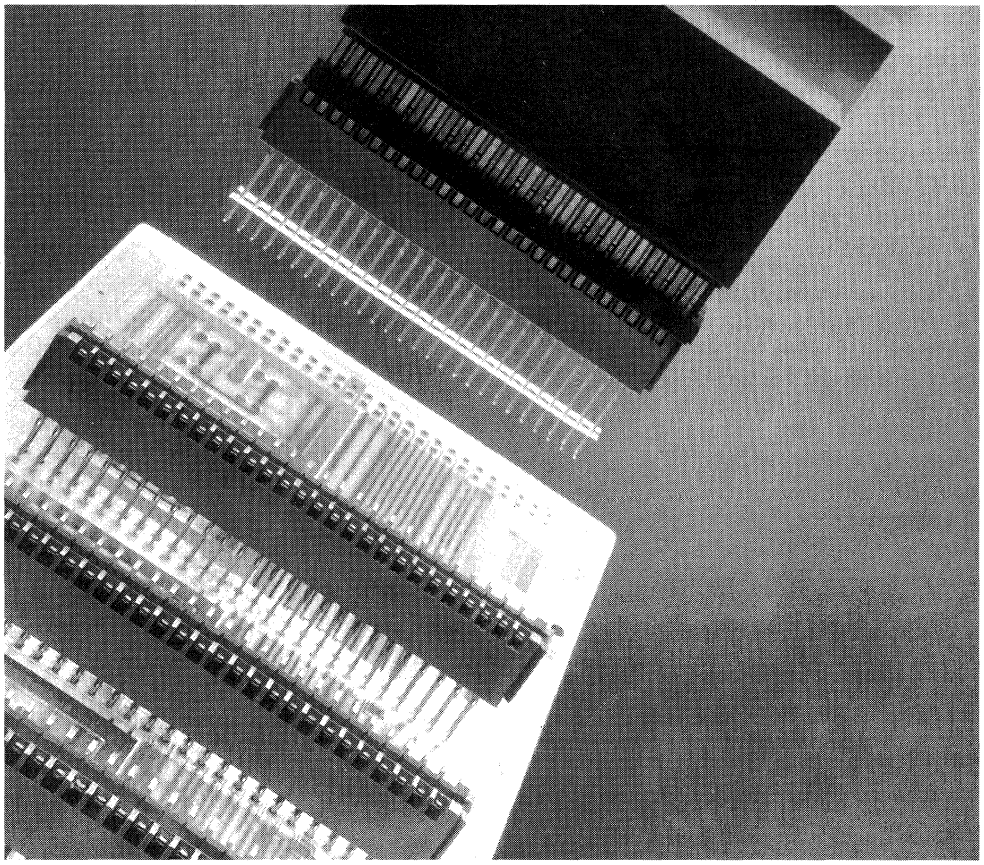
SOURCE: Catalog 82619

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

AMP PACE Connectors

Product Facts

- **Removable housings and contacts for repairs—a Pc board must be inserted into connector when removing contacts**
- **Precision plated contacts and posts**
- **Beam contact design**
- **Gas-tight connection**
- **Contact tip alignment strip assures straight and stable pin alignment for damage-free entry into the Pc board**



AMP PACE (Pre-Assembled Card Edge) Connectors are the latest innovation in the evolution of backplane architecture. Designed to shorten manufacturing time and reduce applied costs, these one-step, preassembled connectors are ready for mounting and mass insertion. In addition, design features such as removable housings and contacts, that are replaceable through the top of the connector housing, assure maximum flexibility in your backplane packaging.

At the heart of the AMP PACE Connector is the proven and reliable ACTION PIN Contact. This unique contact has superior electrical and physical characteristics that are unmatched in the industry.

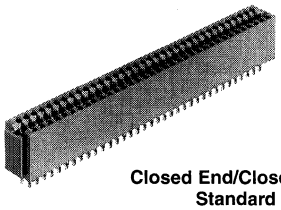
AMP PACE Connectors are available with post centerline spacings of:
.100 x .100 [2.54 x 2.54]
.100 x .200 [2.54 x 5.08]
.125 x .125 [3.18 x 3.18]
.125 x .250 [3.18 x 6.35]
.156 x .200 [3.96 x 5.08]

Important: Application tooling is absolutely necessary to insert connectors into Pc boards.

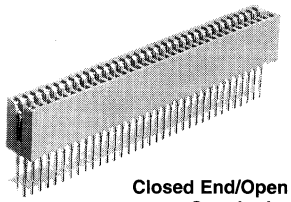
SOURCE: Catalog 82619

AMP PACE Connectors
(Continued)

.100 x .100 [2.54 x 2.54] Centerline



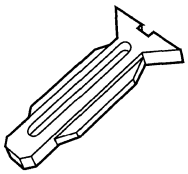
Closed End/Closed End
Standard



Closed End/Open End
Standard

Housings

Keying Plugs



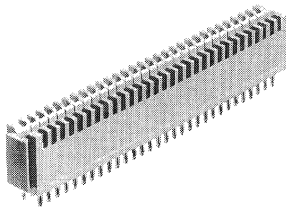
Intercontact (Plastic)
Part No. 119824-1

Note: 35 Pos. Housing Dim. (Typ.)—3.734 [94.84] L x .380 [9.65] W x .545 [13.84] H

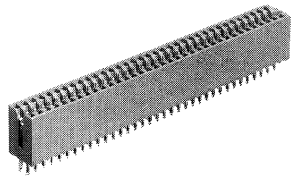
No. of Dual Position	Post Length	Part Numbers	
		Closed End/Closed End Standard	Closed End/Open End Standard
15	**.475** [12.07]	119237-1	—
20	**.180** [4.57]	119734-6	—
25	**.180** [4.57]	1-119734-1	—
28	**.180** [4.57]	1-119734-4	—
31	**.475** [12.07]	1-119237-7	—
35	**.180** [4.57]	2-119734-1	119831-6
	.475 [12.07]	—	119413-6
40	**.475** [12.07]	2-119237-6	—
48	**.475** [12.07]	3-119237-4	—
50	**.180** [4.57]	3-119734-6	—
55	**.180** [4.57]	—	2-119831-6
60	**.180** [4.57]	4-119734-6	—

Note: Other connector sizes and connectors with card scoops can be made available, consult AMP.

.100 x .200 [2.54 x 5.08] Centerline



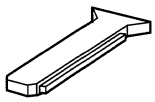
Closed End/Closed End
Standard



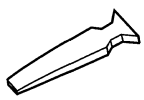
Closed End/Closed End
High Card Scoop

Housings

Keying Plugs



Intercontact (Plastic)
Part No. 118982-1



On-Contact (Plastic)
Part No. 119802-2

Note: 30 Pos. Housing Dim. (Typ.)—3.234 [82.14] L x .390 [9.91] W x .645 [16.38] H

No. of Dual Positions	Post Length	Part Numbers		
		Closed End/Closed End		Closed End/Open End Standard
		Standard	High Scoop	
10	**.180** [4.57]	—	650297-2	—
15	**.180** [4.57]	650122-1	—	—
18	**.180** [4.57]	119738-4	—	—
20	**.180** [4.57]	119738-6	—	—
22	**.475** [12.07]	119216-8	—	—
28	**.180** [4.57]	1-119738-4	—	—
30	**.180** [4.57]	1-119738-6	1-119791-6	—
	.475 [12.07]	1-119216-6	—	—
31	**.180** [4.57]	1-119738-7	—	—
32	**.180** [4.57]	1-650122-8	—	—
34	**.475** [12.07]	2-119216-0	—	—
35	**.475** [12.07]	—	—	119379-7
	.702 [17.83]	—	—	119467-6
36	**.180** [4.57]	2-119738-2	—	—
37	**.180** [4.57]	2-650122-3	—	—
40	**.180** [4.57]	2-119738-6	—	—
		2-650122-6	—	—
43	**.180** [4.57]	2-650122-9	—	—
44	**.475** [12.07]	3-119216-0	—	—
50	**.180** [4.57]	3-119738-6	3-119791-6	—
	.475 [12.07]	3-119216-6	—	—
55	**.180** [4.57]	4-119738-1	4-650124-1	—
60	**.180** [4.57]	4-119738-6	—	—
	.475 [12.07]	4-119216-6	—	—

Note: Other connector sizes can be made available, consult AMP.

SOURCE: Catalog 82619

Specifications subject to change.

1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

AMP PACE Connectors
(Continued)

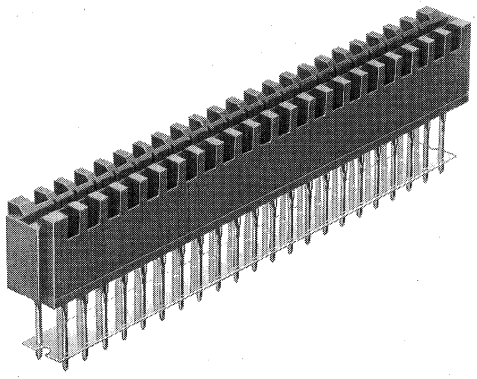
.125 x .125 [3.18 x 3.18] Centerline

Housing with High Card Scoops

28 Dual Positions

Part Number 1-119853-4

Keying Plugs
Intercontact (Plastic)
Part No. 118982-1
On-Contact (Plastic)
Part No. 119802-2

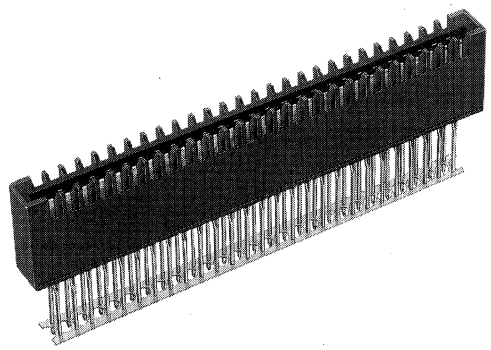


Note: 28 Pos. Housing Dim. (Typ.)—3.755 [95.38] L x .420 [10.67] W x .738 [18.74] H

Special Connector Styles

27 Dual Positions

Part No. 645394-1
Tin-Lead Posts
.634 [16.10] Long

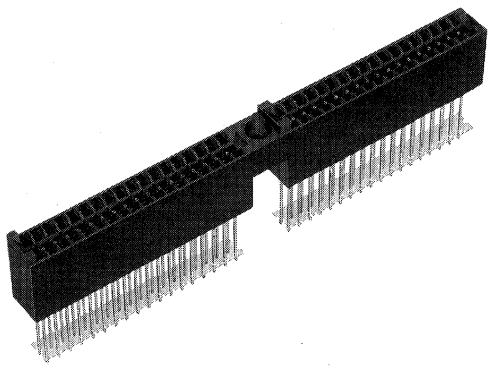


Note: 27 Pos. Housing Dim. (Typ.)—3.650 [92.71] L x .315 [8.00] W x .785 [19.94] H

18 or 36 Dual Positions

Part No. 119552-2
Tin-Lead Posts
.740 [18.80] Long

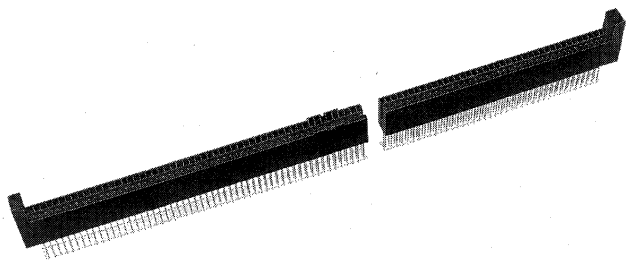
Part No. 119880-1
Tin-Lead Posts
.180 [4.57] Long



Note: Housing Dim. (Typ.)—5.175 [131.44] L x .400 [10.16] W x .865 [21.97] H

97 Dual Positions

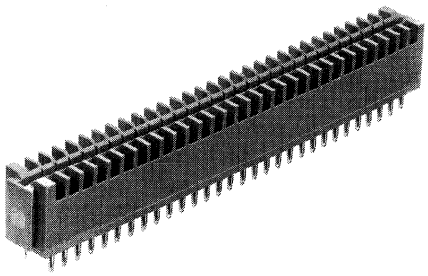
(Two-piece Closed End/Open End with Partial Card Scoops and Card Guides)
Contact AMP for specific part number information.



SOURCE: Catalog 82619

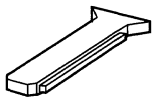
AMP PACE Connectors
(Continued)

.125 x .250 [3.18 x 6.35] Centerline

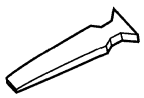


Standard Housings

Keying Plugs



Intercontact (Plastic)
Part No. 118982-1



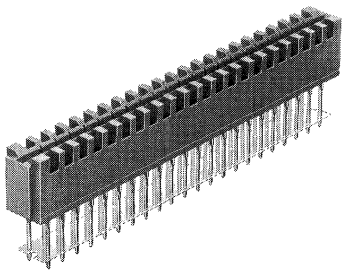
On-Contact (Plastic)
Part No. 119802-2

Note: 30 Pos. Housing Dim. (Typ.)—4.005 [101.73] L x .410 [10.41] W x .638 [16.20] H

No. of Dual Positions	Post Length	Part Numbers Closed End/Closed End Standard
18	**.180** [4.57]	119822-4
22	**.500** [12.70]	119200-8
	.702 [17.83]	119202-8
25	**.180** [4.57]	1-119822-1
27	**.702** [17.83]	1-119202-3
28	**.180** [4.57]	1-119822-4
	.500 [12.70]	1-119200-4
30	**.180** [4.57]	1-119822-6
36	**.180** [4.57]	2-119822-2
40	**.180** [4.57]	2-119822-6
	.500 [12.70]	2-119200-6
50	**.180** [4.57]	3-119822-6
	.702 [17.83]	119914-5
60	**.180** [4.57]	4-119822-6

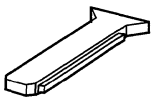
Note: Other connector sizes can be made available, consult AMP.

.156 x .200 [3.96 x 5.08] Centerline

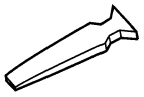


Standard Housings

Keying Plugs



Intercontact (Plastic)
Part No. 118982-1



On-Contact (Plastic)
Part No. 119802-2

Note: 22 Pos. Housing Dim. (Typ.)—3.718 [94.44] L x .360 [9.14] W x .638 [16.20] H

No. of Dual Positions	Post Length	Part Numbers Closed End/Closed End Standard
15	**.180** 4.57	119790-1
	.475 12.07	119254-1
22	**.180** 4.57	119790-8
	.475 12.07	119254-8
	.702 17.83	119256-8
28	**.180** 4.57	1-119790-4
	.475 12.07	1-119254-4
43	**.180** 4.57	2-119790-9
	.475 12.07	2-119254-9
	.702 17.83	2-119256-9

Note: Other connector sizes can be made available, consult AMP.

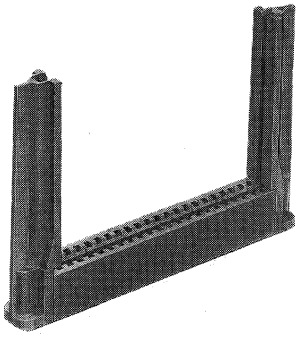
SOURCE: Catalog 82619

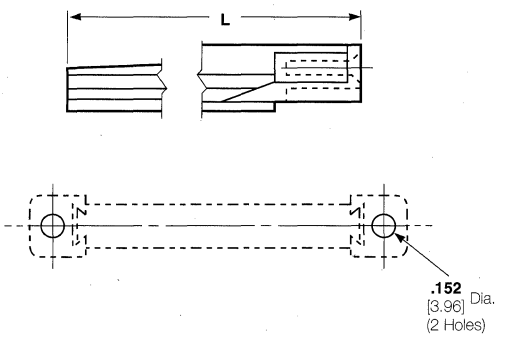
Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

AMP PACE Connector Accessories

Connector Card Guide

Related Product Data:
Mates with all standard housings (will not mate with some special housings)



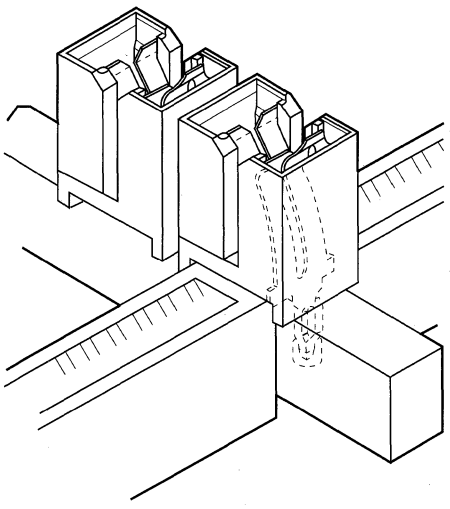


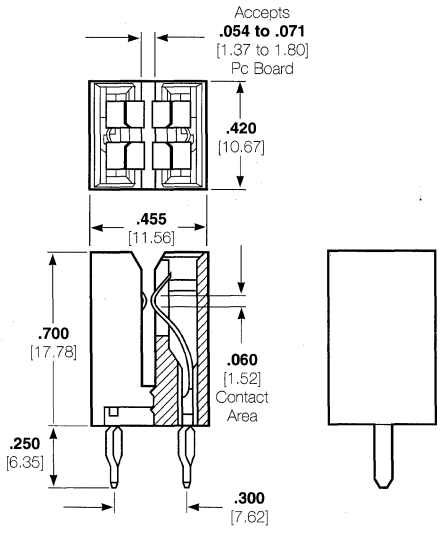
L[1]	Part Numbers
2.500 63.50	117169-3
6.000 152.40	1-117169-3

[1]Other lengths up to 6.0 [152.4] can be made available. Consult AMP for details.

Ground Module

Related Product Data:
Mates with all standard housings (will not mate with some special housings)





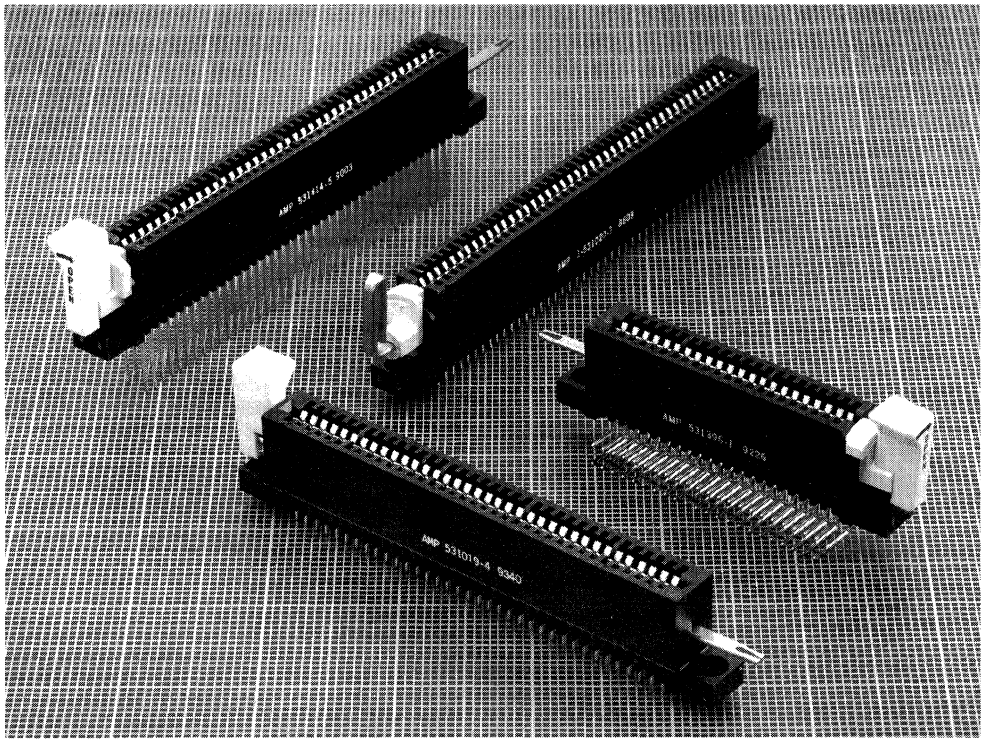
Part No. 119341-1

Seating Tool Part No. 59881-1

Rotary Cam ZIF Connectors

Product Facts

- **Zero insertion force - little or no effort required to insert and withdraw Pc boards**
- **Reduced pad wear for extended board life**
- **Allows all four sides of board to be used for input/output functions**
- **Accepts double-sided boards**
- **Three contact styles to choose from - vertical solder post, right-angle solder post and wrap-type post (2 and 3 high)**
- **Available in .100 [2.54], .125 [3.18] and .156 [3.96] centerlines**
- **Three configurations available—open one end, open both ends and closed both ends**
- **Those products indicated are recognized under the Component Program of Underwriters Laboratories Inc., File No. E28476**



AMP Rotary Cam Zero Insertion Force (ZIF) Card Edge Connectors are available in sizes to fit most industry-standard printed circuit boards. A clockwise rotation of the cam handle opens contacts to allow zero-force insertion or removal of Pc boards - even boards with a large number of contacts. Turning the cam handle to close the connector locks the board securely in place. Rotary Cam ZIF Connectors accept double-sided Pc boards .054-.070 [1.37-1.78] thick, with contact centerline intervals of .100 [2.54], .125 [3.18] and .156 [3.96]. Row-to-row spacing of connector posts is .200 [5.08] for .100 [2.54] and .156 [3.96] connectors and .250 [6.35] for .125 [3.18] connectors.

Contacts are nickel underplated phosphor bronze with gold plate in the contact area and tin-lead plated posts. Contact configurations include vertical and right-angle solder posts, and wrap-type posts.

Connectors are preassembled in housings made from 94V-0 rated glass-filled polyester with mounting ears for easy mounting to the mother board. Housings are available with one end open, both ends open and both ends closed for side and top daughter board insertion. Integral board locks secure boards in connectors. Accessories include dust covers, cam keys for nut-driver actuation and for tandem operation of connectors.

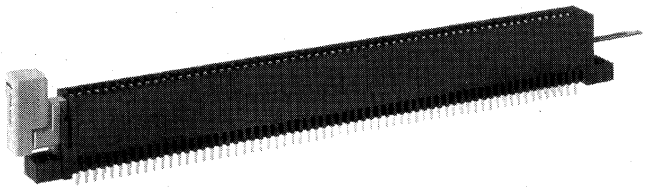
SOURCE: Catalog 82619

Specifications subject to change.
1-800-522-6752 Product Information Center/ AMP FAX Service
1-800-722-1111 Tooling/Technical Assistance Center

Rotary Cam ZIF Connectors
(Continued)

.100 x .200 [2.54 x 5.08] Centerline

Vertical Connector, Solder Post Terminals

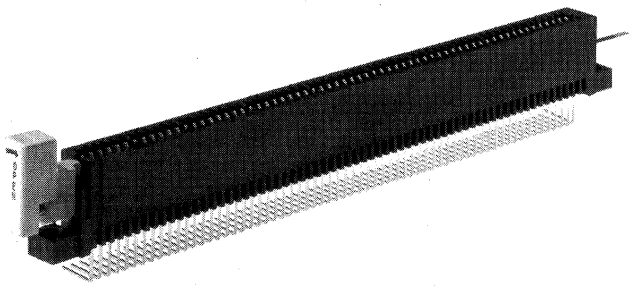


Note: 25 Pos. Housing Dim. (Typ.)—3.400 [86.36] L x .370 [9.40] W x .850 [21.60] H

No. of Dual Positions	Post Length	Part Numbers		
		Open One End*	Open Both Ends*	Closed Both Ends
22	**.125** [3.18]	531020-1	—	531019-1
	.160 [4.06]	1-531020-1	—	—
25	**.125** [3.18]	531020-2	—	531019-2
	.160 [4.06]	1-531020-2	—	—
31	**.160** [4.06]	2-531020-1	—	—
36	**.125** [3.18]	—	—	531019-4
	.160 [4.06]	1-531020-4	—	—
40	**.125** [3.18]	531020-5	—	—
	.160 [4.06]	1-531020-5	—	—
43	**.160** [4.06]	1-531020-7	—	—
50	**.125** [3.18]	531020-8	531021-8	—
	.160 [4.06]	1-531020-8	1-531021-8	1-531019-8
60	**.160** [4.06]	1-531020-9	1-531021-9	—
65	**.125** [3.18]	1-531020-0	—	—
	.160 [4.06]	2-531020-0	—	—

*Recognized under the Component Program of Underwriters Laboratories Inc.
Notes: 1. Connector with card slot open one end is shown for illustration purposes.
2. Other connector sizes can be made available, consult AMP.

Right-Angle Connector, Solder Post Terminals



Note: 25 Pos. Housing Dim. (Typ.)—3.400 [86.36] L x .850 [21.60] W x .370 [9.40] H

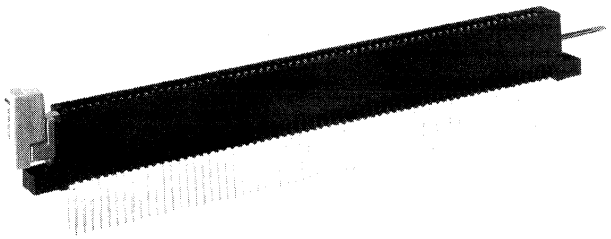
No. of Dual Positions	Bend Left or Right	Part Numbers	
		Open One End*	Open Both Ends*
22	R	531396-1	—
25	R	—	531395-2
36	R	531396-4	—
65	R	1-531396-0	—

*Recognized under the Component Program of Underwriters Laboratories Inc.
Notes: 1. Connector with card slot open one end is shown for illustration purposes.
2. Other connector sizes can be made available, consult AMP.

Rotary Cam ZIF Connectors
(Continued)

.100 x .200 [2.54 x 5.08] Centerline

Vertical Connector, Wrap-Type Post Terminals



Contacts—Phosphor bronze, plated .000030 [0.00076] gold per MIL-G-45204 in contact area; .000100 [0.00254] tin-lead per MIL-P-81728 on post with entire contact underplated .000050 [0.00127] nickel per QQ-N-290

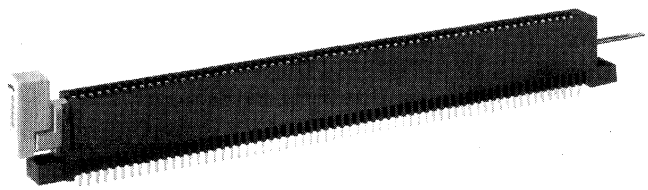
Note: 25 Pos. Housing Dim. (Typ.)—3.400 [86.36] L x .370 [9.40] W x .850 [21.60] H

No. of Dual Positions	Post Length	Part Numbers		
		Open One End*	Open Both Ends*	Closed Both Ends
25	**.380** [9.65]	1-531414-2	—	—
36	**.580** [14.73]	531414-4	531413-4	531415-4
		2-531414-1[1]	—	—
	.380 [9.65]	1-531414-4	—	—
40	**.580** [14.73]	531414-5	—	—
50	**.580** [14.73]	531414-8	—	531415-8
65	**.580** [14.73]	1-531414-0	—	1-531415-0

*Recognized under the Component Program of Underwriters Laboratories Inc.
[1]Contacts plated .000030 [0.00076] gold in contact area, .000030 [0.00076] gold on post, with entire contact underplated .000050 [0.00127] nickel.
Notes: 1. Connector with card slot open one end is shown for illustration purposes.
2. Other connector sizes can be made available, consult AMP.

.125 x .250 [3.18 x 6.35] Centerline

Vertical Connector, Solder Post Terminals



Note: 28 Pos. Housing Dim. (Typ.)—4.425 [112.40] L x .370 [9.40] W x .850 [21.60] H

No. of Dual Positions	Post Length	Part Numbers	
		Open One End*	Open Both Ends*
28	**.125** [3.18]	—	531024-3
36	**.125** [3.18]	531023-5	—
40	**.160** [4.06]	1-531023-4	1-531024-4
50	**.125** [3.18]	531023-8	—

*Recognized under the Component Program of Underwriters Laboratories Inc.
Notes: 1. Connector with card slot open one end is shown for illustration purposes.
2. Other connector sizes can be made available, consult AMP.

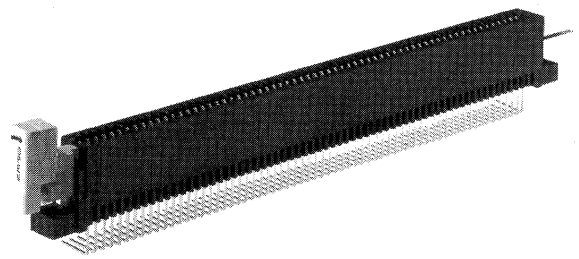
Right-Angle Connector, Solder Post Terminals

28 Dual Positions

Open One End, Bend Right
Part Number 531402-3*

*Recognized under the Component Program of Underwriters Laboratories Inc.

Note: Other connector sizes can be made available, consult AMP.



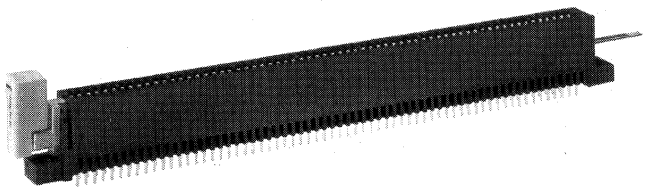
Note: 28 Pos. Housing Dim. (Typ.)—4.425 [112.40] L x .850 [21.60] W x .370 [9.40] H

SOURCE: Catalog 82619

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

Rotary Cam ZIF Connectors
(Continued)

.156 x .200 [3.96 x 5.08] Centerline



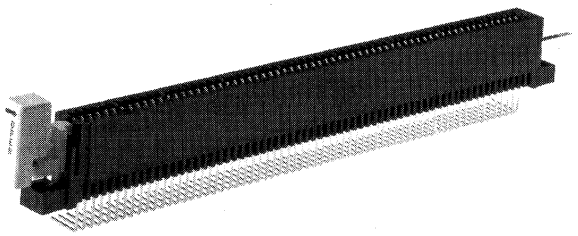
Vertical Connector, Solder Post Terminals

Note: 22 Pos. Housing Dim. (Typ.)—4.388 [111.46] L x .370 [9.40] W x .850 [21.60] H

No. of Dual Positions	Post Lengths	Part Numbers		
		Open One End*	Open Both Ends *	Closed Both Ends
22	**.125** [3.18]	531025-3	—	—
	.160 [4.06]	—	—	531007-9
36	**.160** [4.06]	—	1-531026-1	—
43	**.125** [3.18]	531025-6	—	—
	.160 [4.06]	—	1-531026-2	—

*Recognized under the Component Program of Underwriters Laboratories Inc.
Notes: 1. Connector with card slot open one end is shown for illustration purposes.
2. Other connector sizes can be made available, consult AMP.

Right-Angle Connector, Solder Post Terminals

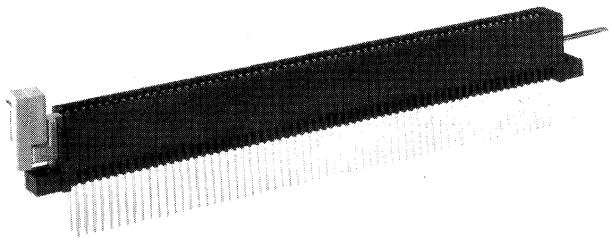


Note: 36 Pos. Housing Dim. (Typ.)—6.572 [166.93] L x .850 [21.60] W x .370 [9.40] H

No. of Dual Positions	Part Number
	Open One End*
36	531408-5

*Recognized under the Component Program of Underwriters Laboratories Inc.
Notes: 1. Other connector sizes can be made available, consult AMP.
2. Bend right.

Vertical Connector, Wrap-Type Post Terminals



Note: 28 Pos. Housing Dim. (Typ.)—5.324 [135.23] L x .370 [9.40] W x .850 [21.60] H

No. of Dual Positions	Part Numbers
	Open One End*
28	531631-4
43	531631-6

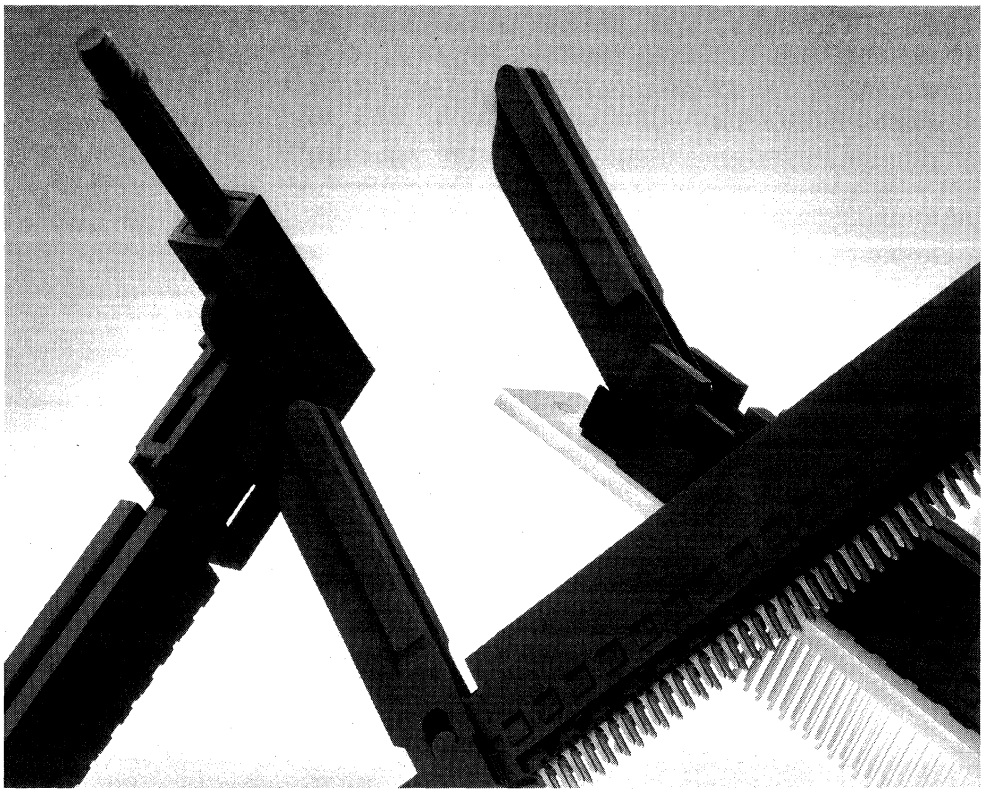
*Recognized under the Component Program of Underwriters Laboratories Inc.
Notes: 1. Connector with card slot open one end is shown for illustration purposes.
2. Other connector sizes can be made available, consult AMP.

SOURCE: Catalog 82619

Linear ZIF Connectors

Product Facts

- **Minimizes force needed to install and remove printed circuit boards**
- **Available in lever and bell crank styles**
- **Lever styles allow side and top card entry**
- **Wiping action contacts enhance electrical properties**
- **Contacts on .100 x .100 [2.54 x 2.54] or .125 x .125 [3.18 x 3.18] centers**
- **.025 [0.64] square posts**
- **Accepts Pc boards from .054 to .070 [1.37 to 1.78] in thickness**
- **Normally closed design leaves springs in relaxed position**
- **35 to 175 dual positions available on .100 [2.54] centerline connectors and 32 to 140 dual positions available on .125 [3.18] centerline connectors**



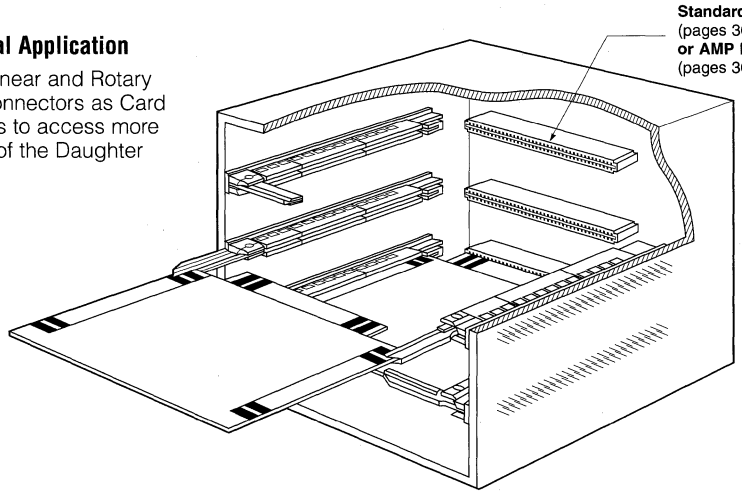
AMP Linear Zero Insertion Force (ZIF) PC Board Edge Connectors are available in both lever and bell crank actuated styles and can be provided as panel assemblies, separate housings and contacts or as preassembled with solder post terminals.

Panel assemblies include a housing with ACTION PIN press-fit solderless contacts mounted on an epoxy board for rack application. Separate housing assemblies and ACTION PIN contacts allow customer assembly. These can be mounted as close as .625 [15.88]. More design latitude for high density application is provided by the side entry lever-type connector, permitting use of all sides of the Pc board for edge-type I/O connections (see page 3043). Where solder applications are required, AMP has a line of preassembled connectors with tin-plated solder terminals. All these configurations are available in a broad range of sizes.

In addition, all connectors have removable wings which make it possible to repair or replace damaged cam rails, handles, contacts and housing modules without removing the entire housing assembly from the board.

Special Application

Use Linear and Rotary ZIF Connectors as Card Guides to access more sides of the Daughter Board.



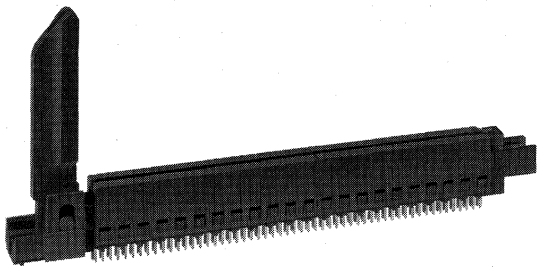
SOURCE: Catalog 82619

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

Linear ZIF Connectors
(Continued)

.100 x .100
[2.54 x 2.54] Centerline

Housing with Solder Posts



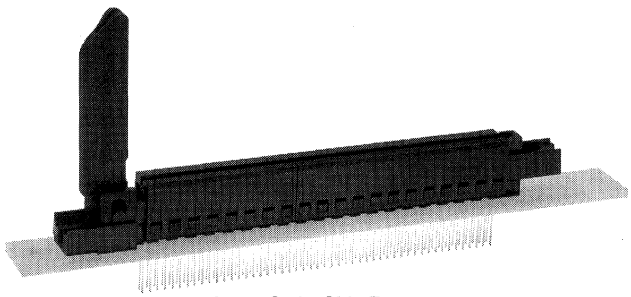
Lever Style, Side Entry

Note: 35 Pos. Housing Dim. (Typ.)—4.475 [113.67] L x .450 [11.43] W x .845 [21.46] H

No. of Dual Positions	Part Numbers
35	645135-2
100	1-645135-5
140	2-645135-3

Note: Other connector sizes can be made available, consult AMP.

Panel Assemblies

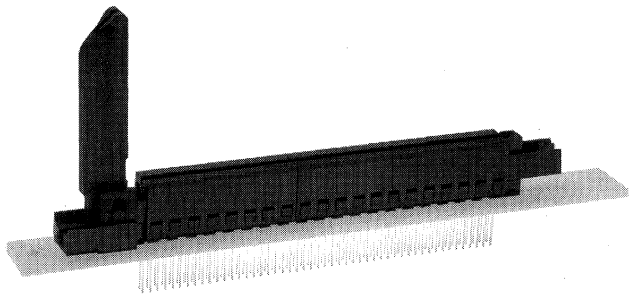


Lever Style, Side Entry

Note: 75 Pos. Closed Housing Dim. (Typ.)—10.125 [257.18] L x .750 [19.05] W x .940 [23.88] H

No. of Dual Positions	Part Numbers
75	1-645145-0
100	1-645145-5
110	1-645145-7
130	2-645145-1
140	2-645145-3
145	2-645145-4
150	2-645145-5

Note: Other connector sizes can be made available, consult AMP.



Lever Style, Top Entry

Note: 40 Pos. Closed Housing Dim. (Typ.)—6.625 [168.28] L x .750 [19.05] W x .940 [23.88] H

No. of Dual Positions	Part Numbers
40	645147-3
100	1-645147-5
110	1-645147-7
120	1-645147-9

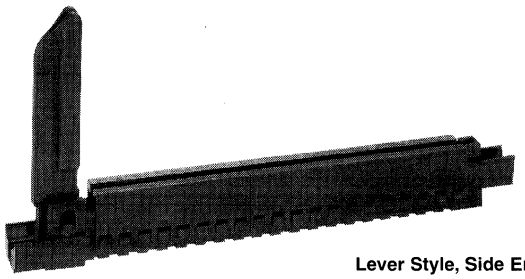
Note: Other connector sizes can be made available, consult AMP.

SOURCE: Catalog 82619

Linear ZIF Connectors
(Continued)

.100 x .100 [2.54 x 2.54] Centerline
(Continued)

Housings

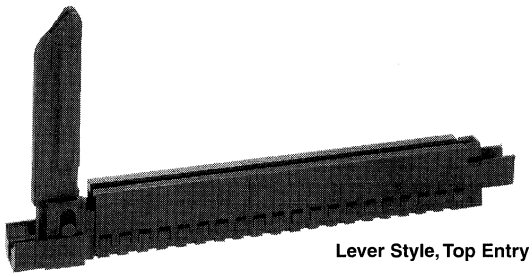


Lever Style, Side Entry

Note: 50 Pos. Closed Housing Dim. (Typ.)—4.900 [124.46] L x .450 [11.43] W x .815 [20.70] H

No. of Dual Positions	Part Numbers
50	645115-5
75	1-645115-0
80	1-645115-1
100	1-645115-5
110	1-645115-7
115	1-645115-8
125	2-645115-0
130	2-645115-1
140	2-645115-3
175	3-645115-0

Note: Other connector sizes can be made available, consult AMP.

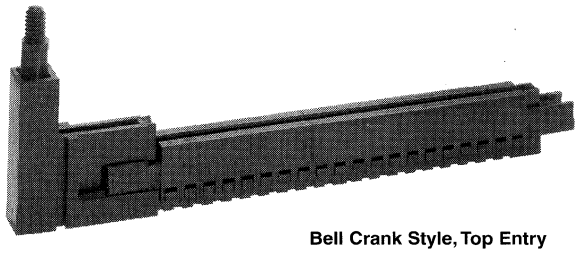


Lever Style, Top Entry

Note: 45 Pos. Closed Housing Dim. (Typ.)—4.400 [111.76] L x .450 [11.43] W x .815 [20.70] H

No. of Dual Positions	Part Numbers
45	645137-4
100	1-645137-5

Note: Other connector sizes can be made available, consult AMP.



Bell Crank Style, Top Entry

Note: 125 Pos. Housing Dim. (Typ.)—13.638 [346.41] L x .450 [11.43] W x .815 [20.70] H

No. of Dual Positions	Part Number
125	2-645141-0

Note: Other connector sizes can be made available, consult AMP.

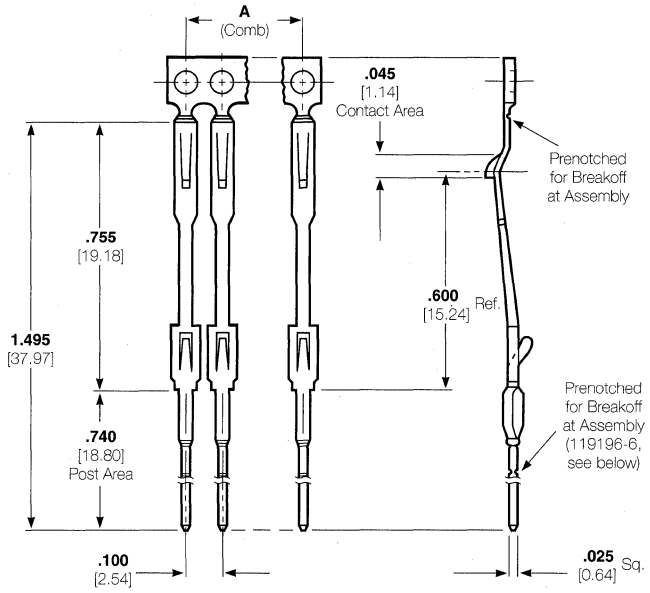
SOURCE: Catalog 82619

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

Linear ZIF Connectors
(Continued)

.100 x .100 [2.54 x 2.54] Centerline
(Continued)

ACTION PIN Contacts with Wiping Feature .100 [2.54] Centerline



Contact Combs

Number of Contacts Per Comb*	Dimension A	Part Numbers
30	**2.900** 73.66	1-119311-6
40	**3.900** 99.06	2-119311-6
45	**4.400** 111.76	3-119311-1
50	**4.900** 124.46	3-119311-6
55	**5.400** 137.16	4-119311-1
60	**5.900** 149.86	4-119311-6

Reeled Contacts

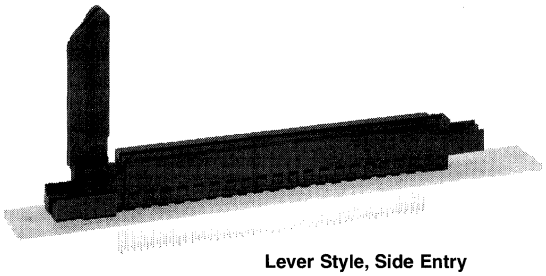
Number of Contacts Per Reel	Part Number
35,000	119196-2
	119196-6

* At least two (2) contact combs required per housing.

Linear ZIF Connectors
(Continued)

.125 x .125
[3.18 x 3.18] Centerline

Panel Assemblies

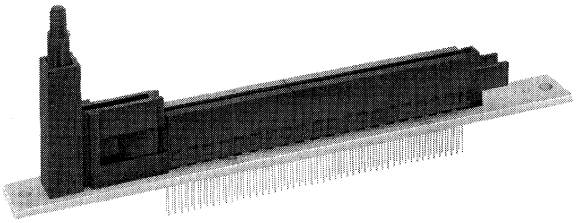


Lever Style, Side Entry

Note: 32 Pos. Open Housing Dim. (Typ.)—6.625 [168.28] L x .750 [19.05] W x .940 [23.88] H

No. of Dual Positions	Part Numbers
32	645146-3
40	645146-5
56	645146-9
60	1-645146-0
72	1-645146-3
84	1-645146-6
92	1-645146-8
100	2-645146-0
124	2-645146-6
136	2-645146-9

Note: Other connector sizes can be made available, consult AMP.



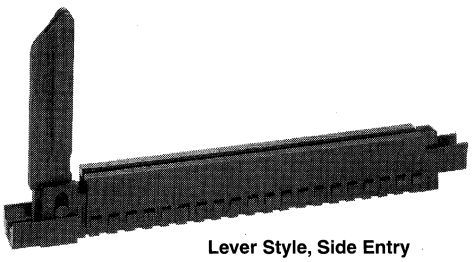
Bell Crank Style, Top Entry

Note: 60 Pos. Housing Dim. (Typ.)—10.625 [269.88] L x .750 [19.05] W x .940 [23.88] H

No. of Dual Positions	Part Numbers
60	1-645149-0
112	2-645149-3
140	3-645149-0

Note: Other connector sizes can be made available, consult AMP.

Housing



Lever Style, Side Entry

Note: 104 Pos. Closed Housing Dim. (Typ.)—14.774 [375.26] L x .475 [12.07] W x .815 [20.7] H

No. of Dual Positions	Part Numbers
104	2-645116-1
112	2-645116-3
124	2-645116-6
128	2-645116-7

Note: Other connector sizes can be made available, consult AMP.

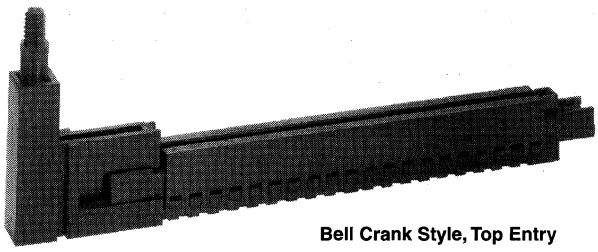
SOURCE: Catalog 82619

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

Linear ZIF Connectors
(Continued)

.125 x .125 [3.18 x 3.18] Centerline
(Continued)

Housing
(Continued)



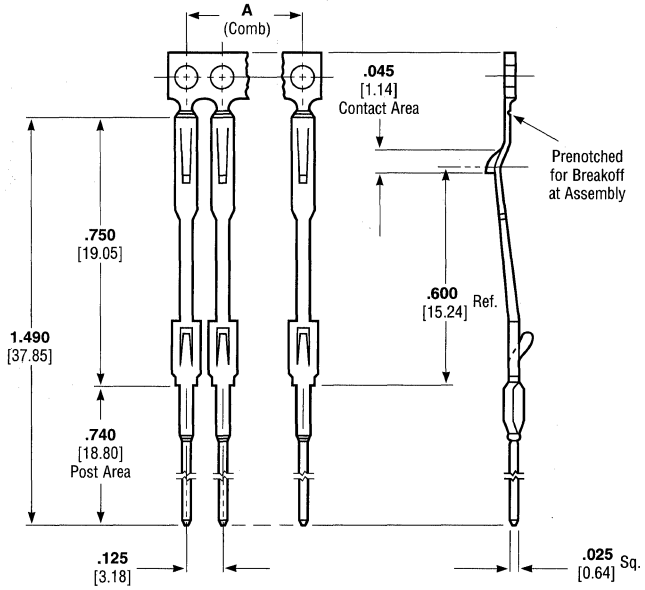
Bell Crank Style, Top Entry

Note: 52 Pos. Closed Housing Dim. (Typ.)—6.375 [161.93] L x .475 [12.07] W x .815 [20.70] H

No. of Dual Positions	Part Numbers
52	645142-8
112	2-645142-3
136	2-645142-9

Note: Other connector sizes can be made available, consult AMP.

ACTION PIN Contacts with Wiping Feature, .125 [3.18] Centerline



Contact Combs

Number of Contacts Per Comb*	Dimension A	Part Numbers
24	**2.875** 73.03	119950-4
48	**5.875** 149.23	1-119950-0
52	**6.375** 161.93	1-119950-1
56	**6.875** 174.63	1-119950-2

Reeled Contacts

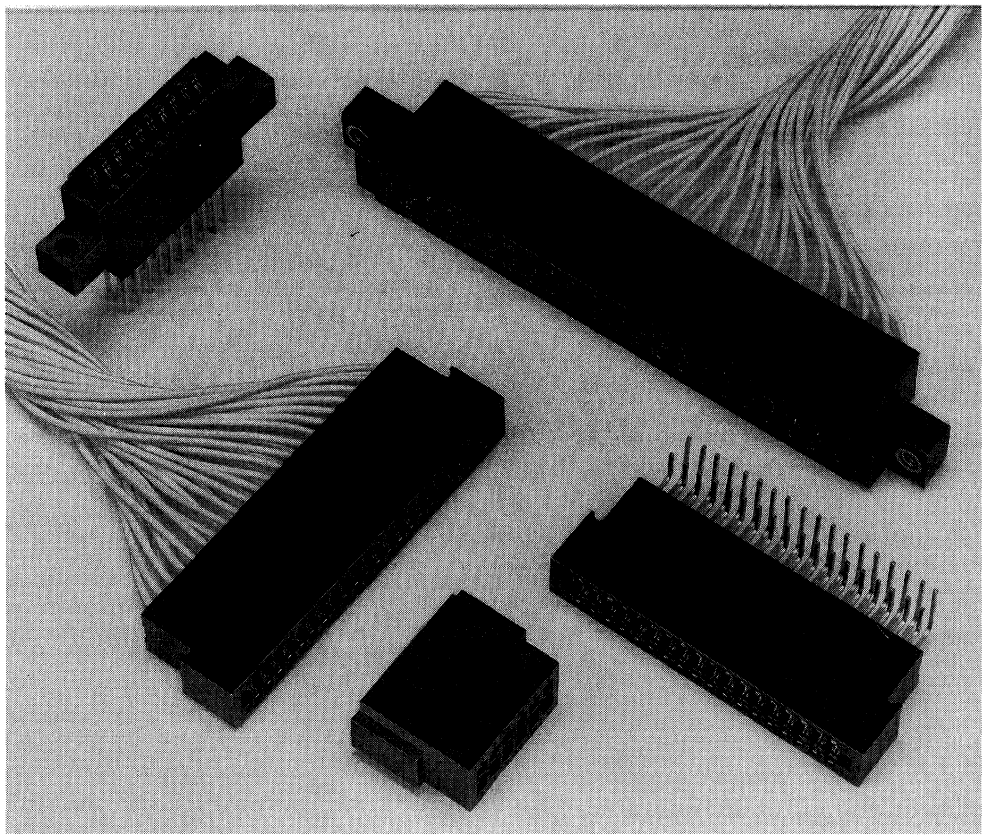
Number of Contacts Per Reel	Part Number
35,000	119949-2

* At least two (2) contact combs required per housing.

Crimp Snap Twin Leaf Connectors

Product Facts

- **Crimp snap-in, solder eyelet, .025 [0.64] square posted and right-angle contacts on .100 [2.54], .125 [3.18] or .156 [3.96] centers**
- **Customer buys only enough contacts to meet circuit and retention requirements**
- **Contacts bifurcated for redundancy**
- **Single leaf version available for higher contact normal forces**
- **Low insertion forces**
- **Accommodates AWG 16-28 [1.4-0.08 mm²] wire range and insulation diameters .035-.105 [0.89-2.67]**
- **Large variety of connector sizes**
- **Cavity identification on face of card slot and wire entry**
- **High speed automatic machine terminations provide uniform reliability at lowest applied cost**
- **Recognized under the Component Program of Underwriters Laboratories Inc., File No. E28476**
- **Certified by Canadian Standards Association, File No. LR 7189**



The Crimp Snap Twin Leaf Connector is designed especially for high density wire-to-board applications. Termination styles include crimp, solder, posted and right-angle, in a variety of sizes.

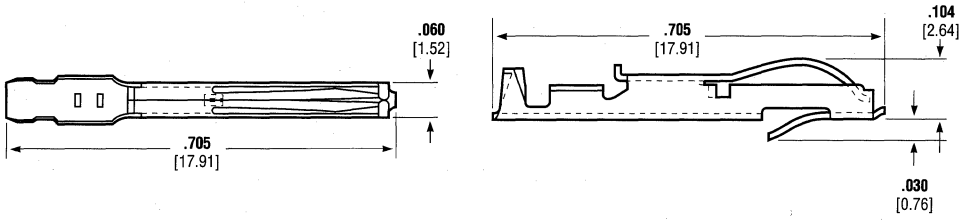
Design flexibility allows the customer to save by purchasing only enough contacts for the circuit requirements. Easy replaceability of each contact cuts repair cost in the event of contact or wire damage.

SOURCE: Catalog 82619

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

Crimp Snap Twin Leaf Connectors
(Continued)

Crimp, Snap-In Contacts



Material and Finish

Phosphor bronze, plated .000030 [0.00076] nickel on entire contact, with the addition of one of the following platings:

A—.000030 [0.00076] gold in mating area.

B—.000015 [0.00038] gold in mating area.

C—.000050 [0.00127] gold in mating area, with gold flash on remainder of contact.

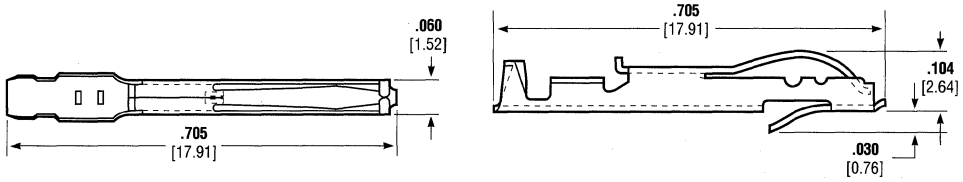
D—.000015 [0.00038] gold in mating area, with gold flash on remainder of contact.

Note: Tin plating is available upon request.

Note: Only loose piece contacts manufactured and supplied by AMP are to be used with the hand tools listed on this page . No attempt should be made to produce loose piece parts from a strip since special cutoff tooling is required to assure a properly functioning part.

Connector Centerline	Wire Size Range AWG/mm²	Insulation Dia. Range	Contact Finish	Contact Part Numbers		Applicator for AMP-O-LECTRIC* Machine	Applicator for Stripper/Crimper Machine	Color Code	Hand Tool
				Loose Piece	Strip Form				
.100 2.54	28-24 0.08-0.2	.035-.055 0.89-1.40	A	583616-4	583616-2	466577-4	466912-1	Orange	90268-1
			B	583616-5	583616-3				
			C	583616-9	583616-8				
			D	1-583616-1	1-583616-0				
	24-20 0.2-0.6	.048-.060 1.22-1.52	A	583853-5	583853-3	466622-2	466919-1	Green	90272-1
			B	583853-4	583853-2				
			C	583853-9	583853-8				
			D	1-583853-1	1-583853-0				
.125 3.18	28-24 0.08-0.2	.035-.055 0.89-1.40	A	583616-4	583616-2	466577-4	466912-1	Orange	90268-1
			B	583616-5	583616-3				
			C	583616-9	583616-8				
			D	1-583616-1	1-583616-0				
	24-20 0.2-0.6	.048-.060 1.22-1.52	A	583853-5	583853-3	466622-2	466919-1	Green	90272-1
			B	583853-4	583853-2				
			C	583853-9	583853-8				
			D	1-583853-1	1-583853-0				
	22-18 0.3-0.9	.049-.095 1.24-2.41	A	583649-6	583649-3	466713-2	466928-1	Violet	90264-1
			B	583649-5	583649-2				
			C	583649-7	583649-4				
	20-16 0.6-1.4	.073-.090 1.85-2.29	A	583875-6	583875-5	687775-2	—	White	90285-1
			C	583875-3	583875-2				
.156 3.96	28-24 0.08-0.2	.035-.055 0.89-1.40	A	583616-4	583616-2	466577-4	466912-1	Orange	90268-1
			B	583616-5	583616-3				
			C	583616-9	583616-8				
			D	1-583616-1	1-583616-0				
	24-20 0.2-0.6	.048-.060 1.22-1.52	A	583853-5	583853-3	466622-2	466919-1	Green	90272-1
			B	583853-4	583853-2				
			C	583853-9	583853-8				
			D	1-583853-1	1-583853-0				
	22-18 0.3-0.9	.049-.095 1.24-2.41	A	583649-6	583649-3	466713-2	466928-1	Violet	90264-1
			B	583649-5	583649-2				
			C	583649-7	583649-4				
	20-16 0.6-1.4	.073-.090 1.85-2.29	A	583875-6	583875-5	687775-2	—	White	90285-1
			C	583875-3	583875-2				

Crimp, Snap-In Contacts, Non-Bifurcated



Material and Finish

Phosphor bronze, plated .000030 [0.00076] nickel on entire contact, with the addition of one of the following platings:

A—.000030 [0.00076] gold in mating area.

B—.000015 [0.00038] gold in mating area.

Note: Tin plating is available upon request.

Connector Centerline	Wire Size Range AWG/mm²	Insulation Dia. Range	Contact Finish	Contact Part Numbers		Applicator for AMP-O-LECTRIC* Machine	Applicator for Stripper/Crimper Machine	Color Code	Hand Tool
				Loose Piece	Strip Form				
.100 2.54	28-24 0.08-0.2	.035-.055 0.89-1.40	A	531476-5	531476-4	466577-4	466912-1	Orange	90268-1
			B	—	531476-2				
	24-20 0.2-0.6	.048-.060 1.22-1.52	A	531477-5	531477-4	466622-2	466919-1	Green	90272-1
			B	531477-3	531477-2				
.125 3.18	28-24 0.08-0.2	.035-.055 0.89-1.40	A	531476-5	531476-4	466577-4	466912-1	Orange	90268-1
			B	—	531476-2				
	24-20 0.2-0.6	.048-.060 1.22-1.52	A	531477-5	531477-4	466622-2	466919-1	Green	90272-1
			B	531477-3	531477-2				
	22-18 0.3-0.9	.045-.095 1.14-2.41	A	—	531478-4	466713-2	466928-1	Violet	90264-1
.156 3.96	28-24 0.08-0.2	.035-.055 0.89-1.40	A	531476-5	531476-4	466577-4	466912-1	Orange	90268-1
			B	—	531476-2				
	24-20 0.2-0.6	.048-.060 1.22-1.52	A	531477-5	531477-4	466622-2	466919-1	Green	90272-1
			B	531477-3	531477-2				
	22-18 0.3-0.9	.045-.095 1.14-2.41	A	—	531478-4	466713-2	466928-1	Violet	—

*For use with Model "K" machines. Call the Tooling/Technical Assistance Center for the part numbers of applicators for use with other bench machines and fully-automatic AMPOMATOR Lead Making Machines.

SOURCE: Catalog 82619

Crimp Snap Twin Leaf Connectors

(Continued)

Snap-In Solder Eyelet Contacts

Material and Finish

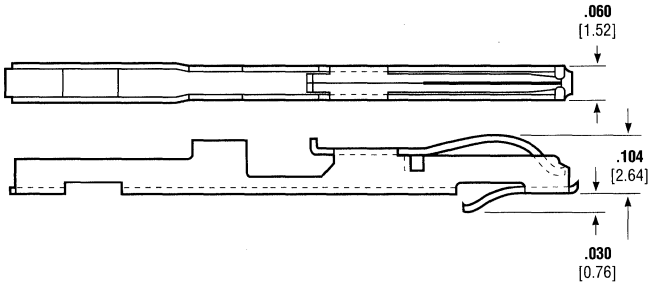
Phosphor bronze, plated .000030 [0.00076] nickel on entire contact, with the addition of one of the following platings:

A—.000030 [0.00076] gold in mating area.

B—.000015 [0.00038] gold in mating area.

Solder eyelet portion is tin plated.

Note: Tin plating of entire contact is available upon request.



Connector Centerline	Contact Finish	Part Numbers
.100 2.54	A	583854-3
	B	583854-5
.125 3.18	A	530245-3

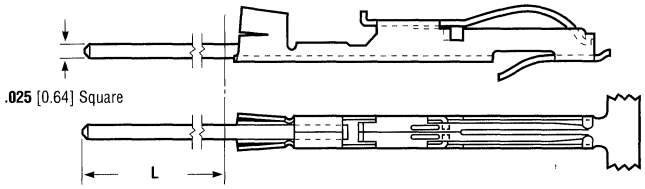
Snap-In Wrap Post Contacts

Material and Finish

Contact—Phosphor bronze, plated .000015 [0.00038] gold in mating area, with entire contact underplated .000030 [0.00076] nickel

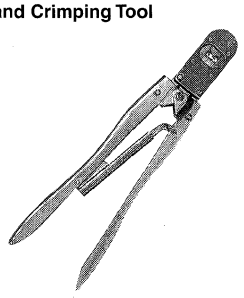
Post—Phosphor bronze, tin-plated

Note: Tin plated contacts are available upon request.

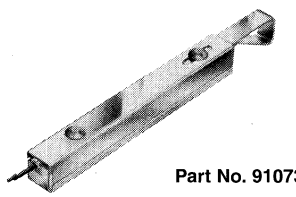


Connector Centerline Spacing	Dimension L	Part Numbers
.100 2.54	.535 13.59	583879-4
.125 3.18	.525 13.34	583884-1
.156 3.96	.525 13.34	583884-1

Hand Crimping Tool



Contact Extraction Tool

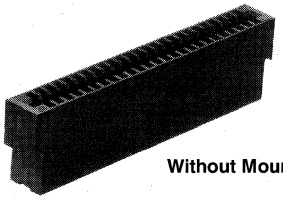


Part No. 91073-1

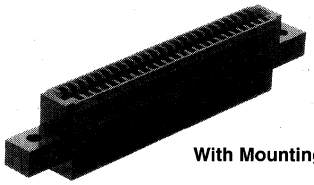
SOURCE: Catalog 82619

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

Crimp Snap Twin Leaf Connectors
(Continued)
.100 [2.54] Centerline



Without Mounting Ears



With Mounting Ears

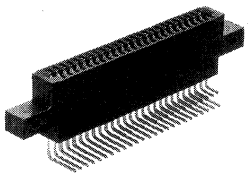
Housings

Note: 25 Pos. Housing Dim. (Typ.)—With mounting ears, 3.600 [91.44] L x .750 [19.05] W x .350 [8.89] H

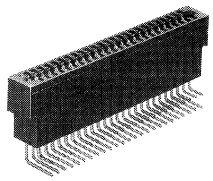
No. of Dual Pos.	Overall Length	Part Numbers		
		Without Mounting Ears	With Mounting Ears	Mounting Ears With Inserts
6	—	2-583717-1	—	—
	1.430 [36.32]	—	583861-5	—
7	—	2-583717-3	—	—
10	**2.100** [53.34]	583717-1	583718-1	—
	1.830 [46.48]	—	583861-7	—
13	—	3-583717-3	—	—
14	—	2-583717-7	—	—
15	**2.600** [66.04]	583717-3	583718-3	—
	2.330 [59.18]	—	583861-9	—
17	—	583717-5	—	—
	2.530 [64.26]	—	1-583861-1	—
18	—	583717-7	—	—
20	—	3-583717-1	—	—
22	**3.300** [83.82]	—	583718-9	583890-9
25	**3.600** [91.44]	1-583717-1	1-583718-1	—
	3.330 [84.58]	—	1-583861-7	—
28	**3.630** [92.20]	—	1-583861-9	—
30	**4.100** [104.14]	1-583717-3	1-583718-3	—
	3.830 [97.28]	—	583861-1	—
32	**4.300** [190.22]	—	2-583718-7	—
36	**4.430** [112.52]	—	2-583861-5	—
40	**5.100** [129.54]	—	1-583718-5	—
	4.830 [122.68]	—	583861-3	—
44	**5.230** [132.84]	—	530216-1	—
50	**6.100** [154.94]	1-583717-9	1-583718-7	—
	5.830 [148.08]	—	2-583861-1	—

Note: Other connector sizes can be made available, consult AMP.

Housings Preloaded with Vertical Wrap-Type Posts and Right-Angle Posts



Right-Angle Posts
With Mounting Ears



Right-Angle Posts
Without Mounting Ears

Note: 25 Pos. Housing Dim. (Typ.)—Right-Angle Posts with Mounting Ears, 3.600 [91.44] L x .750 [19.05] W x .350 [8.89] H

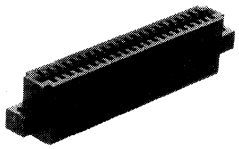
No. of Dual Pos.	Posted Assemblies Part Numbers		
	Vertical Posts with Mounting Ears	Right-Angle Posts with Mounting Ears	Right-Angle Post without Mounting Ears
6	1-583894-5	—	—
10	—	583900-5	1-530218-0
15	—	1-583900-1	1-530218-2
17	—	—	530218-5
22	—	583900-2	—
25	—	583900-1	530218-1
30	583894-1	583900-4	—
36	—	—	1-530218-1
50	—	583900-3	—

Note: Other connector sizes can be made available, consult AMP.

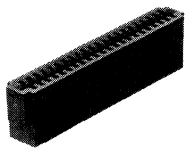
Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

Crimp Snap Twin Leaf Connectors
(Continued)

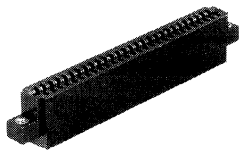
.125 [3.18] Centerline



With Mounting Ears



Without Mounting Ears



Mounting Ears With Inserts

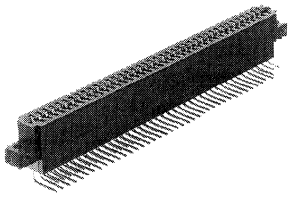
Housings

Note: 22 Pos. Housing Dim. (Typ.)—With Mounting Ears, 2.680 [68.01] L x .437 [11.10] W x .750 [19.05] H

No. of Dual Positions	Part Numbers		
	Without Mounting Ears	With Mounting Ears	Mounting Ears With Inserts
6	583873-1	583864-1	—
10	583873-3	583864-3	—
15	583873-5	—	—
18	—	583864-7	—
22	583873-9	583864-9	—
28	—	1-583564-3	1-583891-3
30	—	2-583864-1	—
40	—	1-583864-7	—
44	1-583873-9	1-583864-9	—

Note: Other connector sizes can be made available, consult AMP.

Housings Preloaded with Right-Angle Posts



With Mounting Ears

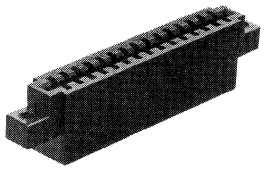
Note: 30 Pos. Housing Dim. (Typ.)—4.555 [115.70] L x .750 [19.05] W x .437 [11.10] H

No. of Dual Positions	Part Numbers With Mounting Ears
30	530238-8
40	530238-3

Note: Other connector sizes can be made available, consult AMP.

.156 [3.96] Centerline

Housings



With Mounting Ears

Note: 15 Pos. Housing Dim. (Typ.)—3.189 [81.00] L x .437 [11.10] W x .750 [19.05] H

No. of Dual Positions	Part Numbers With Mounting Ears
6	1-583859-3
8	2-583859-1
10	583859-9
12	1-583859-5
15	583859-7
18	583859-5
22	583859-3
28	583859-1
36	2-583859-3

Note: Other connector sizes can be made available, consult AMP.

SOURCE: Catalog 82619

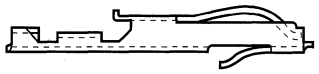
Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

Crimp Snap
Twin Leaf Connector
Accessories

Dummy Contacts

Material
Phosphor bronze

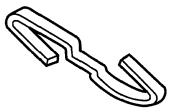
The dummy contact is used in sparsely loaded housings to balance contact pressure. For specific recommendations, consult AMP.



Tin Plated – **Part No. 583857-2**
.000030 [0.00076] Nickel Plated – **Part No. 583857-6**
Gold Flash-Over-Nickel Plate – **Part No. 583857-7**
Unplated – **Part No. 583857-8**

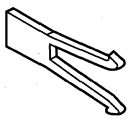
Retaining Spring

Material
Stainless steel

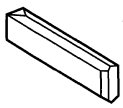


Unplated – **Part No. 583691-2**
Gold Flash-Over-Nickel Plate – **Part No. 583691-3**

Keying Plugs



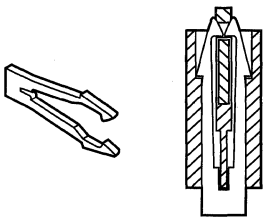
On-Contact Plug
Natural nylon—**Part No. 583764-1**



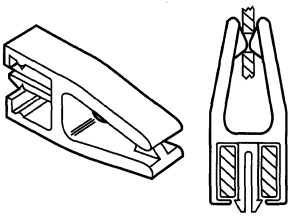
Intercontact Plug
Natural nylon—**Part No. 583274-1**
Glass-Filled Polyester —
Part No. 583274-3

Locking Keys

Material
Nylon



On-Contact Clip
Part No. 530213-1

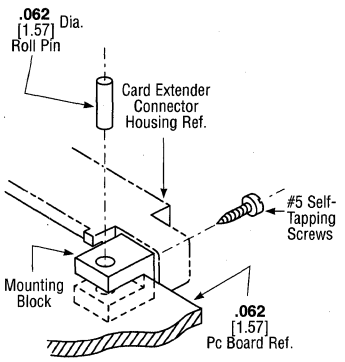


Locking Clip for Connector Mounting Ear
Part No. 530248-1

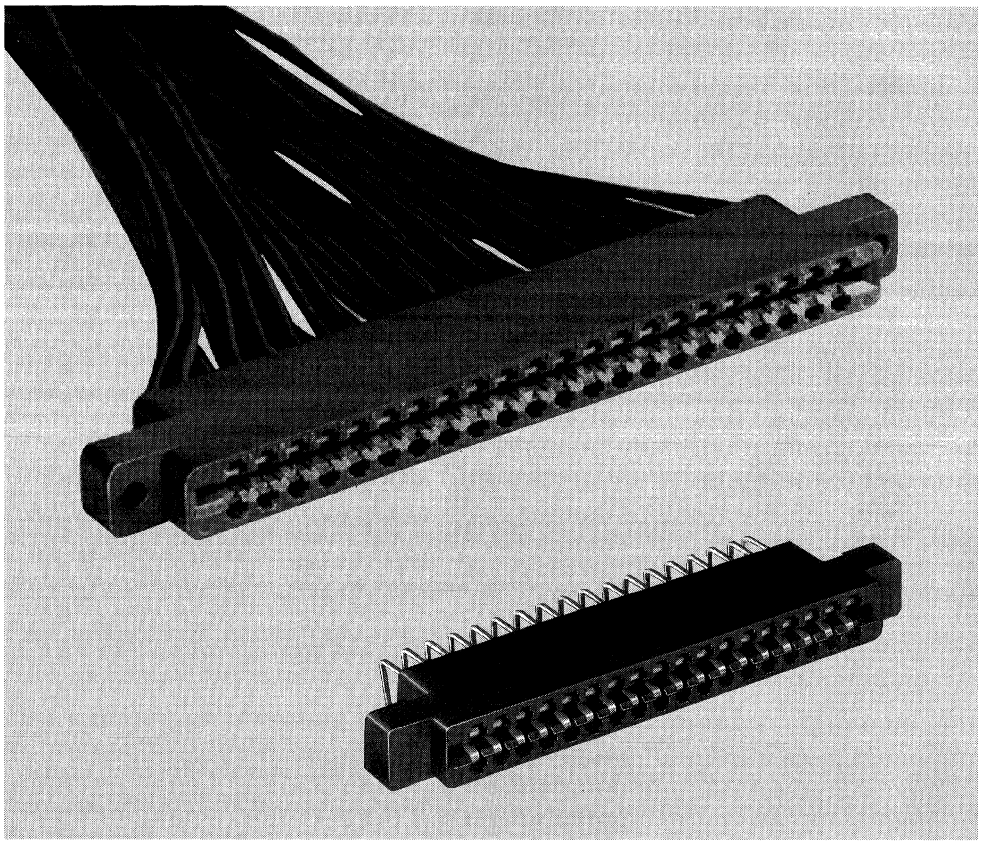
Mounting Block

Material
Natural color nylon

Kit Part No. 531250-4
Each kit includes 2 mounting blocks,
2 self-tapping screws, #5 X .437 [11.10]
2 roll pins .075 x .250 [1.57 x 6.35]



AMP-LEAF Connectors



Product Facts

- **Contacts on .156 [3.96] centers**
- **Contact types include crimp snap-in, solder eyelet and posted**
- **Glass-filled polyester, phenolic or diallyl phthalate housings**
- **Closed card entry design prevents overstressing of contacts**
- **Gold-over-nickel plated contacts**
- **Locking lance permits easy contact replacement**
- **Keying**
- **Contacts maintain exact pressures on the circuit paths, despite repeated insertions and extractions**
- **Recognized under the Component Program of Underwriters Laboratories Inc., File No. E28476**
- **Certified by Canadian Standards Association**, File No. LR 7189**

** CSA Certification pending for certain products, as noted.

AMP-LEAF Connectors are available with crimp, snap-in, solder eyelet contacts or preloaded with right-angle posted contacts.

The crimp type printed circuit connector is supplied with the housing unloaded—the user buys only enough contacts to satisfy circuit requirements. This feature, when coupled with the AMP matched tooling, contributes substantially to lower installed costs.

Right-angle posted connectors are supplied in various sizes, with preloaded contacts on one or both sides. The solder-type posts are formed 90° from the housing to permit right-angle interfacing between mother and daughter boards.

SOURCE: Catalog 82619

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

AMP-LEAF Connectors
(Continued)

Crimp, Snap-In Contacts

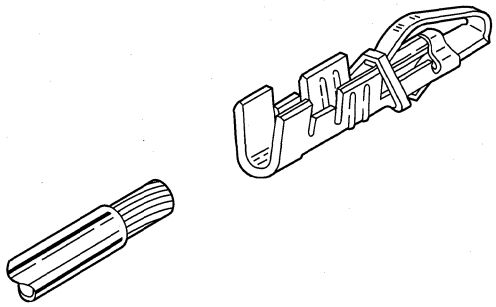
Material and Finish

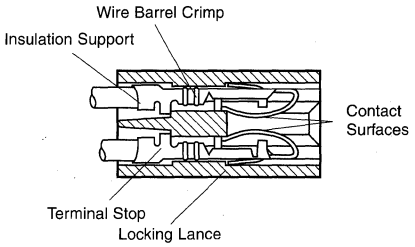
Phosphor bronze, plated as follows:

A—.000100-.000200 [0.00254-0.00508] tin (lubricant must be used)

B—.000030 [0.00076] gold in mating area; gold flash on remainder of contact, with entire contact underplated .000050 [0.00127] nickel

C—.000015 [0.00038] gold in mating area, gold flash on remainder of contact, with entire contact underplated .000050 [0.00127] nickel



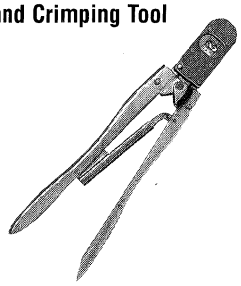


Wire Range AWG/mm²	Insulation Range: Single Wire	Insulation Range: Double Wire	Contact Part Numbers: Loose Piece	Contact Part Numbers: Strip Form	Contact Finish	Applicator for AMP-O-LECTRIC Machine	Applicator for Stripper/Crimper Machine	Hand Tool
26-22 0.12-0.4	**.050-.064** 1.27-1.63	—	583990-3	583204-2	B	466366-2	466911-1	90028-3
22-18 0.3-0.9	**.055-.080** 1.40-2.03	**.120** 3.05 Max.	583989-2	583361-2	A	466367-2	—	90017-3 90028-3 90101-3 (2 #20)
			583989-3	583361-3	B			
			—	60030-5*	B			
			583989-6	583555-6	C			
16 1.25-1.40	**.108** 2.74 Max.	**.080-.160** 2.03-4.06	583991-3	60151-6	B	466368-2	—	90031-8 (2 #18) 90101-3 (1 #16)

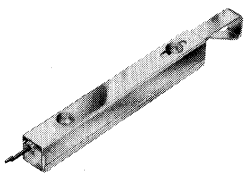
*Used with .084-.104 [2.13-2.64] thick Pc board.

Notes: 1. Applicators are for use with Model "K" machines. Call the Tooling/Technical Assistance Center for the part numbers of applicators for use with other bench machines and fully-automatic AMPOMATOR Lead Making Machines.
2. Shorting contacts are available, consult AMP.
3. Contacts and housings to accommodate .093 [2.36] thick Pc boards can be made available, consult AMP.

Hand Crimping Tool



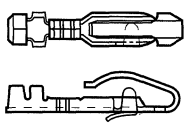
Contact Extraction Tool



Tool Number	Used with Housings
465195-1	480110 480142 582140 582147 582264 582358 582500 582963 583167 583280 583399-1, -3 583552-1 583617-1, -3 583637-1 583680-1 583685-1 583722-1 583723-1 583724-1 583725-1, -3 583726-1
465195-2	480133 480146 582191

Dummy Contact

Material
Phosphor bronze



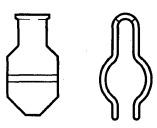
Plain Finish–
Part No. 66084-1

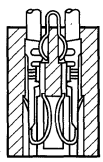
Tin Finish–
Part No. 66084-2

Gold Finish–
Part No. 66084-3

Commoning Spring

Material and Finish
Beryllium copper, gold plated





.055-.070 [1.4-1.78] thk. Pc board–**Part No. 66092-1**

.084-.104 [2.13-2.64] thk. Pc board–**Part No. 66064-1**

.055-.070 [1.4-1.78] and .084-.104 [2.13-2.64] thk. Pc board with locking latches–
Part No. 583454-1

SOURCE: Catalog 82619

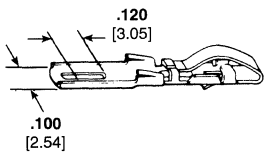
Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

AMP-LEAF Connectors
(Continued)

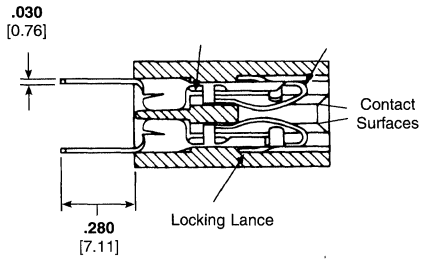
Solder Eyelet Contact

Material and Finish

Phosphor bronze, plated .000015 [0.00038] gold in contact area, gold flash on remainder of contact, with entire contact underplated .000050 [0.00127] nickel



Standard Eyelet Type Contact
Part No. 66067-5
(For .055-.070 [1.4-1.78]
Thick Pc Boards)

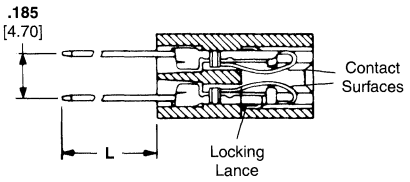


Note: Solder tab will accommodate a maximum of two 16 AWG [1.25-1.4 mm²] solid wires, or two 18 AWG [0.8-0.9 mm²] stranded wires.

Post Type Contacts

Material and Finish

Phosphor bronze, plated .000015 [0.00038] gold in contact area, tin on post, with entire contact underplated .000050 [0.00127] nickel



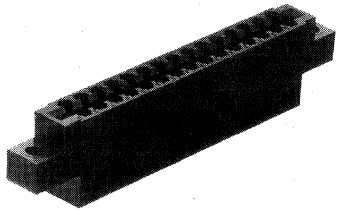
Post Length L	No. of TERMI-POINT Clips or Wraps per Post	Loose Piece Contact Part No. (.045 x .045 [1.14 x 1.14] Post)
.960 24.38	4	1-582355-3
.760 19.3	3	1-582355-4
.560 14.22	2	1-582355-5
.360 9.14	1	1-582355-6
.213 5.41	1	2-582355-0

Note: Post type contacts are for .055-.070 [1.4-1.78] thick Pc boards.

SOURCE: Catalog 82619

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

AMP-LEAF Connectors
(Continued)
.156 [3.96] Centerline

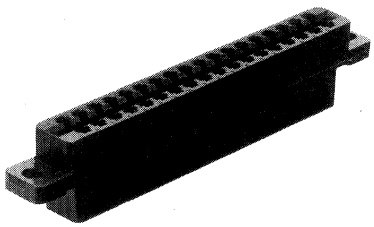


Glass-Filled Polyester Housings

Note: 15 Pos. Housing Dim. (Typ.)—3.189 [81.00] L x .350 [8.89] W x .700 [17.78] H

No. of Dual Positions	Housing Part Numbers
6	583722-1
8	530864-1*
10	583723-1
	582963-2*
12	583724-1*
15	583554-1*[1]
	583680-1
18	583725-1
	583725-3
22	583617-1
	583617-3
25	583726-1
30	583685-1
36	583552-1*

*CSA Certification pending.
[1] Housing without mounting ears.
Note: Other connector sizes can be made available, consult AMP.



Glass-Filled Phenolic Housings

Note: 18 Pos. Housing Dim. (Typ.)—3.650 [92.71] L x .375 [9.53] W x .700 [17.78] H

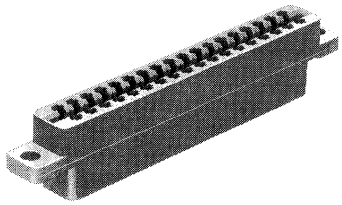
No. of Dual Positions	Housing Part Numbers
8	582140-5
10	582963-2*
	583280-1[1]
15	480110-5
	1-582147-5*
	582500-5
18	480133-5
	1-582191-5*
	583399-3[2,4]
22	480142-3
25	583167-3*
28	583637-1
30	480146-7*[3]
32	582264-2[2,4]

*CSA Certification pending.
[1] Housing without mounting ears.
[2] Housing does not accommodate intercontact keying plug.
[3] Twin slot housing.
[4] For .086 to .104 [2.18 to 2.64] thick Pc boards (special contacts required).
Note: Other connector sizes can be made available, consult AMP.

AMP-LEAF Connectors
(Continued)

.156 [3.96] Centerline
(Continued)

Diallyl Phthalate Housings



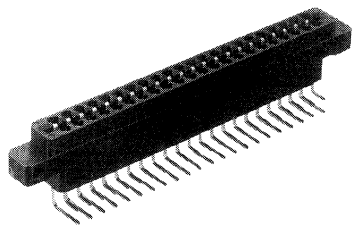
Single Slot Housing

Note: 18 Pos. Housing Dim. (Typ.)—3.656 [92.86] L x .375 [9.53] W x .700 [17.78] H

No. of Dual Positions	Housing Part Numbers
8	582140-2
10	582963-4*
15	1-582147-2*
	480110-2
	582500-2
18	480133-2
	1-582191-2*
22	480142-2
	582358-2
32	582264-5[1]

*CSA Certification pending.
[1] For .086-.104 [2.18-2.64] thick Pc boards (special contacts required).
Note: Other connector sizes can be made available, consult AMP.

Housings Preloaded with Right-Angle Post Contacts



Loaded Two Sides (X)

Note: 18 Pos. Housing Dim. (Typ.)—3.650 [92.71] L x .700 [17.78] W x .375 [9.53] H

No. of Dual Positions	Part Numbers	Loading Two Sides (X) One Side (Y)	Housing Material
10	583599-1*	X	Glass-Filled Phenolic
	583599-2*	Y	
15	583545-1*	X	
18	583544-1*	X	
	583544-2*	Y	
22	583458-2*	X	
	583458-1*	Y	
	583975-1*	X	Glass-Filled Polyester
28	530061-1*	X	Glass-Filled Phenolic

*CSA Certification pending.
Notes: 1. Other connector sizes can be made available, consult AMP.
2. Finished hole size is .048-.054 [1.22-1.37] diameter.

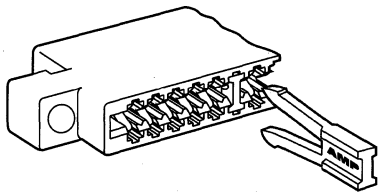
SOURCE: Catalog 82619

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

AMP-LEAF Connector Accessories

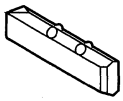
Keying Plugs

On-Contact Keying Plugs



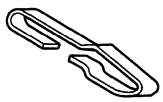
.055-.070 [1.4-1.78] Board Thickness–**Part No. 480143-1** (Nylon)
.084-.104 [2.13-2.64] Board Thickness–**Part No. 582756-1** (Nylon)

Intercontact Keying Plugs



.040 [1.02] Wide–**Part No. 582501-1** (Nylon)
.040 [1.02] Wide–**Part No. 582501-3** (Polyester)
.025 [0.64] Wide–**Part No. 583274-1** (Nylon)
.025 [0.64] Wide–**Part No. 583274-3** (Polyester)

Retaining Spring

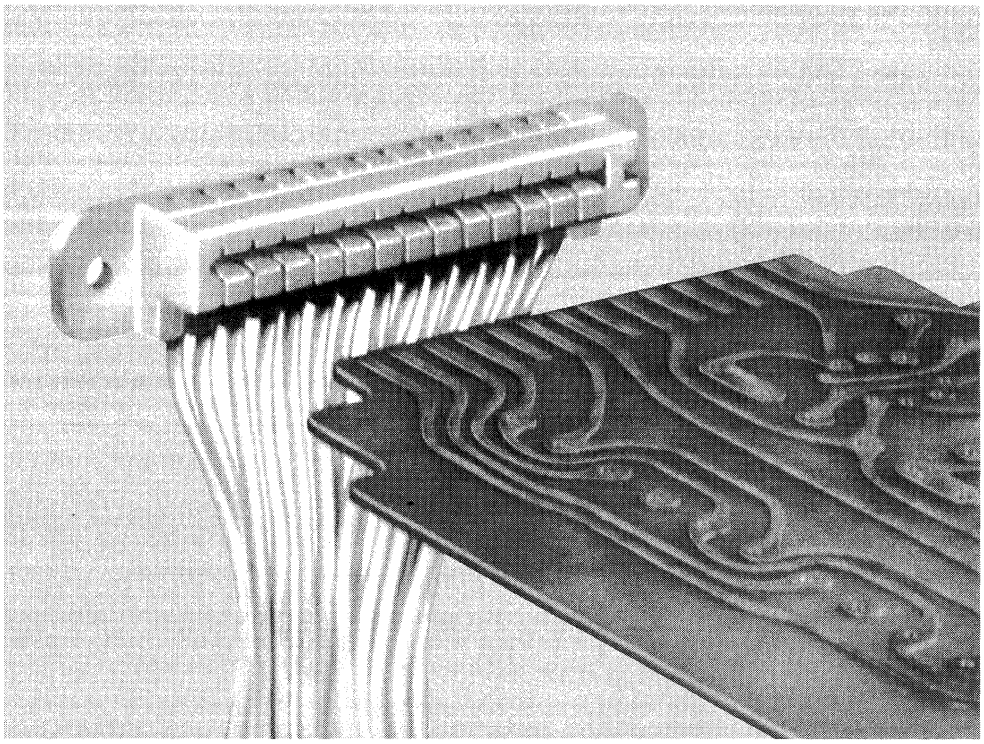


Nickel Finish–**Part No. 42973-1**
Plain Finish–**Part No. 42973-2**
Gold Finish–**Part No. 42973-3**

DUO-TYNE Flag Connectors

Product Facts

- **Right-angle design permits cabling in close quarters**
- **Recessed contacts prevent arcing**
- **Sizes and configurations available with or without mounting ears**
- **Lowest installed costs achieved through high-speed compression crimping with AMP matched tooling**
- **Meets quality and reliability requirements for appliance controls, vending machine subassemblies and business machines**
- **Recognized under the Component Program of Underwriters Laboratories Inc., File No. E28476**
- **Certified by Canadian Standards Association, File No. LR 7189**

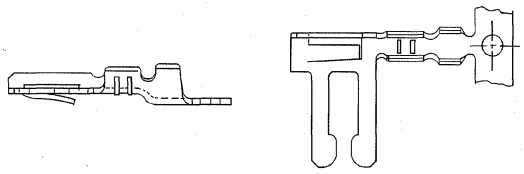


This flag-type connector is designed to meet the quality and reliability of such equipment as appliance controls, vending machine subassemblies, television, stereo, business machines and other applications with similar control needs. Among its assembly-saving features is a right-angle design which permits cabling in close quarters, where it does not require frame mounting to attach the keyed housing to the card cutout and double locking of the contacts when a Pc board is inserted. In addition, contacts are recessed to prevent arcing. All sizes and configurations are available with or without mounting ears. Added to low initial cost, lowest installed costs are achieved through high-speed compression crimping with AMP matched tooling.

SOURCE: Catalog 82619

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

DUO-TYNE Flag Connectors
(Continued)



Crimp, Snap-In Contacts

Material and Finish

Beryllium copper or phosphor bronze (see chart) plated as follows:

A—.000030 [0.00076] gold in mating area, with entire contact underplated .000050 [0.00127] nickel

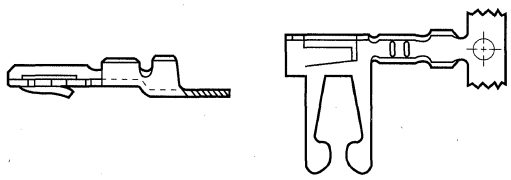
B—.000015 [0.00038] gold in mating area, with entire contact underplated .000050 [0.00127] nickel

C—.000150 [0.00381] tin

Standard Contacts

Wire Size Range AWG	Wire Size Range [mm²]	Insulation Dia. Range	Material	Contact Finish	Strip Form Part Numbers: For Standard Applicator	Strip Form Part Numbers: For Miniature Applicator	Loose Piece Part Numbers	Applicator for AMP-O-LECTRIC Machine*	Hand Tool
26-22	0.12-0.4	**.035-.055** 0.89-1.4	Phosphor Bronze	A	66149-3	66362-2	66150-3	466586-2	90094-4
				C	66149-4	66362-1	66150-2		
			Beryllium Copper	A	583379-5	—	—		
22-18	0.3-0.9	**.060-.090** 1.52-2.29	Phosphor Bronze	A	60215-5	66335-3	66088-3	466424-2	90027-4
				C	60215-4	66335-2	66088-2		
			Beryllium Copper	B	583284-4	583284-5	583285-4		
				C	—	—	583285-2		
18-16	0.8-1.4	**.090-.130** 2.29-3.3	Phosphor Bronze	B	—	530501-7	—	466413-2	90335-1
				C	—	530501-5	530502-1		
			Beryllium Copper	B	—	530503-7	—		

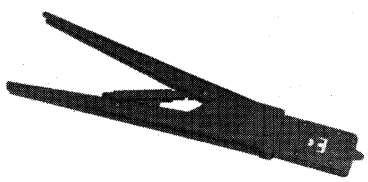
*For use with AMP-O-LECTRIC "Model K" Machine **Part No. 565435-5.** Call the Tooling/Technical Assistance Center for part numbers of applicators for use with other bench machines and fully-automatic AMPOMATOR Lead Making Machines.



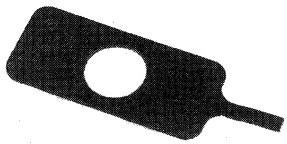
Tapered Beam Contacts

Wire Size Range AWG	Wire Size Range [mm²]	Insulation Dia. Range	Material	Contact Finish	Strip Form Part Numbers: For Standard Applicator	Strip Form Part Numbers: For Miniature Applicator	Loose Piece Part Numbers	Applicator for AMP-O-LECTRIC Machine	Hand Tool
26-22	0.12-0.4	**.035-.055** 0.89-1.4	Beryllium Copper	A	—	530004-6	—	466586-2	90094-4
				B	530004-4	530004-7	530005-3		
22-18	0.3-0.9	**.060-.090** 1.52-2.29	Phosphor Bronze	A	530002-3	—	530003-2	466424-2	90027-4
				B	—	530002-7	—		
				C	—	530002-5	—		
			Beryllium Copper	A	—	530006-6	—		
				B	530006-4	530006-7	530007-3		
				C	530006-2	530006-5	—		
18-16	0.8-1.4	**.090-.130** 2.29-3.3	Phosphor Bronze	C	—	530505-5	—	466413-2	—

Hand Crimping Tool



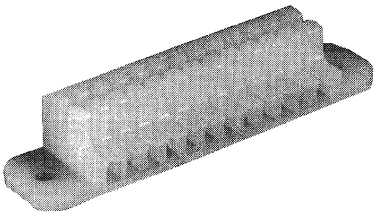
Contact Extraction Tool
Part No. 810992-1



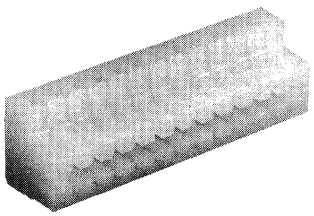
SOURCE: Catalog 82619

DUO-TYNE Flag Connectors
(Continued)

Housings, With and Without Mounting Ears



With Mounting Ears



Without Mounting Ears

Note: 12 Pos. Housing Dim. (Typ.)—With mounting ears, 2.788 [70.82] L x .500 [12.70] W x .590 [14.99] H

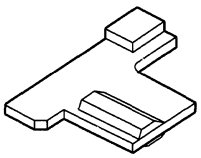
No. of Pos.	Part Numbers			
	With Mounting Ears		WIthout Mounting Ears	
	For Ins. Dia. Range .035-.090 [0.89-2.29]	For Ins. Dia. Range .090-.130 [2.29-3.30]	For Ins. Dia. Range .035-.090 [0.89-2.29]	For Ins. Dia. Range .090-.130 [2.29-3.30]
3	582380-9	—	—	—
5	—	—	582370-9	530853-2
6	582382-9	—	582371-9	530853-3
9	582383-9	530509-2	582375-9	—
12	582384-9	530509-6	582376-9	530853-5
14	582385-9	—	582372-9	530853-6
15	582386-9	530509-3	582377-9	—
18	582387-9	530509-8	582378-9	530853-8
22	582388-9	530509-9	582379-9	—

Note: Other connector sizes can be made available, consult AMP.

30 Position Housing, With and Without Mounting Holes

With Mounting Holes—
Part No. 583436-2
Without Mounting Holes—
Part No. 582804-1

On-Contact Keying Plug



Part No. 583661-1

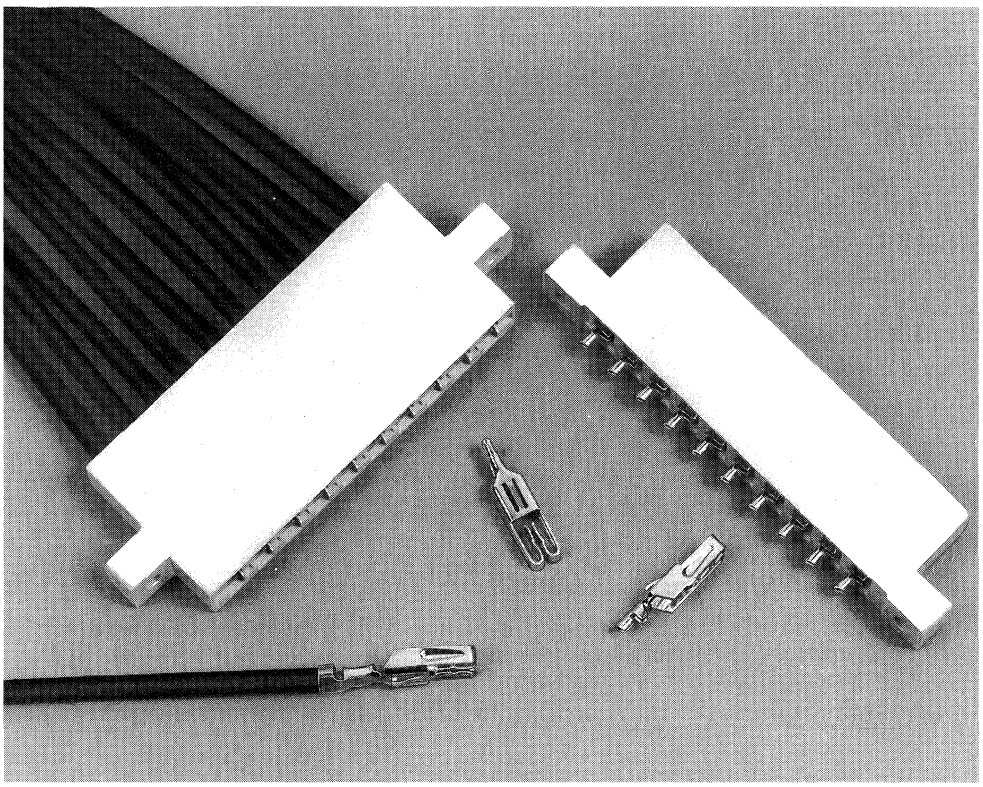
SOURCE: Catalog 82619

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

High Current Connectors

Product Facts

- **High current capability up to 30 amperes***
- **UL rated 94V-0 glass-filled thermoplastic housings**
- **Choice of wire-to-board and board-to-board (solder tail) connector configurations in 3, 4, 5, 6, 8, 10 and 12 contact sizes**
- **Heavy duty contacts made of high conductivity copper alloy with tin-over-nickel plating**
- **Contacts on .312 [7.92] centers**
- **Large redundant areas of contact assure excellent electrical continuity**
- **Connectors available for mating with .062 [1.57] and .093 [2.36] thick double-sided Pc boards**
- **Contacts furnished in strip form for automatic machine termination and loose form for hand tool application**
- **Recognized under the Component Program of Underwriters Laboratories Inc., File No. E28476**
- **Certified by Canadian Standards Association, File No. LR 7189**



AMP High Current Edge Connectors are an economical answer to the costly problem of interconnecting high current printed circuitry. Designed for a current capability of up to 30 amperes*, these connectors feature UL rated 94V-0, rugged glass-filled thermoplastic housings and high conductivity copper alloy contacts with bright tin-over-nickel plating. Contacts are on .312 [7.92] centers.

Connectors are available in 3, 4, 5, 6, 8, 9, 10 and 12 contact positions and in a choice of two styles for board-to-board and wire-to-board applications.

The board-to-board connectors are supplied preloaded with solder tail contacts and are designed to mate with .062 [1.57] thick double-sided daughter boards.

Wire-to-board housings are available with and without mounting ears and with capabilities of mating with .062 [1.57] and .093 [2.36] thick double-sided daughter boards. These housings are designed to accept crimp, snap-in contacts which can accommodate a wire size range of 16-10 AWG [1.25-6 mm²]. Contacts are furnished in strip form for automatic machine termination and in loose form for hand tool application.

While the basic contact is designed to carry 30 amperes* of current, the actual number of contacts in a connector carrying 30 amperes is limited by the "T" rise of the connector and the Pc board.

When used with a .180 [4.57] wide double-sided Pc board with 5 oz. [0.14 Kg] min. copper each side. Consult AMP engineering when paralleling contacts for power applications.

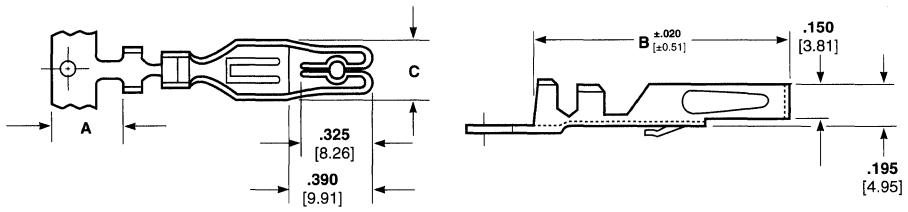
SOURCE: Catalog 82619

High Current Connectors
(Continued)

Crimp, Snap-In Contacts

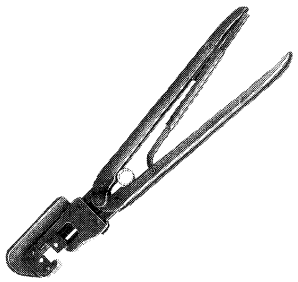
Material and Finish

Copper alloy CDA-195 plated
.000150 [0.00381] bright tin over
.000030 [0.00076] nickel

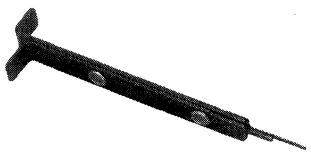


Wire Size Range		Ins. Dia. Range	Dimensions			Mateable Daughter Board Thickness	Contact Part Numbers		Applicator for AMP-O-LECTRIC Machine*	Hand Tool 69710-1 Die Insert
AWG	mm²		A	B	C		Loose Piece	Strip Form		
16-14	1.25-2	**.090-.145** 2.29-3.68	**.260** 6.60	**1.160** 29.46	**.285** 7.24	**.062** 1.57	530518-1	530517-2	466439-2	90333-1
12-10	3-6	**.160-.210** 4.06-5.33	**.190** 4.83	**1.230** 31.24	**.285** 7.24	**.062** 1.57	530520-1	530519-2	466438-2	90332-1
					.347 8.81	**.093** 2.36	—	531373-2	466811-2	—

*For use with "Model K" machines. Call the Tooling/Technical Assistance Center for part numbers of applicators for use with other bench machines and fully-automatic AMPOMATOR Lead Making Machines



Hand Crimping Tool
Part No. 69710-1



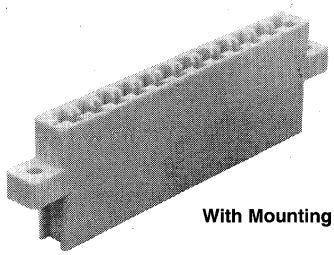
Extraction Tool
Part No. 91116-1

SOURCE: Catalog 82619

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

High Current Connectors
(Continued)
.312 [7.92] Centerline

Housings



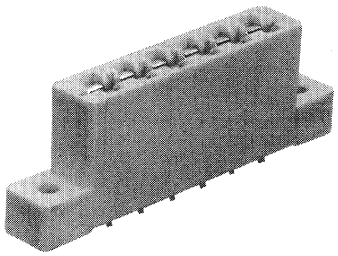
With Mounting Ears

Note: 5 Pos. Housing Dim. (Typ.)—With mounting ears, 2.596 [65.94] L x 1.400 [35.56] W x .437 [11.10] H

No. of Pos.	Housing Part Numbers		
	.062 [1.57] Pcb Thickness[1]		.093 [2.36] Pcb Thickness[2]
	With Mounting Ears	Without Mounting Ears	With Mounting Ears
3	—	—	531370-2
4	530521-3	—	—
5	—	530890-4	—
6	530521-5	—	—
8	530521-6	—	—
	—	—	531370-6
9	530521-7	—	—
12	530521-9	—	—

[1]Housings designed to accept .055-.070 [1.4-1.78] thick daughter boards; use Intercontact Keying Plug **Part No. 530533-1.**
[2]Housings designed to accept .084-.102 [2.13-2.59] thick daughter boards; use Intercontact Keying Plug **Part No. 531369-1.**
Notes: 1. Use Extraction Tool **Part No. 91116-1** to remove contacts.
2. Other connector sizes can be made available, consult AMP.

Housings Preloaded with Solder Tail Contacts



Note: 6 Pos. Housing Dim. (Typ.)—
2.908 [73.86] L x .937 [23.80] W x .437 [11.10] H

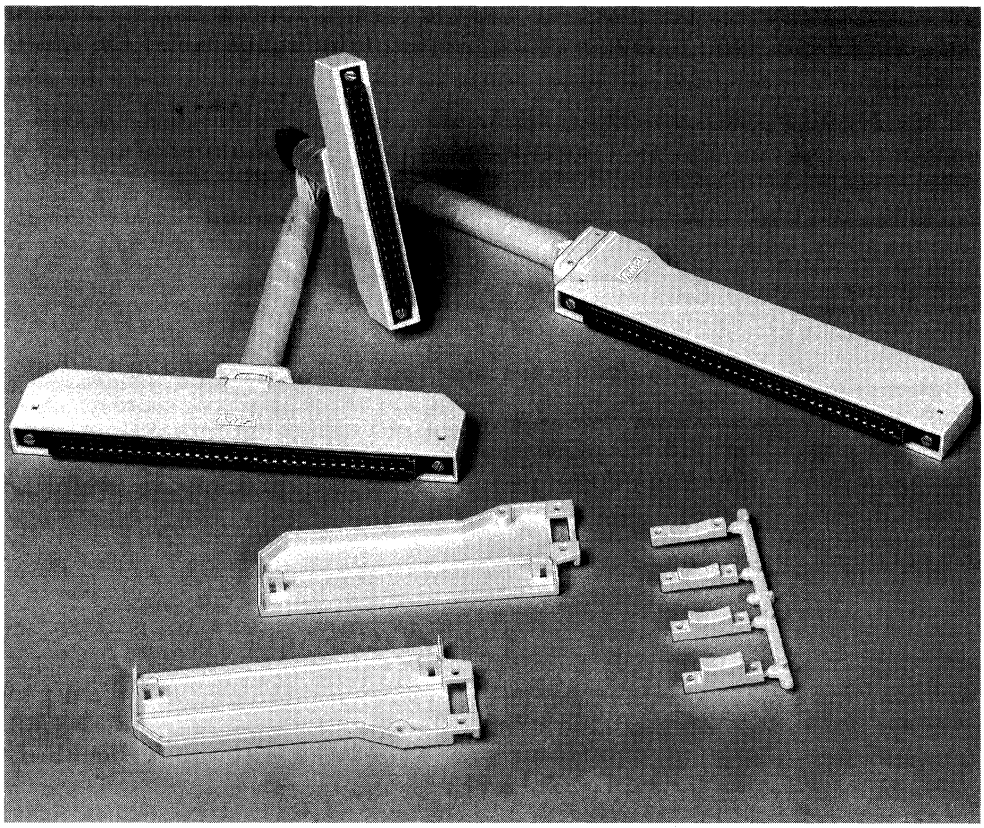
No. of Positions	Connector Part Numbers
3	531353-2
4	531353-3
6	531353-5
8	531353-6
9	531353-7
10	531353-8
12	531353-9

Notes: 1. A 1/16 [1.57] thick dummy Pc board should be inserted into the connector during soldering to a mother board.
2. Other connector sizes can be made available, consult AMP.

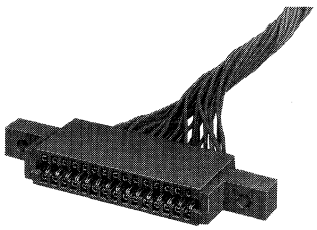
Printed Circuit Board Connector Hood Assemblies

Product Facts

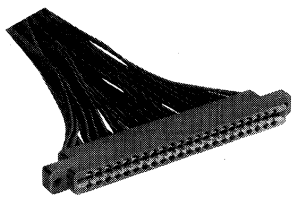
- Can be used with the highly versatile AMP-LEAF and Crimp Snap Twin Leaf printed circuit edge connectors
- Clamping capabilities for wire bundles to .550 [13.97] maximum diameter
- Available with 90° or 180° cable outlet
- All plastic construction—thermoplastic material UL rated 94V-0 for electrical and mechanical applications up to +105°C
- Thermoplastic material has excellent resistance to common commercial cleaners when used at moderate temperatures
- Separate hood assembly halves permit easy cable dressing
- Furnished in convenient kit form—each kit includes four cable clamp sizes



For use with the following connectors:



Crimp Snap Twin Leaf Connectors
(pages 3037-3042)



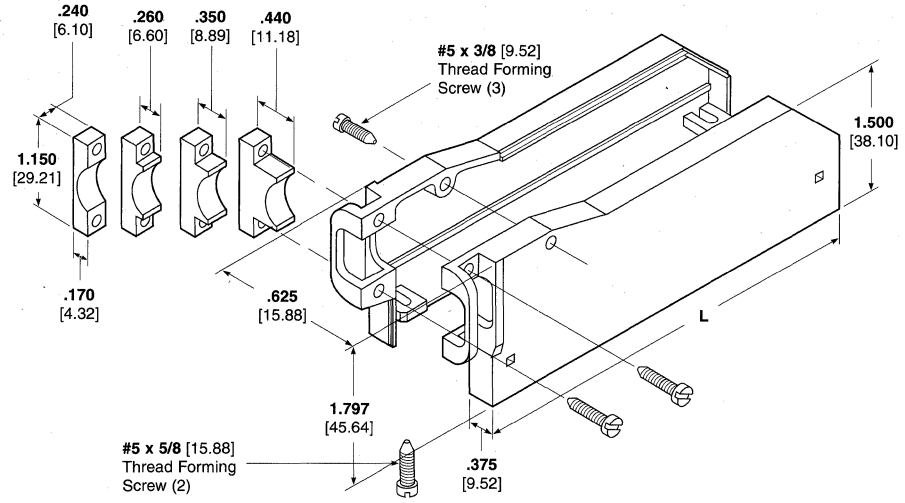
AMP-LEAF Connectors
(pages 3043-3048)

SOURCE: Catalog 82619

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

Printed Circuit Board Connector Hood Assemblies
(Continued)

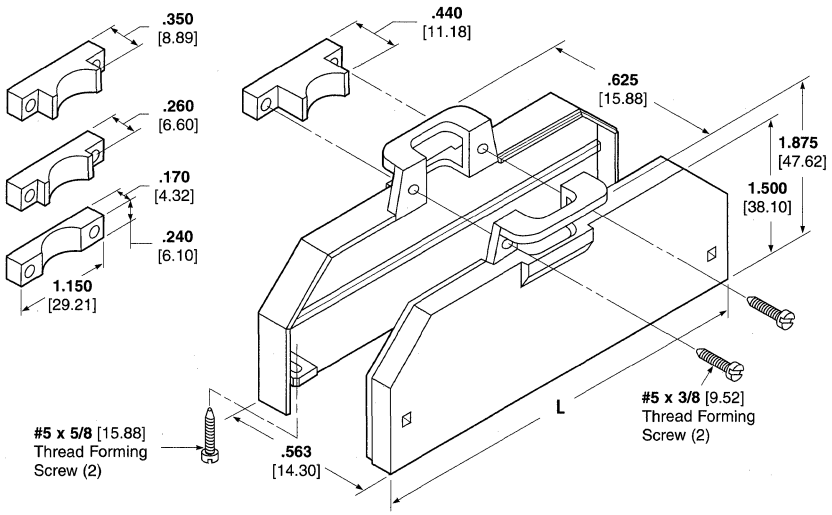
90° Cable Outlet



No. of Pos.	Hood L Dim. (Max.)	Part Numbers			
		Connector Width .380 [9.65] Max.		Connector Width .437 [11.10]	
		AMP Connector Family	Hood Assembly Kit Number*	AMP Connector Family	Hood Assembly Kit Number*
18	**3.826** 97.18	AMP-LEAF (except 582191)	530088-3	—	—
22	**3.715** 94.36	—	—	Crimp Snap Twin Leaf	1-530088-8
36	**7.198** 182.83	—	—	AMP-LEAF, Crimp Snap Twin Leaf	1-530088-6

*All screws and four sizes of cable clamps are supplied with each kit.
Note: Other hood sizes can be made available, consult AMP.

180° Cable Outlet



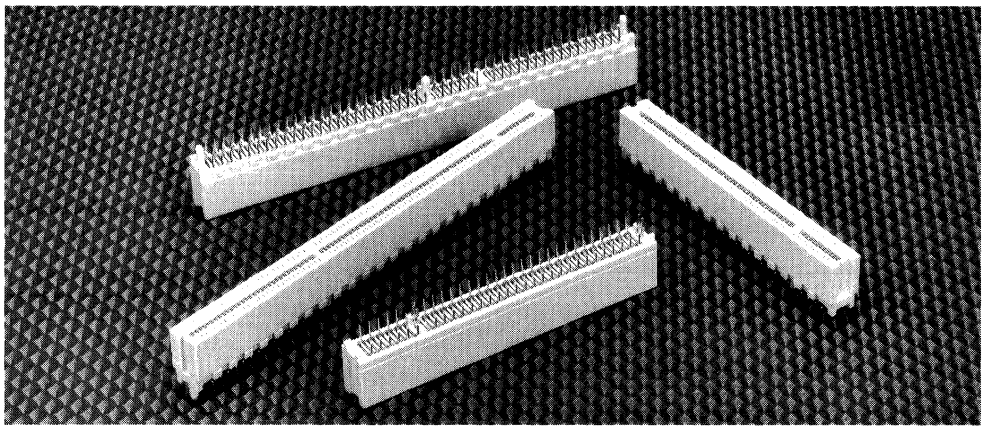
No. of Pos.	Hood L Dim. (Max.)	Part Numbers	
		Connector Width .380 [9.65] Max.	
		AMP Connector Family	Hood Assembly Kit Numbers*
10	**2.580** 65.63	AMP-LEAF	530087-1
22	**4.451** 113.06	AMP-LEAF	530087-4

*All screws and four sizes of cable clamps are supplied with each kit.
Note: Other hood sizes can be made available, consult AMP.

SOURCE: Catalog 82619

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

Standard Edge .050 [1.27] Series PCI (Peripheral Component Interconnect) Connectors



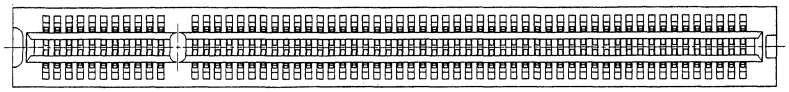
Product Facts

- High density .050 [1.27] centerline contact spacing
- Easy mating of high-circuit count daughter boards
- Polarizing web for positive board-to-connector registration
- Choice of plastic pylons or metal holddowns

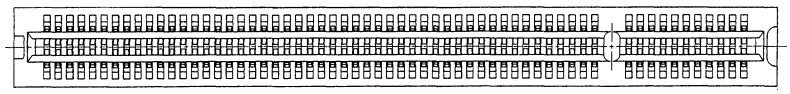
The connectors that support PCI expansion cards are derived from those on the MC bus. The MC connectors are well defined and have proven value and reliability. There are four connectors that can be used depending upon the PCI implementation. The differences between these connectors are 32 bit and 64 bit, and the 5-volt and 3.3-volt signaling environments. A key differentiates the signaling environment voltages. The same physical connector is used for the 32-bit signaling environments. In one orientation, the key accepts 5-volt boards. When rotated 180°, the connector accepts 3.3-volt signaling boards. The pin numbering of the connector changes for the different signaling environments to maintain the same relative position of signals on the connector.

32 Bit

Note:
Housing Dim. (Typ.)—
3.34 [84.84] L x .350
[8.89] W x .610 [15.49] H



2 x 60 (60 Dual) 3.3 Volt

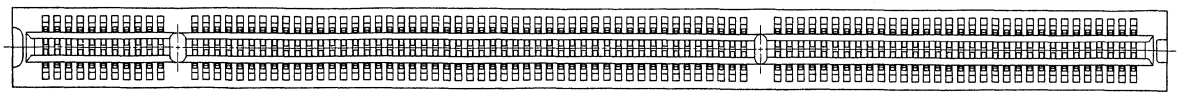


2 x 60 (60 Dual) 5 Volt

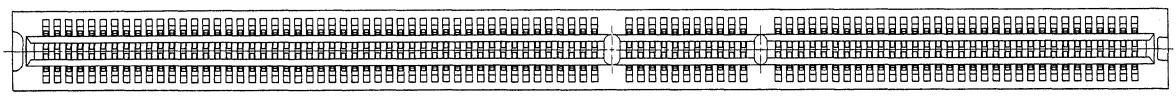
Lead Length	Part Numbers*	
	With Plastic Pylons	With Metal Holddowns
.100 2.54	646255-1	145035-1
.125 3.18	646255-2	145035-2
.140 3.55	646255-3	145035-3

* The 3.3-volt and 5-volt 32-bit connectors use the same part number; they are just rotated 180° on the board.

64 Bit



2 x 92 (92 Dual) 3.3 Volt



2 x 92 (92 Dual) 5 Volt

Note:
Housing Dim. (Typ.)—
5.04 [128.02] L x .350
[8.89] W x .610 [15.49] H

Lead Length	Part Numbers			
	3.3 Volt		5 Volt	
	with Plastic Pylons	With Metal Holddowns	With Plastic Pylons	With Metal Holddowns
.100 [2.54]	646253-1	145033-1	646254-1	145034-1
.125 [3.18]	646253-2	145033-2	646254-2	145034-2
.140 [3.55]	646253-3	145033-3	646254-3	145034-3

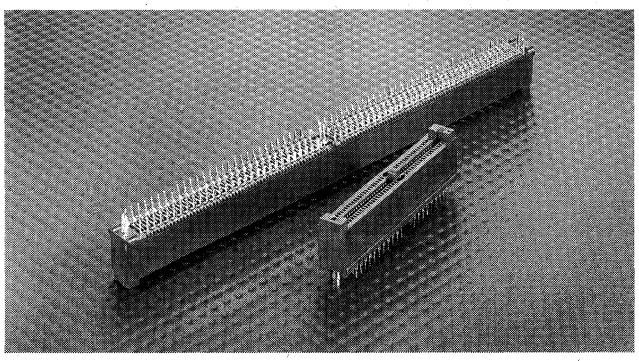
SOURCE: Catalog 82619

Specifications subject to change.

1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

High-Speed Standard Edge Connectors



Product Facts

- **1:1 signal-to-ground ratio**
- **Designed for signal transmissions with rise and fall times of 0.5 nanoseconds or greater**
- **40 signal/ground pairs per linear inch**
- **Less than 10 picosecond skew**
- **Propagation delay is typically 75 picoseconds from motherboard to daughtercard at the top of the connector**
- **Multiple simultaneous switching: 7% max. @ 0.5 ns, 5% max. @ 1.0 ns**

METRIC

- **43 ohm impedance**
- **High performance maintained when using up to 50% of the ground contacts for power**
- **30 to 130 dual positions (in increments of 10), and 73 dual position**
- **Staggered contact height minimizes mating force**
- **Produced under a Quality Management System certified to ISO 9001**

A copy of the certificate is available upon request.

ISO 9001 Certified

High-Speed Standard Edge connectors are the answer for a low cost, one-piece approach to high-speed signal transmissions.

These connectors have an upper row of signal contacts on 1.27 [.050] centerline with a lower row of ground contacts within each circuit cavity. This achieves a 0.64 [.025] centerline density in a 1.27 [.050] centerline connector with 40 signal/ground pairs per linear inch and a 1:1 signal-to-ground ratio. The staggered contact height also reduces the daughtercard mating force.

Board retainers align the connector with the motherboard and retain it for soldering. Also, the use of high-temperature tolerant materials ensures that these connectors will withstand various wave and reflow soldering techniques.

High-Speed Standard Edge connectors are available in sizes of 30 to 130 dual positions, in increments of 10, and with solder tail lengths of 2.54 [.100], 3.18 [.125], 3.94 [.155] and 4.83 [.190].

Connector accepts 1.37-1.78 [.054-.070] thick daughtercard.

No. of Dual Positions	No. of Board Retainers	Solder Tail Length*	Part Numbers
30	2	2.54	145094-1
		3.18	145094-2
		3.94	145094-3
		4.83	145094-4
40	2	2.54	145094-5
		3.18	145094-6
		3.94	145094-7
		4.83	145094-8
50	3	2.54	145090-1
		3.18	145090-2
		3.94	145090-3
		4.83	145090-4
60	3	2.54	145090-5
		3.18	145090-6
		3.94	145090-7
		4.83	145090-8
70	3	2.54	145090-9
		3.18	1-145090-0
		3.94	1-145090-1
		4.83	1-145090-2
73	3	2.54	3-145090-7
		3.18	3-145090-8
		3.94	3-145090-9
		4.83	4-145090-0
80	3	2.54	1-145090-3
		3.18	1-145090-4
		3.94	1-145090-5
		4.83	1-145090-6
90	3	2.54	1-145090-7
		3.18	1-145090-8
		3.94	1-145090-9
		4.83	2-145090-0
100	3	2.54	2-145090-1
		3.18	2-145090-2
		3.94	2-145090-3
		4.83	2-145090-4
110	3	2.54	2-145090-5
		3.18	2-145090-6
		3.94	2-145090-7
		4.83	2-145090-8
120	3	2.54	2-145090-9
		3.18	3-145090-0
		3.94	3-145090-1
		4.83	3-145090-2
130	3	2.54	3-145090-3
		3.18	3-145090-4
		3.94	3-145090-5
		4.83	3-145090-6

Note: 90 Pos. Housing Dim. (Typ)—131.03 [5.158] L x 11.94 [.470] W x 18.17 [.715] H

SOURCE: Catalog 82619

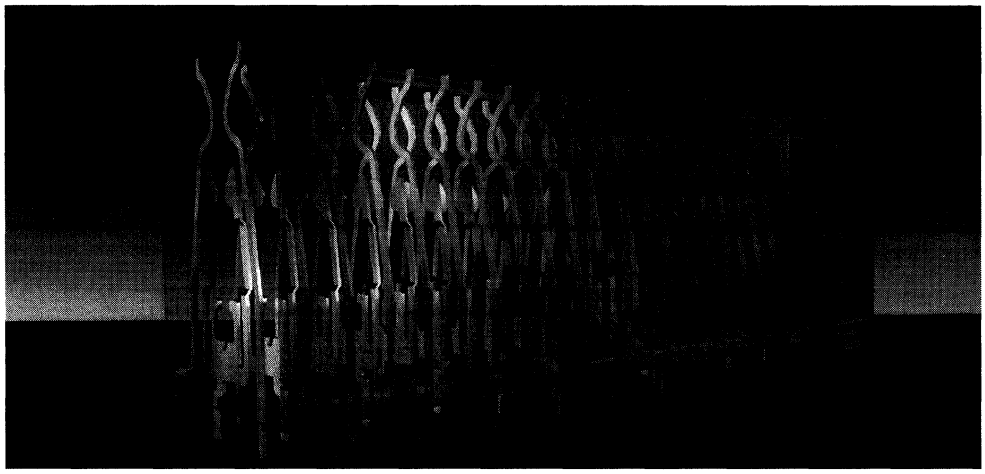
* Equivalent length in inches are: **2.54** [.100], **3.18** [.125], **3.94** [.155] and **4.83** [.190].

Specifications subject to change.

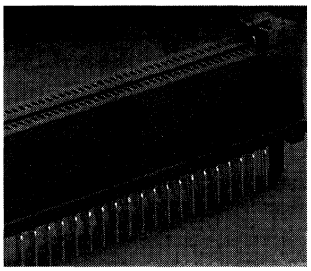
1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

High-Speed Standard Edge Connectors



How to hit 500 ps rise times with card edge economy.



If your challenge is big performance on a small bugdet, we've got exactly the price/performance edge you need.

Our High-Speed Standard Edge connector line has been designed from the board up to deliver sub-nanosecond performance in an affordable, one-piece package. Key to that performance: an upper row of signal contacts on .050 [1.27] centers, with a corresponding lower row of ground contacts in each signal cavity—providing a 1:1 signal-to-ground ratio at a very dense 40 signal lines/inch, available in 30 to 130 dual signal positions.

And the numbers? How about 500 ps edge rates, with less than 10 ps skew. Or crosstalk figures—with multiple simultaneous switching—of 7% at 0.5 ns, 5% at 1.0 ns. And the stacked contact configuration that makes it all work also reduces insertion forces significantly.

If you need high performance in a product that won't tolerate the high cost of high-speed two-piece connectors, look into the AMP High-Speed Standard Edge connector line. Full technical specifications, performance reports, and SPICE models are available, to simplify your job even more.

PERSONAL COMPUTER BUSES

Bus System	AMP Connector	No. of Dual Positions	AMP Connector Part Number	Contact Interface (Duplex Plating)	Remarks
EXPANSION BUSES					
ISA	Standard Edge II (.100 [2.54] Centerline)	52	645169-2	.000030 [0.00076] Gold	Board Retention Leads
			645169-3	.000030 [0.00076] Gold	Straight Leads
			176139-1	Gold Flash	Board Retention Leads
			176139-2	.000015 [0.00038] Gold	Board Retention Leads
			176139-3	.000030 [0.00076] Gold	Board Retention Leads
MCA	Standard Edge .050 Series (.050 [1.27] Centerline)	56	650090-1	.000030 [0.00076] Gold	Straight Leads
		66	650091-1	.000030 [0.00076] Gold	Straight Leads
		91	650092-1	.000030 [0.00076] Gold	Straight Leads
		97	650706-1	.000030 [0.00076] Gold	Straight Leads
		101	650707-1	.000030 [0.00076] Gold	Straight Leads
LOCAL BUSES					
VESA (VL)	Standard Edge .050 Series (.050 [1.27] Centerline)	56	650090-1	.000030 [0.00076] Gold	Straight Leads
PCI	Standard Edge .050 Series PCI (.050 [1.27] Centerline)	60	646255-1	.000030 [0.00076] Gold	32 Bit, 3.3 and 5 Volt
		92	646253-1	.000030 [0.00076] Gold	64 Bit, 3.3 Volt
			646254-1	.000030 [0.00076] Gold	64 Bit, 5 Volt
SYMMETRIC MULTI-PROCESSOR BUSES					
HYDRA MPI (Special Interest Group LSI Logic Corporation)	High-Speed Standard Edge	90	145052-1	.000040 [0.00102] Gold	Universal
			145053-1	.000040 [0.00102] Gold	CPU
			145054-1	.000040 [0.00102] Gold	Memory
V (Vitesse Semiconductor Corporation)	High-Speed Standard Edge	90	145052-1	.000040 [0.00102] Gold	Universal
			145053-1	.000040 [0.00102] Gold	CPU
			145054-1	.000040 [0.00102] Gold	Memory
			145084-1	.000040 [0.00102] Gold	I/O
MP BUS (Designed by PeQuR Technology, Inc.)	High-Speed Standard Edge	73	3-145090-7	.000040 [0.00102] Gold	—

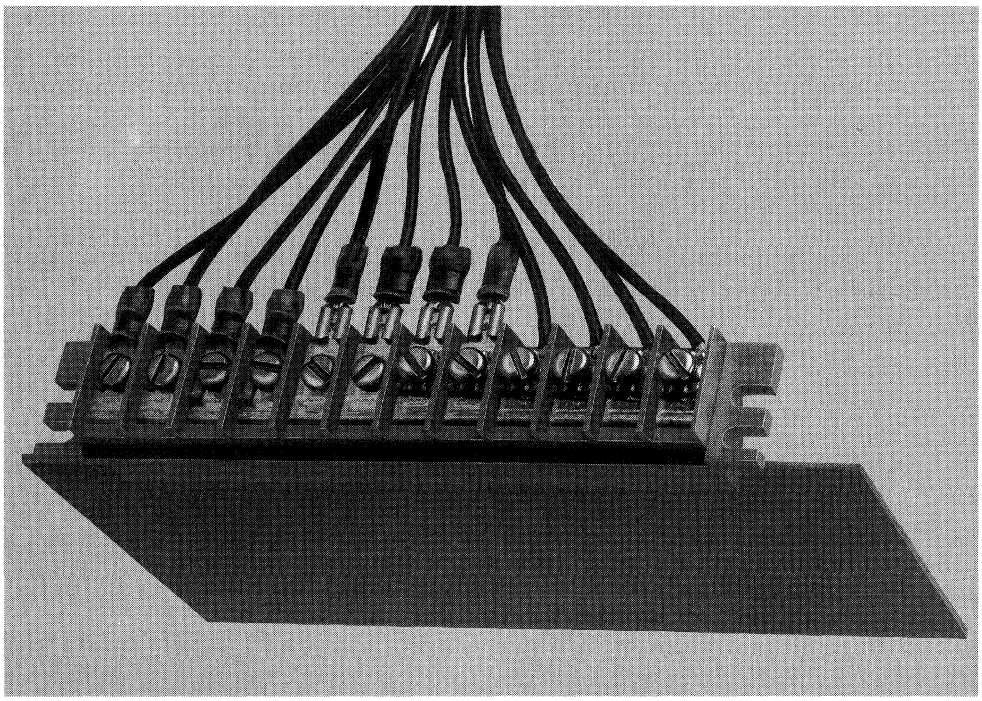
SOURCE: Catalog 82619

Specifications subject to change.

1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

AMP Multiple-Tap Printed Circuit Edge Connectors



Product Facts

- **Current rating—5 amperes**
- **Operating temperature— -85°F (-65°C) to +280°F (+137°C)**
- **Combination card edge connector/terminal block—accepts .062 [1.57] thick board for quick, easy distribution of outputs**
- **Choice of wire connections—either screw terminations for ring tongue or spade application and wire clamps for "bare" wire connections without terminals or .187 [4.75] or .250 [6.35] FASTON tabs for quick connect/disconnects**
- **Durable polycarbonate housings with one-piece phosphor bronze contacts**
- **Firm mating action of bifurcated contacts and board pads assures excellent electrical and mechanical board connections**
- **Gold over nickel or tin plated bifurcated contacts provide maximum resistance to corrosion and long life characteristics**
- **Available in popular 8, 10, 12, 14, 16 and 18 position sizes with contacts on .375 [9.53] centers—for single-sided pc boards and a 28 position double-sided on .218 [5.54] staggered centerlines**
- **Keying plugs available. Other connector sizes available upon request**
- **Recognized under the Component Program of Underwriters Laboratories Inc., File No. E60677**

The AMP Multiple-Tap Printed Circuit Edge Connector is a combination card edge connector and terminal block. It provides a direct interface between electricians' intraplant equipment wiring and a pc board. Plant wiring of industrial control equipment must conform to codes which require heavy gauge wire (18-12 AWG [0.8-3 mm²]) and barrier or terminal block style interconnections. The Multiple-Tap Connector conforms to these codes and at the same time serves as a card edge connector.

By combining the terminal block and printed circuit connector into a single component, interconnections are reduced and reliability is increased.

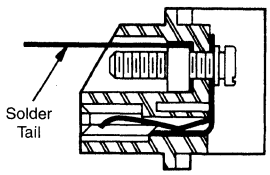
Multiple-Tap Connectors provide connection options of .187 [4.75] or .250 [6.35] FASTON tabs, 6-32 screws for ring or spade terminals and wire clamps for stripped wires. Connectors are available for single- or double-sided .062 [1.57] thick pc boards.

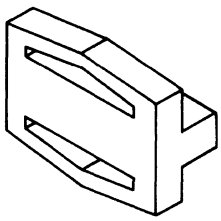
The durable and reliable Multiple-Tap Connector is heavily used in the process control industry. Other applications exist where various industrial and commercial control equipment must be interconnected.

SOURCE: Catalog 82619

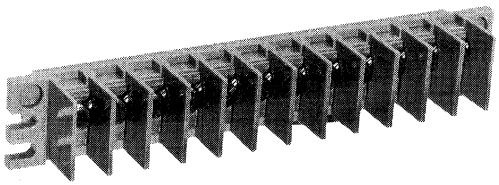
Single-Sided Pc Board Connectors

Various combinations of termination methods, materials, platings and connector sizes can be made available. For example, a special solder tail terminal is available for attaching LED displays (see drawing below). Consult your local AMP Sales Engineer.





Keying Plug
Part Number 1-480602-0



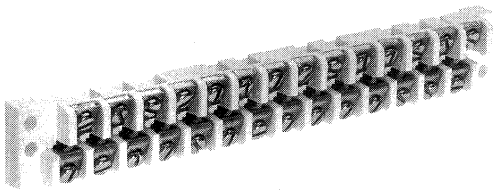
Wire Clamp Assemlby

Note: 12 Pos. Housing Dim. (Typ.)—5.250 [133.35] L x .895 [22.73] W x .715 [18.16] H

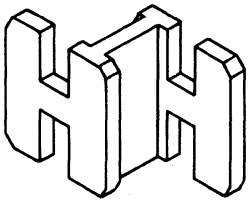
No. of Pos.	Termination Method	Termination Finish	Contact Finish	Housing Color	Part Numbers
8	6-32 Screw	Zinc	Gold	Gray	350912-1
10	6-32 Screw	Zinc	Gold	Gray	350985-1
	Wire Clamp Assy.	Zinc	Tin	Gray	640100-1
12	Wire Clamp Assy.	Zinc	Gold Flash	Gray	350861-1
	.250 [6.35] Tab	Tin	Tin	Gray	350883-1
	6-32 Screw	Zinc			
14	.187 [4.75] Tab	Gold Flash	Gold Flash	Gray	1-380914-0
	6-32 Screw	Zinc			
	.187 [4.75] Tab	Gold	Gold	Gray	1-380914-2
	6-32 Screw	Zinc			
	Wire Clamp Assy.	Zinc	Gold Flash	Gray	1-380960-0
	6-32 Screw	Zinc	Tin	Gray	1-380992-0
	.187 [4.75] Tab Bent 45°	Gold Flash	Gold Flash	Gray	640154-1
	6-32 Screw	Zinc			
16	Wire Clamp Assy.	Zinc	Gold Flash	Gray	1-380983-0
	Wire Clamp Assy.	Zinc	Gold Flash	Blue	1-380983-1
	Wire Clamp Assy.	Zinc	Tin	Gray	1-380983-2
18	Wire Clamp Assy.	Zinc	Tin	Gray	640346-1

28 Position Double-Sided Pc Board Connector (14 positions each side, staggered)

Part Number 640113-3



Note: 28 Pos. Housing Dim. (Typ.)—
6.960 [176.78] L x 1.000 [25.4] W x .968 [24.59] H



Keying Plug
Part Number 640109-1

SOURCE: Catalog 82619

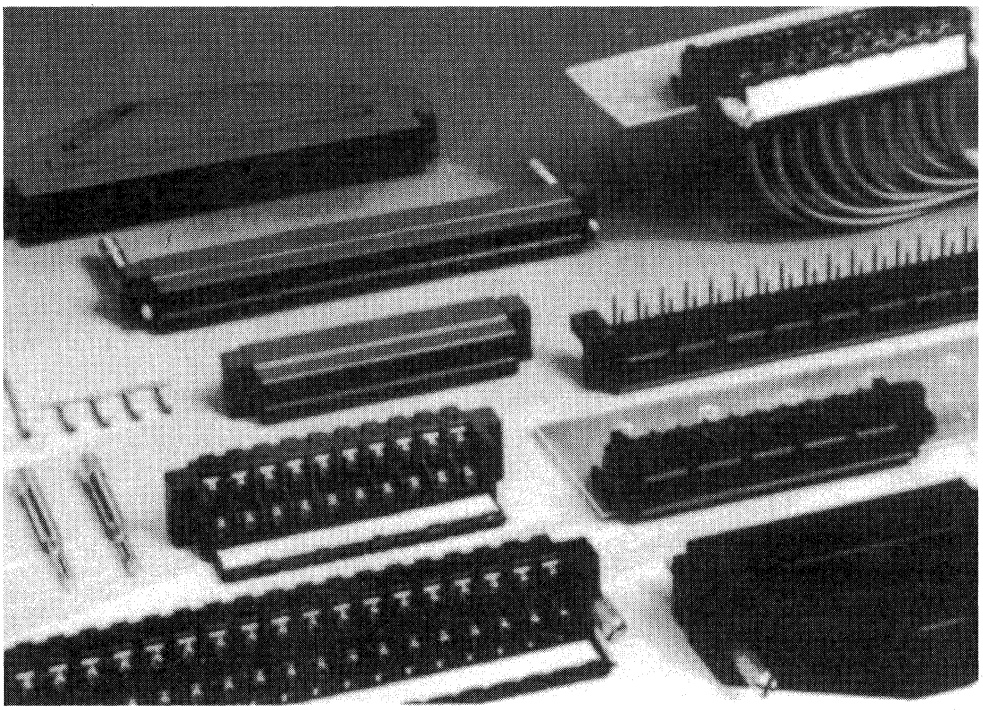
Specifications subject to change.

1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

METRIC

AMP I/O Connector Series Multiple-Tap Connectors



Product Facts

- Two-piece connector consisting of a post header and the mating plug half for wires
- Plug connector is available in two configurations: terminal block plug assembly and crimp-type
- Receptacle contacts accept three wire ranges: AWG 28-24 [0.08-0.2 mm²], AWG 24-18 [0.2-0.75 mm²] and AWG 20-14 [0.5-2.0 mm²]
- Post header is available in two configurations: right-angle for horizontal mounting and straight-type post for vertical mounting onto pc board
- 2.0 [.079] max. board thickness

Applications

- Control panels
- Power distribution boards
- Sequence controllers
- Machine tools
- Industrial robots
- Elevators
- Small power supplies

AMP I/O Connector Series Multiple-Tap Connector is easy-to-assemble wire-to-board two-piece connector consisting of a right-angle post header and the mating plug half for wires, to replace the conventional barrier connector that needs direct mounting to a pc board. The plug connector is available in two configurations: terminal block plug assembly to which terminals on wire are connected with screws and crimp-type plug connector to which crimp-terminated receptacles are snapped in. The board mount post header is loaded with right-angle square posts to mate with receptacle contacts on either 10.16 [.400] or 5.08 [.200] centers.

Crimp-type plug connector

The connector consists of a plug housing and receptacle contacts. Contacts are on 5.08 [.200] centers with row-to-row spacing of 10.16 [.400]. The connector is available in three sizes of 24, 40 and 72 positions. It can share the mating post header with a terminal block plug assembly with contacts loaded in alternate cavities. Receptacle contacts accept three wire size ranges of AWG 28-24 (0.08-0.2 mm²), AWG 24-18 (0.2-0.75 mm²) and AWG 20-14 (0.5-2.0 mm²). A shield case kit for wire bundling and protection and movable screws for mating and securing of the connector are available on request for use with this crimp-type plug connector.

Terminal block plug assembly

The terminal block plug assembly consists of a plug housing with stud nuts (M3.5), loaded with washer screws (M3.5) and receptacle contacts on 10.16 [.400] centers with row-to-row spacing of 10.16 [.400]. The assembly comes in three sizes of 12, 20 and 36 positions. For terminals, PLASTI-GRIP or PIDG ring terminals with stud size of 3.5 [.138] minimum and tongue diameter of 8.7 [.343] maximum can be used. A name plate kit for circuit identification and movable screws for mating and screwing of the assembly are available on request for use with this terminal block plug assembly.

Post header

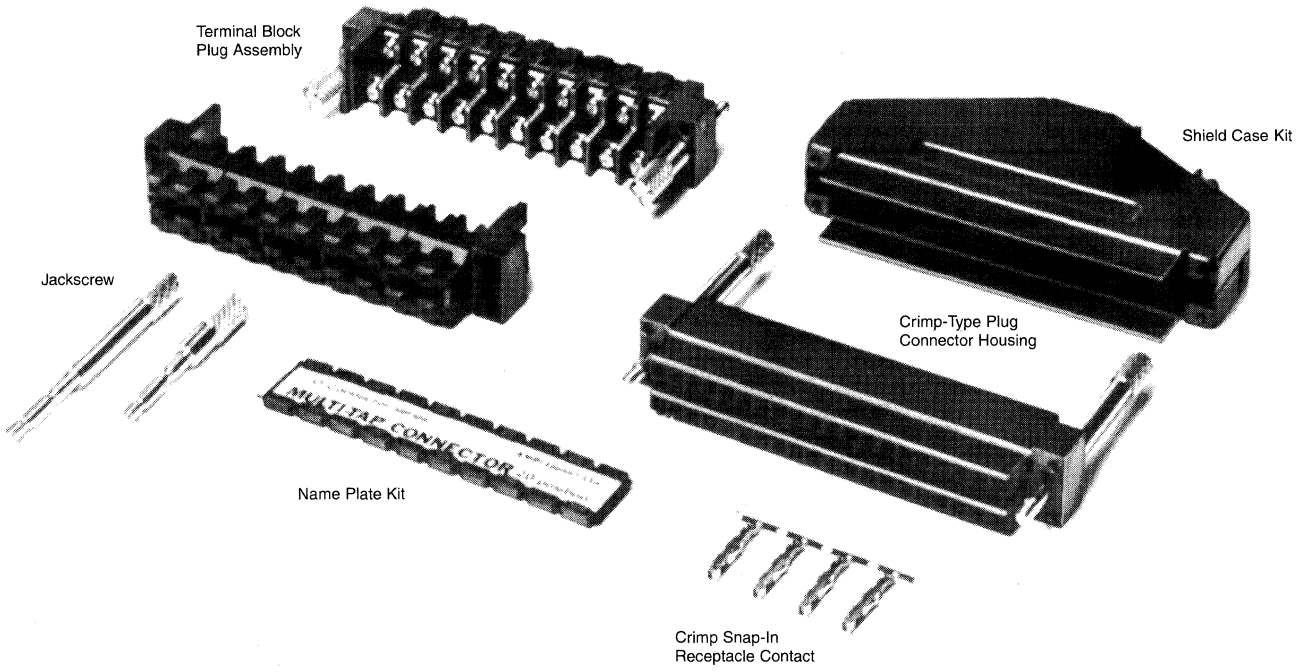
The post header is available in two configurations, a right-angle post header which can be mounted onto the board horizontally and a straight-type post header which is mounted onto the board vertically.

Both are supplied with contacts either on 10.16 [.400] or 5.08 [.200] centerlines. The one with 10.16 [.400] centerline contacts mates with a terminal block plug assembly as well as with crimp-type plug connector loaded with contacts in every other cavity. The post header with 5.08 [.200] centerline contacts mates a fully loaded crimp-type plug connector.

SOURCE: Catalog 82619

Connector Components

METRIC

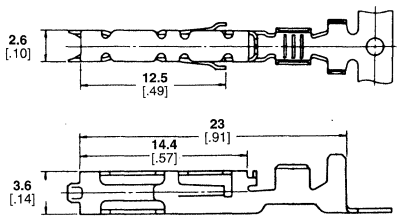


Crimp-Type Plug Connector Housings

Note: 24 Pos. Housing Dim. (Typ.)—81.3 [3.20] L x 20.0 [.787] W x 30.0 [1.18] H

No. of Pos.	Part No.	Part No. of Applicable Post Header
24	172450-1	172457-1
40	172450-2	172457-2
72	172450-3	172457-3

Crimp Snap-In Receptacle Contacts



Wire Size		Wire Ins. Dia.	Part No. of Contact		Part No. of Applicable Plug Housing	Hand Tool No.
AWG	mm²		Strip	Loose Piece		
28-24	0.08-0.2	**0.8-1.4** [0.03-0.06]	—	172758-1	172450	752929-1
24-18	0.2-0.75	**1.1-2.8** [0.04-0.11]	172754-1	172755-1		752928-1
20-14	0.5-2.0	**2.2-3.4** [0.09-0.13]	172751-1	172752-1		752927-1

Note: Extraction Tool **Part No. 752930-1**

SOURCE: Catalog 82619

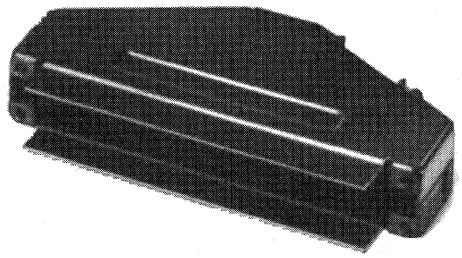
Specifications subject to change.

1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

METRIC

Shield Case Kit (For Crimp-Type Plug Connector)



For 40 and 72 Positions

No. of Positions	Cable Bundle Dia. (Max.)	Part No. of Shield Case Kit	Part No. of Applicable Plug Housing
24	18	172455-1	172450-1
40	22	172455-2	172450-2
72	30	172455-3	172450-3

Terminal Block Plug Assembly

Note: 12 Pos. Housing Dim. (Typ.)—81.3 [3.20] L x 21.0 [.827] W x 38.3 [1.51] H

No. of Positions	Part No. of Plug Assembly	Part No. of Commoning Tab
12	172378-1	171605-2*
20	172378-2	
36	172378-3	

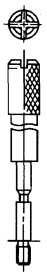
*Strip part number

Name Plate Kit (Option) (For Terminal Block Plug Assembly)

Note: 20 Pos. Housing Dim. (Typ.)—102.7 [4.04] L x 20.0 [.787] W x 4.2 [.165] H

No. of Positions	Part No. of Name Plate Kit
20	172382-2

Jackscrew



Part No. of Jackscrew	Part No. of Applicable Connector
172960-3	172378
172960-5 172960-6	172450

SOURCE: Catalog 82619

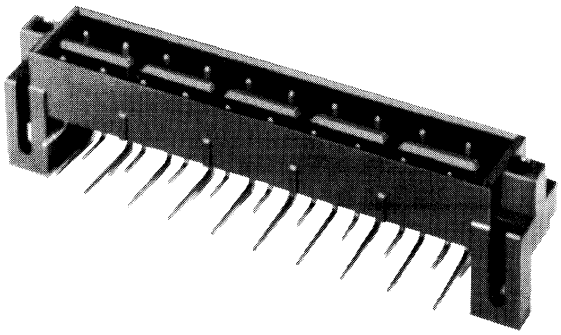
Specifications subject to change.

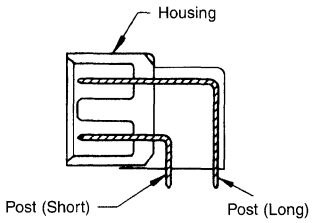
1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

METRIC

Post Header, Right-Angle Type

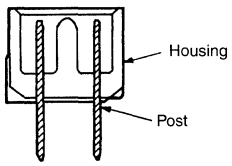




Note: 12 Pos. Housing Dim. (Typ.) —
10.16 [.400] Centerline, 81.3 [3.2] L x 28.2 [1.11] W x 20.5 [.807] H

Post Centerline	No. of Positions	Part Numbers
10.16 .400	12	172380-1
	20	172380-2
	36	172380-3
5.08 .200	24	172457-1
	40	172457-2
	72	172457-3

Post Header, Vertical Mount Type



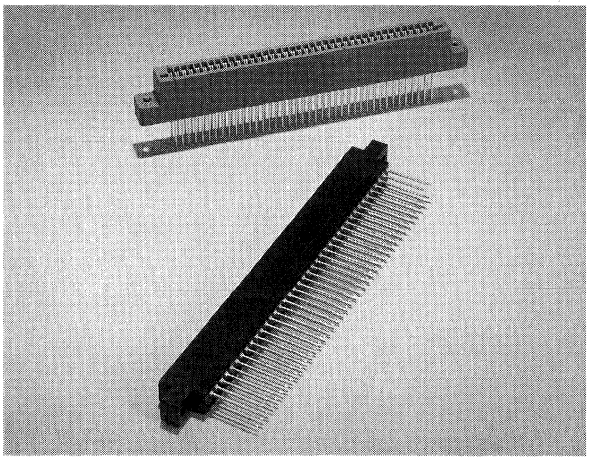
Note: 20 Pos. Housing Dim. (Typ.)—121.9 [4.80] L x 20.0 [.787] W x 16.0 [.630] H

Post Centerline	No. of Positions	Part Number
10.16 [.400]	20	172812-2

SOURCE: Catalog 82619

Specifications subject to change.
1-800-522-6752 Product Information Center/ AMP FAX Service
1-800-722-1111 Tooling/Technical Assistance Center

Wrap-Type Printed Circuit Connectors



Product Facts

- Post engineered for wiring by semiautomatic and hand wrap-type tooling
- Contacts incorporate posts for complete compatibility with .025 [0.64] square wrap-type technology
- Housings furnished in a variety of sizes and configurations—dual contact positions other than those listed can also be supplied
- Housings accommodate pc boards from .054 to .071 [1.37 to 1.80] thick
- Polarizing keys are available
- One-piece contacts are bifurcated for redundancy and are removable using a simple extraction tool
- Recognized under the Component Program of Underwriters Laboratories Inc., File No. E28476

Card Edge Connectors

.100 x .200 [2.54 x 5.08] Centerline Spacing (Post Size—.025 [0.64] square equivalent)*

Polarizing Key
Intercontact Type
Part No. 67342

Replacement Contact
Part No. 67826-6

*AMP equivalent post .022 x .027 [0.56 x 0.69] has the same cross section as the .025 [0.64] square post and is approved by Gardner-Denver for hand and semiautomatic wrap-type applications using the .025 [0.64] termination technique.

Note: 30 Pos. Housing Dim. (Typ.)—3.84 [97.54] L x .380 [9.65] W x .720 [18.29] H

No. of Dual Positions	Housing Marking Style†	Part Numbers		
		Diallyl Phthalate Housing	Phenolic Housing	
		.000030 [0.00076] Selective Gold Plating	.000030 [0.00076] Gold Plating	.000015 [0.00038] Gold Plating
25	46	—	3-67962-3	—
30	46	1-67962-1	—	1-67962-2
35	46	—	—	1-67962-8
40	46	—	3-67962-9	2-67962-0
60	46	—	—	2-67962-6

†Marking Styles—see page 3069.

.125 x .200 [3.18 x 5.08] Centerline Spacing (Post Size—.025 [0.64] square equivalent)*

Polarizing Key
Contact Replacement Type
Part No. 67372

*AMP equivalent post .022 x .027 [0.56 x 0.69] has the same cross section as the .025 [0.64] square post and is approved by Gardner-Denver for hand and semiautomatic wrap-type applications using the .025 [0.64] termination technique.

Note: 22 Pos. Housing Dim. (Typ.)—3.38 [85.85] L x .380 [9.65] W x .720 [18.29] H

No. of Dual Positions	Housing Marking Style†	Part Numbers	
		Phenolic Housing	
		.000030 [0.00076] Gold Plating	.000015 [0.00038] Gold Plating
12	46	—	67963-2
22	46	—	67963-8
28	46	3-67963-4	—

†Marking Styles—see page 3069.

SOURCE: Catalog 82006

Specifications subject to change.

1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

Card Edge Connectors
(Continued)

.125 x .250 [3.18 x 6.35] Centerline Spacing (Post Size—.025 [0.64] square equivalent)*

Polarizing Key
Contact Replacement Type
Part No. 645067-1

Replacement Contact
Part No. 2-67875-0

*AMP equivalent post .022 x .027 [0.56 x 0.69] has the same cross section as the .025 [0.64] square post and is approved by Gardner-Denver for hand and semiautomatic wrap-type applications using the .025 [0.64] termination technique.

Note: 35 Pos. Housing Dim. (Typ.)—5.18 [131.57] L x .370 [9.40] W x .610 [15.49] H

No. of Dual Positions	Housing Marking Style†	Part Numbers	
		Diallyl Phthalate Housing	Phenolic Housing
		.000030 [0.00076] Selective Gold Plating	.000015 [0.00038] Gold Plating
35	41	1-67964-3	—
40	41	—	67878-7
50	41	—	1-67878-0

†Marking Styles—see page 3069.

.156 x .188 [3.96 x 4.78] Centerline Spacing (Post Size—.025 [0.64] square equivalent)*

Polarizing Key
Intercontact Type
Part No. 67611-6

Contact Replacement Type
Part No. 67372

Replacement Contact
Part No. 67826-6

*AMP equivalent post .022 x .027 [0.56 x 0.69] has the same cross section as the .025 [0.64] square post and is approved by Gardner-Denver for hand and semiautomatic wrap-type applications using the .025 [0.64] termination technique.

Note: 22 Pos. Housing Dim. (Typ.)—4.28 [108.71] L x .350 [8.89] W x .720 [18.29] H

No. of Dual Positions	Housing Marking Style†	Part Numbers		
		Diallyl Phthalate Housing	Phenolic Housing	
		.000030 [0.00076] Selective Gold Plating	.000030 [0.00076] Gold Plating	.000015 [0.00038] Gold Plating
15	45	—	—	67797-8
18	1	—	67797-2	—
22	45	1-67797-0	3-67797-3	1-67797-1
22	12	67798-1	67798-2	—
28	45	—	—	1-67797-5
30*	4	—	67799-1	—

†Marking Styles—see page 3069.
**14 and 16 Position dual card slot

.156 x .188 [3.96 x 4.78] Centerline Spacing (Post Size—.025 [0.64] square equivalent)*

Polarizing Key
Intercontact Type
Part No. 67611-6

Contact Replacement Type
Part No. 67372

Replacement Contact
Part No. 67808-7

*AMP equivalent post .022 x .027 [0.56 x 0.69] has the same cross section as the .025 [0.64] square post and is approved by Gardner-Denver for hand and semi automatic wrap-type applications using the .025 [0.64] termination technique.

Note: 25 Pos. Housing Dim. (Typ.)—4.75 [120.65] L x .380 [9.65] W x .720 [18.29] H

No. of Dual Positions	Housing Marking Style†	Part Numbers	
		Polyester Housings	
		.000030 [0.00076] Gold Plating	.000015 [0.00038] Gold Plating
25	41	2-67985-6	67985-6
36	41	3-67985-0	1-67985-0
43	41	—	1-67985-1

†Marking Styles—see page 3069.

SOURCE: Catalog 82006

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

Card Edge Connectors
(Continued)

.156 x .188 [3.96 x 4.78] Centerline Spacing
(Post Size—.031 x .062 [0.79 x 1.57])*

Polarizing Key
Intercontact Type
Part No. 67611-6

Contact Replacement Type
Part No. 67372

Replacement Contact
Part No. 7-67018-5

*These posts are approved by Gardner-Denver for hand and semiautomatic wrap-type applications.

Note: 15 Pos. Housing Dim. (Typ.)—3.19 [81.03] L x .350 [8.89] W x .720 [18.29] H

No. of Dual Positions	Housing Marking Style†	Part Numbers		
		Diallyl Phthalate Housing	Phenolic Housing	
		.000030 [0.00076] Selective Gold Plating	.000030 [0.00076] Gold Plating	.000015 [0.00038] Gold Plating
10	45	67824-2	—	1-67824-2
15	45	—	3-67824-1	—
18	45	—	3-67824-2	1-67824-4
22	45	67824-5	3-67824-3	1-67824-5
28	45	67824-7	—	1-67824-7
30	45	—	3-67824-6	—

†Marking Styles—see page 3069.

.156 x .188 [3.96 x 4.78] Centerline Spacing
(Post Size—.031 x .062 [0.79 x 1.57])*

Polarizing Key
Intercontact Type
Part No. 67611-6

Contact Replacement Type
Part No. 67372

Replacement Contact
Part No. 7-67018-5

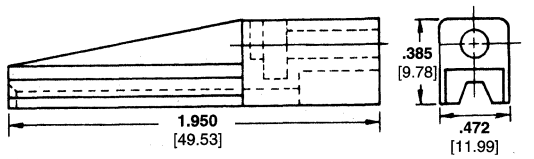
*These posts are approved by Gardner-Denver for hand and semiautomatic wrap-type applications.

Note: 28 Pos. Housing Dim. (Typ.)—5.22 [132.59] L x .370 [9.40] W x .720 [18.29] H

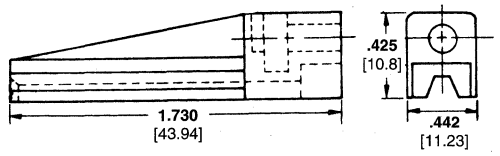
No. of Dual Positions	Housing Marking Style†	Part Numbers	
		Polyester Housings	
		.000030 [0.00076] Gold Plating	.000015 [0.00038] Gold Plating
6	41	2-67986-1	67986-1
28	41	—	67986-7

†Marking Styles—see page 3069.

Card Guides



Part Number 67764-1 (Blue)
Part Number 67764-2 (Black)



Part Number 67762-1 (Blue)
Part Number 67762-2 (Black)

Contact Replacement Tool

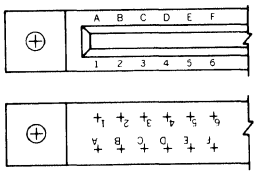
Post Size	Part Number
.022 x .027 0.56 x 0.69	265831-1
.031 x .062 0.79 x 1.57	265831-3

SOURCE: Catalog 82006

Housing Marking Styles

Type of Characters—
Stamped white ink

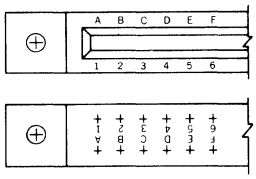
1



Card Side

Post Side

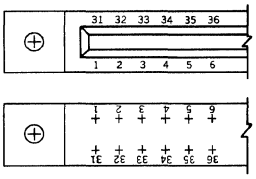
12



Card Side

Post Side

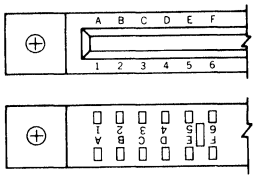
4



Card Side

Post Side

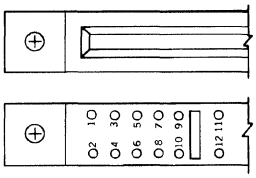
45



Card Side

Post Side

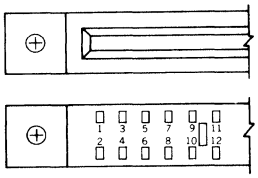
41



Card Side

Post Side

46



Card Side

Post Side

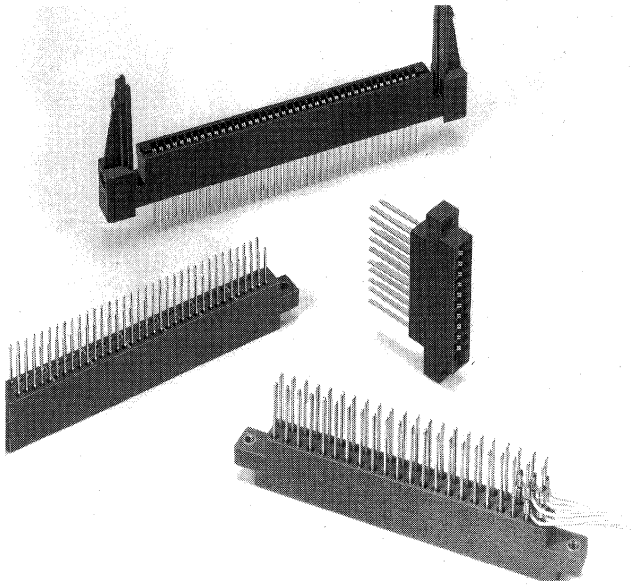
SOURCE: Catalog 82006

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

TERMI-TWIST Printed Circuit Connectors

Product Facts

- Locking shoulders firmly secure contact in housing
- Adaptability of connectors to the automatic AMP M-TACT Wiring Head assures greatest economy and production efficiency
- One-piece contacts are bifurcated for redundancy and are easily removed with simple extraction tool
- Choice of finishes includes varied thicknesses of gold-over-nickel plating plus selective plating on contact tip for longer life and greater economy
- Housings accommodate pc boards from .054 to .071 [1.37 to 1.8] thick
- Housing materials include glass filled phenolic, polyester and diallyl phthalate
- Housings loaded in one or both sides and available with polarizing keys
- Connector sizes provide a wide selection of contact positions—contacts on .100 [2.54], .125 [3.18], .156 [3.96] and .200 [5.08] centers
- Post configurations compatible with TERMI-POINT clip technique, wrap-type terminations or solder applications
- Recognized under the Component Program of Underwriters Laboratories Inc., File No. E28476



Card Edge Connectors

.100 x .200 [2.54 x 5.08] Centerline Spacing
(Post Size—.022 x .036 [0.56 x 0.91])

Polarizing Key
Intercontact Type
Part No. 67342

Note: 34 Pos. Housing Dim. (Typ.)—4.28 [108.71] L x .350 [8.89] W x .720 [18.29] H

No. of Dual Positions	Housing Marking Style	Part Number Phenolic Housing
34	None	1-67105-3*

* .000030 [0.00076] gold plating

.125 x .200 [3.18 x 5.08] Centerline Spacing
(Post Size—.022 x .036 [0.56 x 0.91])

Polarizing Key
Contact Replacement Type
Part No. 67372-1

Replacement Contact
Part No. 67621-2

Note: 50 Pos. Housing Dim. (Typ.)—6.875 [174.63] L x .380 [9.70] W x .720 [18.29] H

No. of Dual Positions	Housing Marking Style†	Part Number Diallyl Phthalate Housing .000030 [0.00076] Selective Gold Plating
50	46	1-67782-2

†Marking styles–see page 3072

Card Edge Connectors
(Continued)

.156 x .188 [3.96 x 4.78] Centerline Spacing
(Post Size—.022 x .036 [0.56 x 0.91])

Polarizing Key
Intercontact Type Part No. 67704-4
Contact Replacement Type
Part No. 67372
Replacement Contact
Part No. 67698-9

Note: 15 Pos. Housing Dim. (Typ.)—3.19 [81.03] L x .35 [8.89] W x .72 [18.29] H

No. of Dual Positions	Housing Marking Style†	Part Numbers	
		Diallyl Phthalate Housing .000030 [0.00076] Selective Gold Plating	Phenolic Housing
15	45	67686-3	—
22	12	—	67747-2**
43	45	—	2-67686-1*

* .000015 [0.00038] gold plating
** .000030 [0.00076] gold plating
†Marking styles—see page 3072

.156 x .188 [3.96 x 4.78] Centerline Spacing
(Post Size—.031 x .062 [0.79 x 1.57])

Polarizing Key
Intercontact Type
Part No. 67611-6
Contact Replacement Type
Part No. 67372
Replacement Contact
Part No. 7-67018-5

Note: 28 Pos. Housing Dim. (Typ.)—5.29 [134.37] L x .440 [11.18] W x .720 [18.29] H

No. of Dual Positions	Housing Marking Style†	Part Numbers	
		Diallyl Phthalate Housing .000030 [0.00076] Selective Gold Plating	Phenolic Housing
10	45	67824-2	1-67824-2*
18	45	—	1-67824-4*
18	1	67074	67074-9**
22	45	67824-5	1-67824-5*
22	12	1-67031-0	1-67031-5*
28	45	67824-7	1-67824-7*
36	32P	—	67552-6**
43	21	—	67822-1**

†Marking styles—see page 3072
*.000015 [0.00038] gold plating
**.000030 [0.00076] gold plating

.156 x .188 [3.96 x 4.78] Centerline Spacing
(Post Size—.031 x .062 [0.79 x 1.57])

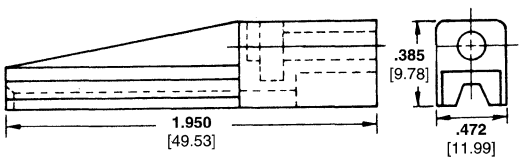
Polarizing Key
Intercontact Type
Part No. 67611-6
Contact Replacement Type
Part No. 67372

Note: 6 Pos. Housing Dim. (Typ.)—1.784 [45.31] L x .370 [9.40] W x .720 [18.29] H

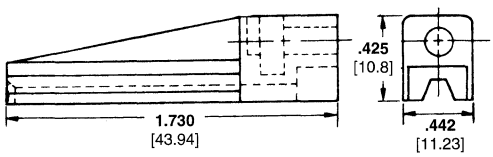
No. of Dual Positions	Housing Marking Style†	Polyester Housing Part Numbers	
		Without Threaded Insert	
		.000015 [0.00038] Gold Plating	.000030 [0.00076] Gold Plating
6	44	67986-1	2-67986-1
28	44	67986-7	—

†Marking styles—see page 3072

Card Guides



Part Number 67764-1 (Blue)
Part Number 67764-2 (Black)



Part Number 67762-1 (Blue)
Part Number 67762-2 (Black)

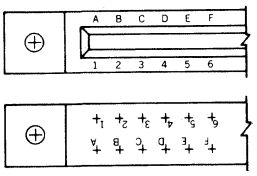
SOURCE: Catalog 82005

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

Housing Marking Styles

Type of Characters—
Stamped white ink

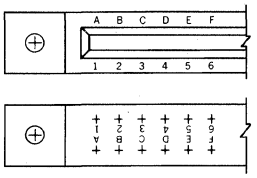
1



Card Side

Post Side

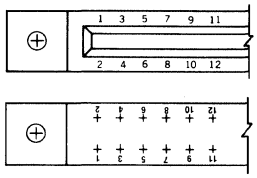
12



Card Side

Post Side

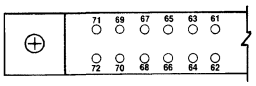
21



Card Side

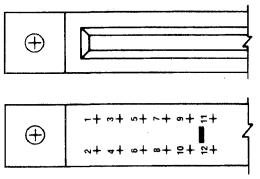
Post Side

32



Post Side

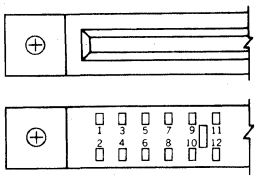
44



Card Side

Post Side

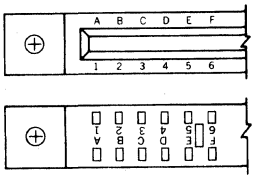
46



Card Side

Post Side

45



Card Side

Post Side

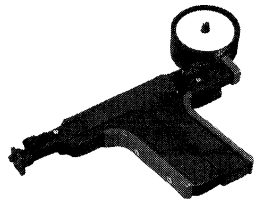
3 Printed Circuit Board Connectors
TERMI-TWIST Printed Circuit Connectors

SOURCE: Catalog 82005

TERMI-POINT
Tooling and Clips

.022 x .036 [0.56 x 0.91] Post Size
Pneumatic Hand Tool Part No. 59865-1, (for use with semiautomatic wiring machines) and Manual Service Tool Part No. 69535

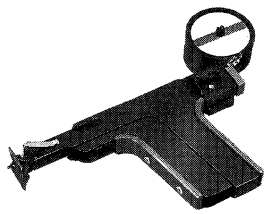
Wire Size Solid or Stranded (7 Str.)		Insulation Dia. Range		Mandrel Insert Number	Mandrel Color Code	Clip Part Number (2500 per Reel)	
AWG	mm²	inch	mm			Tin Plated	Gold Plated
28	0.08-0.09			69545-1	Black		
30	0.05	.018-.029	0.46-0.74	69545-3	White	3-67042-4	67042-2
32	0.03			69545-2	Gray		



Manual Service Tool
Part No. 69535

.031 x .062 [0.79 x 1.57] Post Size
Pneumatic Hand Tool Part No. 59928-2 and Pneumatic Tool Part No. 59928-7 (for use with semiautomatic wiring machines)

Wire Size Solid or Stranded (7 Str.)		Insulation Dia. Range		Mandrel Insert Number	Mandrel Color Code	Clip Part Number (2800 per Reel)	
AWG	mm²	inch	mm			Tin Plated	Gold Plated
22	0.3-0.4	.036-.045	0.91-1.14	265070-1	Orange	4-330495-2	4-330495-9
		.046-.055	1.17-1.4	265070-2			
		.056-.065	1.42-1.65	265070-3			
24	0.2	.034-.045	0.86-1.14	265070-4	Red	2-330495-1	2-330495-2
		.046-.055	1.17-1.4	265070-5			
26	0.12-0.15	.030-.045	0.76-1.14	265070-7	Brown	1-330495-3	1-330495-8
28	0.08-0.09	.034-.045	0.86-1.14	1-265070-0	Black	3-330495-5	9-330495-6

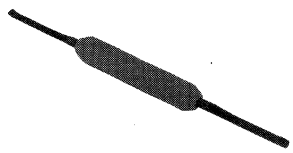


Manual Service Tool
Part No. 69526-2

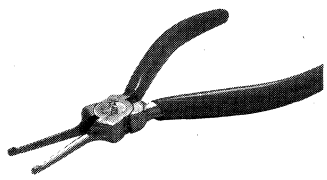
.031 x .062 [0.79 x 1.57] Post Size
Manual Service Tool Part No. 69526-2

Wire Size Solid or Stranded (7 Str.)		Insulation Dia. Range		Mandrel Insert Number	Mandrel Color Code	Clip Part Number (1000 per Reel)	
AWG	mm²	inch	mm			Tin Plated	Gold Plated
22	0.3-0.4	.036-.045	0.91-1.14	69551-8	Orange	6-330495-1	6-330495-2
		.046-.065	1.17-1.65	1-69411-4			
24	0.2	.034-.045	0.86-1.14	69551-9	Red	5-330495-3	1-330495-9
		.046-.065	1.17-1.65	1-69411-3			
26	0.12-0.15	.022-.045	0.56-1.14	69551-6	Brown	5-330495-5	9-330495-8
		.046-.055	1.17-1.4	1-69411-9			
28	0.08-0.09	.022-.045	0.56-1.14	69551-5	Black	5-330495-9	—

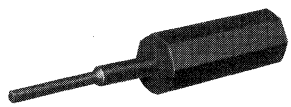
Pull Test Tool
.022 x .036 [0.56 x 0.91] Post—
Part No. 69358-6
.031 x .062 [0.79 x 1.57] Post—
Part No. 69358-2



Clip Extraction Tool
.022 x .036 [0.56 x 0.91] Post—
Part No. 69357-5
.031 x .062 [0.79 x 1.57] Post—
Part No. 69357-3



Clip Extraction Captive Tool
.031 x .062 [0.79 x 1.57] Post—
Part No. 69445



Post Replacement Tool
.022 x .036 [0.56 x 0.91] Post—
Part No. 265831-1
.031 x .062 [0.79 x 1.57] Post—
Part No. 265831-3

SOURCE: Catalog 82005

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

.031 x .062 [0.79 x 1.57] Interconnection System (AMPMODU)

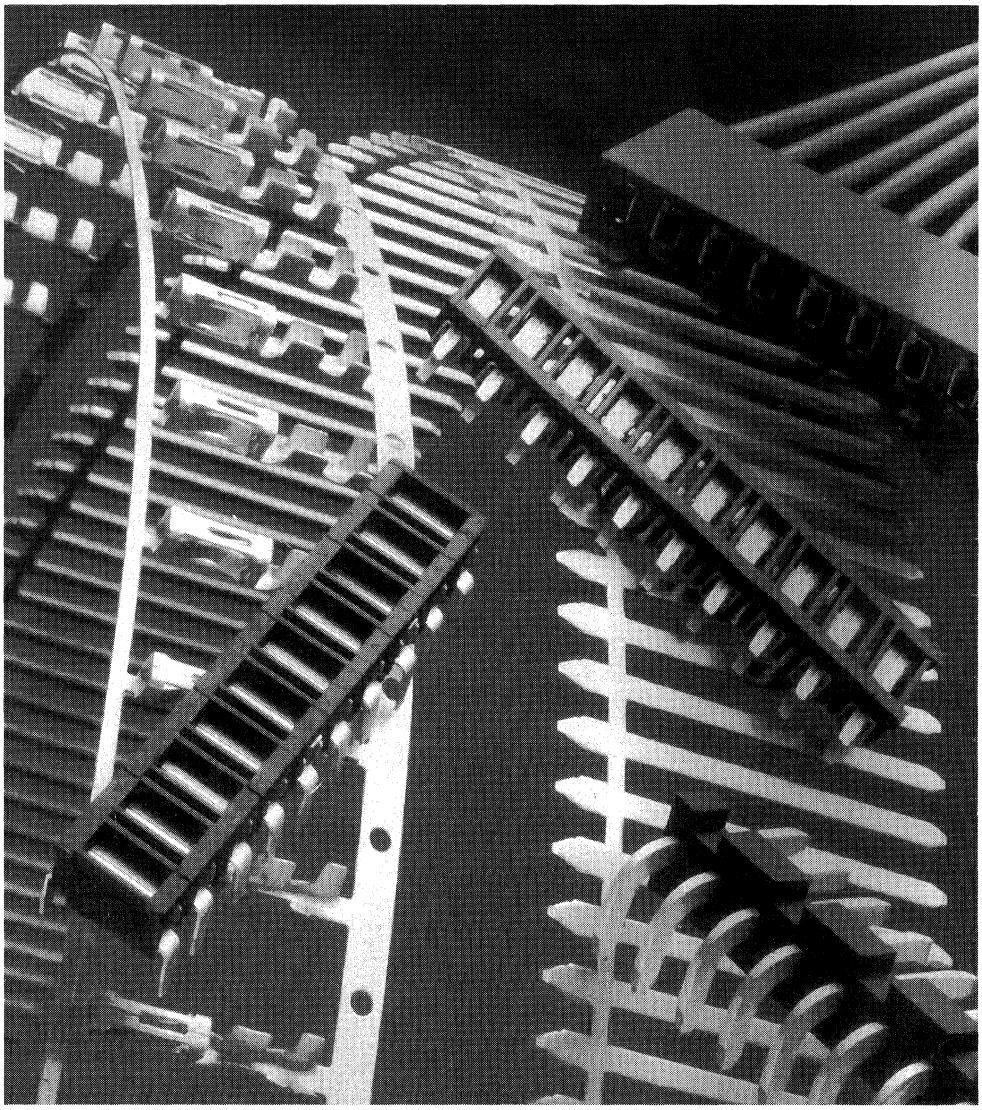
The .031 x .062 [0.79 x 1.57] interconnection system has served as an industry standard for modular packaging for over two decades. It is a rugged, large scale system designed for board-to-board and board-to-wire or cable applications that has offered millions of reliable interconnections and countless mating cycles.This versatile interconnection system successfully meets the requirements for most modular power supply packaging.

Board mounted receptacles and receptacle assemblies are available in various geometries, offering packaging interconnections that include perpendicular, parallel and stacking capabilities. Machine applied terminations, through matched application equipment, are geared to virtually any production requirement, providing the lowest possible applied cost.

Crimp snap-in receptacles for 26-18 AWG [0.12-0.9 mm²] wire provide excellent discrete wire terminations. Housings for these contacts provide for ease of handling terminations in high density applications.

AMPMODU mating posts are supplied typically as header assemblies. They are available in various sizes to meet the interconnection and packaging requirements of your system. However, in instances where packaging configurations do not lend themselves to the economies of assemblies, AMP can provide for the discrete location of individual posts and receptacles.

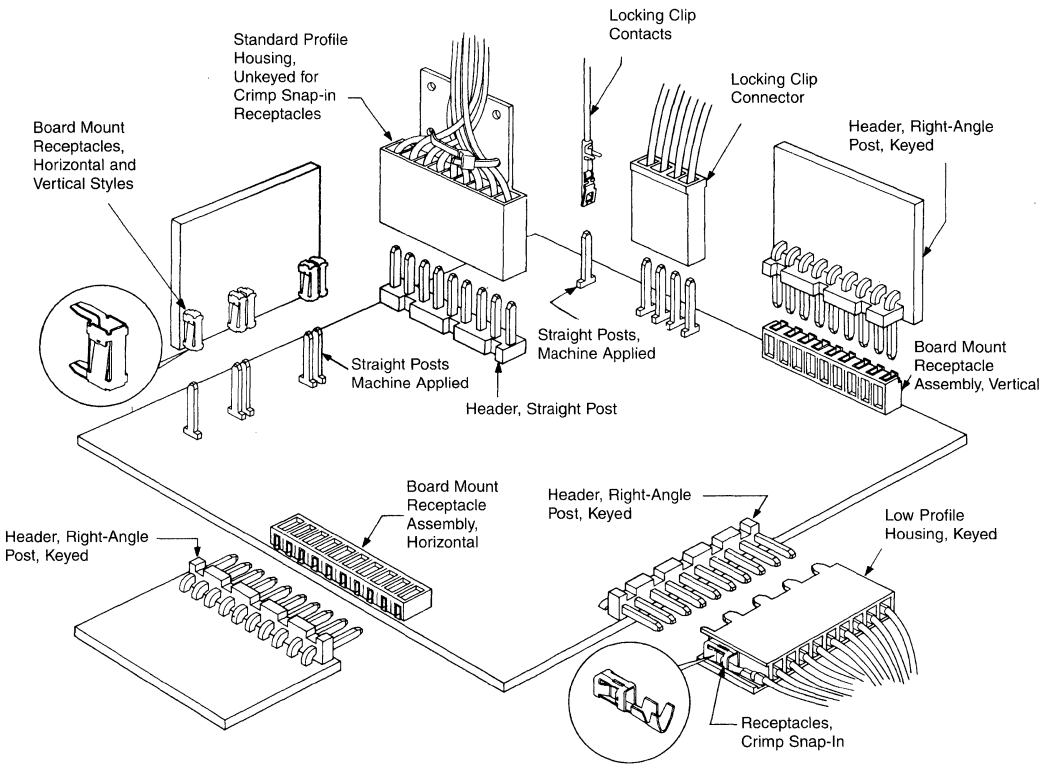
If your interconnections require Top Entry, Bottom Entry and/or Side Entry for perpendicular, parallel and stacked configurations, the .031 x .062 [0.79 x 1.57] interconnection system can fulfill your needs with the lowest applied cost through efficient interconnections and supporting application equipment.

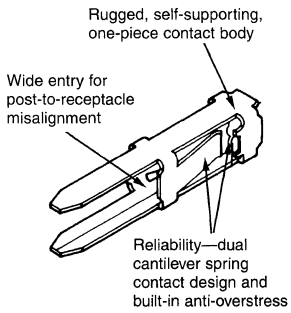


- **Recognized under the Component Program of Underwriters Laboratories Inc., File No. E28476**
- **Certified by Canadian Standards Association File No. LR 7189**

SOURCE: Catalog 82060

AMPMODU
Interconnection System
(Continued)

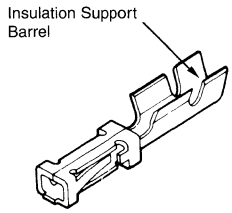




The AMPMODU receptacle cross-section is primarily rectangular, with rounded corners. Two integral cantilever beams contact the mating square or rectangular posts. Deflection of these spring members is limited by anti-overstress and excessive permanent deformation is prevented. This feature allows a wide range of tolerances for misalignment of mating contacts.

The configuration of the receptacle completely encloses the spring members preventing damage during handling and assembly and makes the system compatible with automatic application techniques.

This design also permits the use of the receptacles without housings or encapsulation.

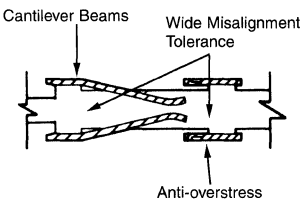


Wire Crimp Receptacle

Note: Application of a contact lubricant is part of the manufacturing process of all AMPMODU tin-plated crimp products. However, it is not part of the manufacturing process of products that customers will solder, then clean. For these products, AMP recommends that customers purchase the Contact Lubricant listed below:

Part No.: 854387-2, 1 qt. [.95 liter] bulk can

Board Mount Receptacle



Two styles offer high or low contact forces

SOURCE: Catalog 82060

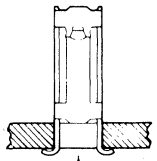
Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

Receptacles, Board Mount

Vertical and Horizontal Board Mount

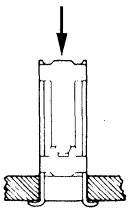
Material and Finish
Copper alloy, see chart

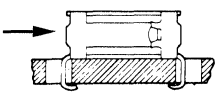
Mates with—Machine Applied Posts and Headers



Bottom Post Entry Type A

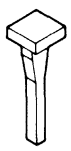
Top Post Entry Type B





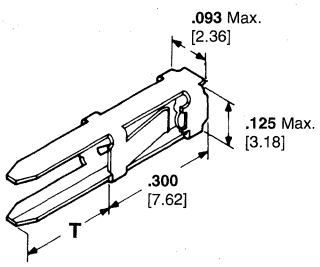
Horizontal Post Entry Type C

Keying Plug

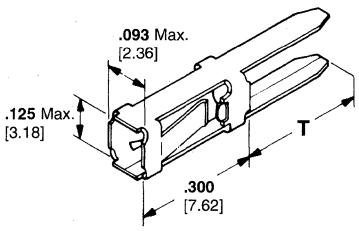


Part No. 86181-2
Use in Board Mount Receptacles

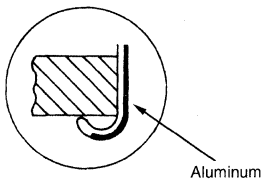
Receptacle Styles



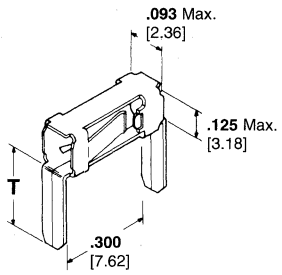
Type A



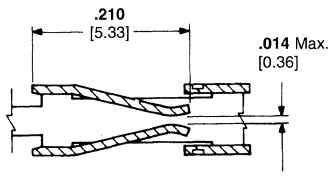
Type B



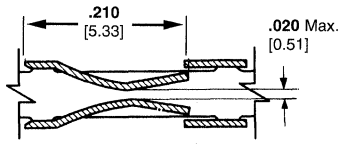
Typical Solder Resist Tab (Type A or B)



Type C



Standard Pressure Receptacle



High Pressure Receptacle

Type	Board Thickness	Dim. T	Finish	Part Numbers			
				Standard Pressure		High Pressure	
				Strip Form[1]	Loose Piece[2]	Strip Form[1]	Loose Piece[2]
A	**.070-.055** 1.78-1.40	**.112** 2.84	Tin	86477-3	—	87316-3	87509-2
			Gold	86477-2	86480-2	—	—
			Solder Resist	87772-2	—	—	—
B	**.070-.055** 1.78-1.40	**.112** 2.84	Tin	87003-2	—	87954-1	—
			Gold	87003-1	87105-1	—	—
			Solder Resist	87774-2	—	—	—
C	**.103-.055** 2.62-1.40	**.145** 3.68	Tin	85487-3	85493-3	86432-1	86434-1
			Gold	85487-4	85493-4	—	—

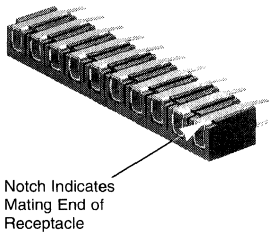
[1]Packaging quantity of 5,000 each.
[2]Packaging quantity of 500 each.

SOURCE: Catalog 82060

Receptacle Assemblies, Vertical Board Mount

Single Row .156 [3.96] Centers

Mates with—Machine Applied Posts and Headers



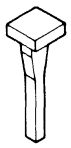
Notch Indicates Mating End of Receptacle

Note: 10 Pos. Housing Dim. (Typ.)—1.560 [39.62] L x .175 [4.45] W x .300 [7.62] H

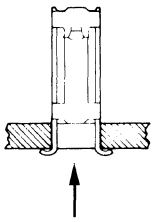
No. of Pos.	Part Numbers						
	Type A				Type B		
	Standard Pressure			High Pressure	Standard Pressure		
	Tin Plated	Gold Plated	Solder Resist	Tin Plated	Tin Plated	Gold Plated	Solder Resist
2	—	87984-2	—	87993-2	87985-2	—	—
3	—	87984-3	—	—	87985-3	—	—
4	87983-4	87984-4	—	—	87985-4	87986-4	—
5	87983-5	87984-5	—	87993-5	87985-5	—	—
6	—	87984-6	87989-6	87993-6	87985-6	87986-6	—
8	87983-8	87984-8	87989-8	87993-8	87985-8	—	—
10	—	—	1-87989-0	—	1-87985-0	1-87986-0	—
12	—	—	1-87989-2	—	1-87985-2	—	1-87990-2
14	—	—	1-87989-4	—	—	—	—

Packaging Quantities: 2 through 4 Pos. (500 each); 5, 6 and 8 Pos. (250 each); and 10 through 14 Pos. (100 each).

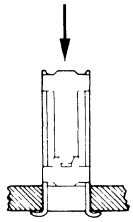
Keying Plug



Part No. 86181-2
Use in Board Mount Receptacles



Post Entry Type A

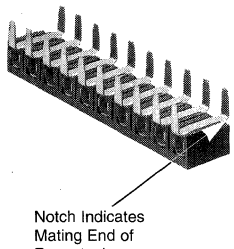


Post Entry Type B

Receptacle Assemblies, Horizontal Board Mount

Single Row, .156 [3.96] Centers

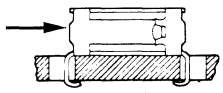
Mates with—Machine Applied Posts and Headers



Notch Indicates Mating End of Receptacle

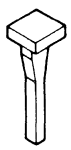
Note: 5 Pos. Housing Dim. (Typ.)—.780 [19.81] L x .300 [7.62] W x .175 [4.45] H

No. of Pos.	Pkg. Qty.	Part Numbers		
		Tin Plated		Gold Plated
		Standard Pressure	High Pressure	Standard Pressure
3	500	—	87995-3	—
4	500	—	87995-4	87988-4
5	250	87987-5	—	87988-5
6	250	87987-6	—	87988-6
7	250	—	87995-7	—
8	250	87987-8	—	87988-8



Post Entry Type C

Keying Plug



Part No. 86181-2
Use in Board Mount Receptacles

SOURCE: Catalog 82060

Specifications subject to change.

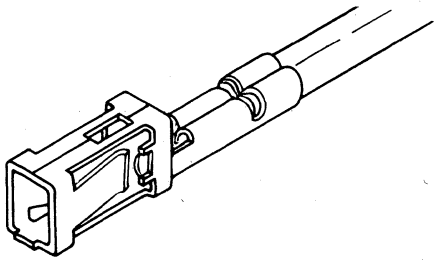
1-800-522-6752
Product Information Center/ AMP FAX Service

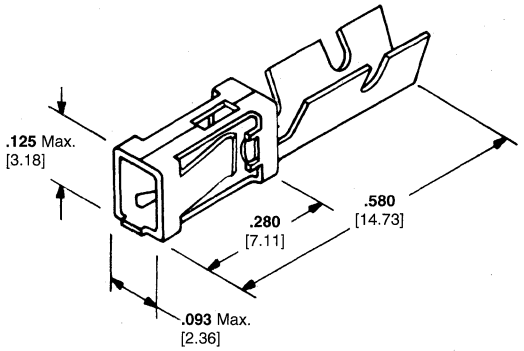
1-800-722-1111
Tooling/Technical Assistance Center

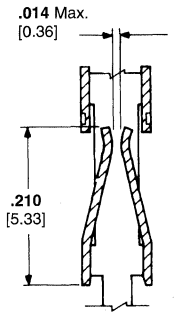
Receptacles, Crimp Snap-In (Wire Applied)

Material and Finish
Copper alloy, see chart

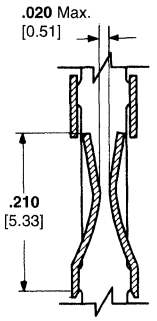
Mates with—Machine Applied Posts and Headers





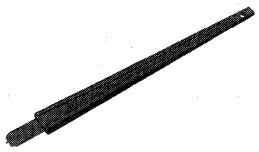


Standard Pressure Receptacle



High Pressure Receptacle

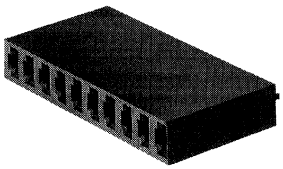
Wire Range AWG/mm²	Ins. Dia. Range	Finish	Pkg. Qty.	Part Numbers Strip Form	
				Standard Pressure	High Pressure
22-18	**.051-.090**	Tin	5,000	102099-5	102100-5
0.3-0.97	1.30-2.29	Gold	5,000	102099-2	102100-2
26-22	**.042-.073**	Tin	5,000	102101-5	102102-5
0.12-0.4	1.07-1.85	Gold	5,000	—	102102-2



Extraction Tool Part No. 843473-1

Receptacle Housings, Standard Profile (Unkeyed)

Without Strain Relief, Single Row, .156 [3.96] Centers



Mates with—Machine Applied Posts and Headers

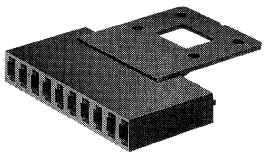
Note: 10 Pos. Housing Dim. (Typ.)—1.560 [39.62] L x .790 [20.01] W x .250 [6.35] H

No. of Pos.	Pkg. Qty.	Part Numbers	
		Stamped[1]	Unstamped[2]
2	300	—	2-87025-5[3]
3	300	—	2-87025-1
4	300	—	1-87025-3
5	300	—	2-87025-3
6	300	87025-1	87025-2
9	300	87025-9	1-87025-0[3]
10	300	1-87025-7	1-87025-8
11	150	—	3-87025-6[3]
12	150	1-87025-1[3]	1-87025-2[3]
13	150	2-87025-9[3]	3-87025-0[3]
14	150	—	3-87025-8[3]
17	150	—	4-87025-0[3]
20	150	—	87025-8
25	150	—	5-87025-0

[1] AMP Trademark, Part No. and Data Code stamped on housing.
[2] No marking on housing.
[3] Minimum order greater than packaged quantities required. Consult AMP.

Receptacle Housings, Standard Profile (Unkeyed)

With Strain Relief, Single Row, .156 [3.96] Centers



Type II

Note: 10 Pos. Housing Dim. (Typ.)—1.560 [39.62] L x 1.640 [41.66] W x .290 [7.37] H

No. of Pos.	Type	Pkg. Qty.	Part Numbers[1]
10	II	150	1-102090-0[2]
12	II	75	1-102090-2[2]
13	II	75	1-102090-3[2]

[1] No marking on housing.
[2] Minimum order greater than packaged quantities required. Consult AMP.

Mates with—Machine Applied Posts and Headers

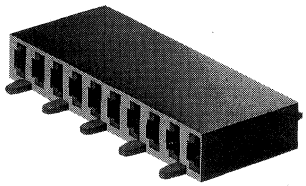
SOURCE: Catalog 82060

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

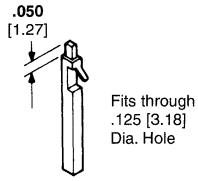
Receptacle Housings, Low Profile (Keyed)

Single Row, .156 [3.96] Centers

Mates with—Headers



Keying Plug
Part No. 87116-2

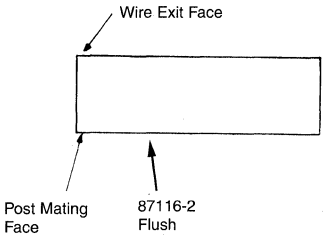


Note: 10 Pos. Housing Dim. (Typ.)—1.560 [39.62] L x .640 [16.26] W x .250 [6.35] H

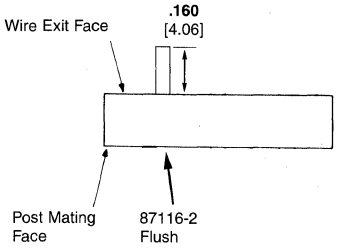
No. of Pos.	No. of Keys	Pkg. Qty.	Part Numbers (Unstamped)[1]
2	1	300	87159-3
3	1	300	87159-4
4	2	300	87159-5
5	2	300	87159-1
6	3	300	87159-6
7	3	300	87159-7
8	4	300	87159-8
9	3	300	87159-9
10	5	300	1-87159-0
12	6	150	1-87159-2
13	4	150	87159-2
14	7	150	1-87159-3
15	5	150	1-87159-4
18	6	150	1-87159-7
20	10	150	1-87159-9

[1] No marking on housing.

Keying Plug References



For Standard Housings

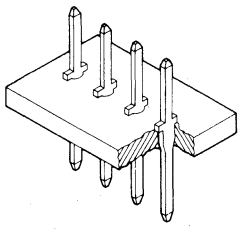


For Low Profile Housings

Posts, Machine Applied

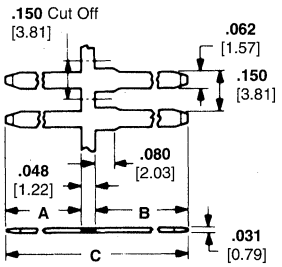
Straight Posts

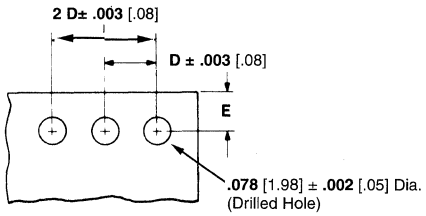
Material and Finish
Brass, see chart



Typical Assembly

Mates with—
Board Mount Receptacles, Board Mount Receptacle Assemblies, Crimp Snap-In Receptacles and Housings





Recommended Mounting Holes

D—Post centers may vary depending on requirements. Minimum nominal centerline spacing between adjacent contacts is .125 [3.18]; .003 [.08] tolerances not to accumulate over length of board.
E—Post center location from edge of board may vary to satisfy application.

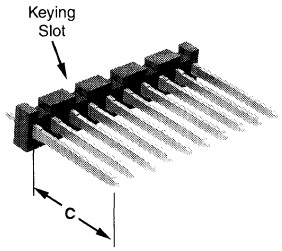
Dimensions			Part Numbers		
			Tin Plated	Gold Plated	
A	B	C	Strip Form[1]	Strip Form[1]	Loose Piece[2]
.360 [9.14]	**.187** [4.75]	**.595** [15.11]	86147-2	86147-7	86182-7
.380 [9.65]	**.320** [8.13]	**.748** [19.00]	86147-9	1-86147-5	1-86182-5
.400 [10.16]	**.125** [3.18]	**.573** [14.55]	3-86147-7	4-86147-2	—
.480 [12.19]	**.187** [4.75]	**.715** [18.16]	2-86147-2	1-86147-8	1-86182-8
.565 [14.35]	**.187** [4.75]	**.800** [20.32]	86147-1	86147-8	86182-8
.800 [20.32]	**.150** [3.81]	**.998** [25.35]	1-86147-0	1-86147-2	1-86182-2

[1] Packaging quantity of 20,000 per reel.
[2] Packaging quantity of 1,000 per bag.
Note: Strip form posts applied with Insertion Machine **Part No. 3-457382-1**, includes power unit and applicator.

SOURCE: Catalog 82060

Headers, Straight Post (Keyed)

Single Row, .156 [3.96] Centers



Mates with— Board Mount Receptacles, Board Mount Receptacle Assemblies, Crimp Snap-In Receptacles and Housings

Note: 10 Pos. Housing Dim. (Typ.)—1.515 [38.48] L x .125 [3.18] W x .250 [6.35] H

No. of Pos.	No. of Keying Slots	Pkg. Qty.	Post Height C = .405 [10.29]		Post Height C = .587 [14.91]	
			Bright Tin Plated Posts	Gold Plated Posts	Bright Tin Plated Posts	Gold Plated Posts
2	1	500	87160-4	85829-2	—	87247-2
3	1	500	87160-5	85829-3	—	—
4	2	500	87160-6	85829-4	—	87247-4
5	2	250	87160-1	85829-5	87262-5	—
6	3	250	87160-7	85829-6	—	87247-6
7	3	250	87160-8	—	—	—
8	4	250	87160-9	85829-8	87262-8	87247-8
9	3	250	1-87160-0	—	—	87247-9
10	5	100	1-87160-1	1-85829-0	1-87262-0	1-87247-0
12	6	100	1-87160-3	1-85829-2	1-87262-2	—
13	4	100	87160-2	—	—	—
15	5	100	—	1-85829-5	—	1-87247-5
18	6	50	—	—	1-87262-8	—

No. of Pos.	No. of Keying Slots	Pkg. Qty.	Post Height C = .750 [19.05]		Post Height C = 1.187 [30.15]		Post Height C = 1.310 [33.27]
			Bright Tin Plated Posts	Gold Plated Posts	Bright Tin Plated Posts	Gold Plated Posts	Gold Plated Posts
2	1	500	85875-7	—	—	87283-2	85839-2
3	1	500	85875-8	—	—	—	85839-3
4	2	500	85875-1	85923-4	86207-9	87283-4	85839-4
5	2	250	85875-2	—	86207-3	—	—
6	3	250	85875-9	—	—	—	85839-6
7	3	250	1-85875-0	—	—	87283-7	—
8	4	250	1-85875-1	—	—	—	85839-8
9	3	250	85875-3	85923-9	—	—	—
10	5	100	—	—	—	—	1-85839-0
12	6	100	—	—	—	—	1-85839-2
14	7	100	1-85875-5	—	—	—	—
15	5	100	—	—	—	—	1-85839-5
16	8	50	1-85875-7	—	—	—	—
17	6	50	—	—	—	1-87283-7	—

SOURCE: Catalog 82060

Specifications subject to change.
1-800-522-6752
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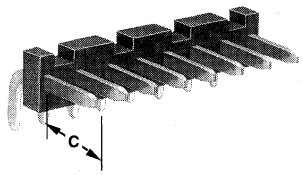
1-800-722-1111
Tooling/Technical Assistance Center

Headers, Right-Angle Post (Keyed)

Single Row .156 [3.96] Centers

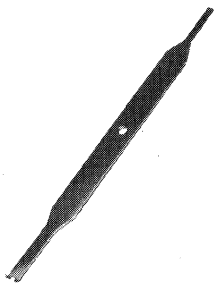


Mates with—Board Mount Receptacles, Board Mount Receptacle Assemblies, Crimp Snap-In Receptacles and Housings, and Locking Clip Contacts and Housings (.500 Post Height Only)

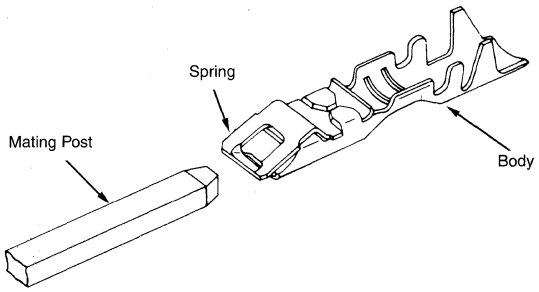
Note: 8 Pos. Housing Dim. (Typ.)—1.203 [30.56] L x .125 [3.18] W x .250 [6.35] H

No. of Pos.	No. of Keying Slots	Pkg. Qty.	Post Height C = .345 [8.76]		Post Height C = .500 [12.7]	
			Bright Tin Plated Posts	Gold Plated Posts	Bright Tin Plated Posts	Gold Plated Posts
2	1	500	87655-2	—	—	87258-2
3	1	500	87655-3	—	—	87258-3
4	2	500	—	87654-4	—	87258-4
5	2	250	87655-5	—	87194-4	—
6	3	250	—	—	87194-5	—
8	4	250	87655-8	87654-8	—	87258-8
13	4	100	—	—	—	1-87258-3
15	5	100	1-87655-5	—	—	—
18	6	50	—	1-87654-8	—	—
24	12	50	2-87655-4	—	—	—

Locking Clip Contacts, Crimp Snap-In (Wire Applied)



Extraction Tool Part No. 91104-1

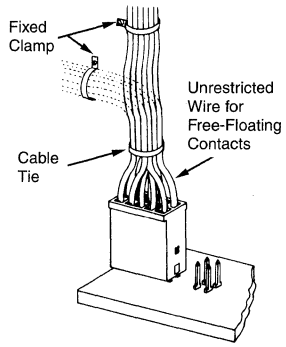


Wire Range AWG/mm²	Ins. Dia. Range	Finish	Contact Part Numbers	
			Strip Form	Loose Piece
22-18	.050-.100	Tin Plated	87269-1	87278-1
0.3-0.9	1.27-2.54	Gold Plated	87269-2	87278-2

Note: These contacts must be crimped in accordance with AMP Specification No. 114-25008 in order to function properly in a connector housing.
Extraction Tool No. 91104-1 is used for removing individual contacts from connector housings and for detaching contacts from mating posts.

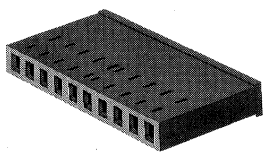
Wire Harnessing

If necessary, wires can be grouped with cable ties and secured to a panel with fixed clamps. However, locking clip contacts must be free to float within the connector housings to ensure proper extraction. Therefore, harnessing hardware or the use of multiple terminations per contact must not restrict the free-floating action of contacts in the housing.



Locking Clip Connector Housings

Single Row, .156 [3.96] Centers



Mates with—Machine Applied Posts and Headers (.500 Post Height Only)

Note: 10 Pos. Housing Dim. (Typ.)—1.624 [41.25] L x .860 [21.84] W x .194 [4.93] H

No. of Pos.	Housing Part No.		Keyed Positions on Mating Face
	Unkeyed	Keyed	
1	87270-1	—	—
2	87270-2	—	—
3	1-87270-3	—	—
3 of 4	—	87270-3	□□■□
4	87270-4	—	—
4 of 5	—	1-87270-0	□□□■□
5	1-87270-4	—	—
6	87270-5	—	—
8	87270-6	—	—
10	87270-7	—	—

■ Indicates "closed cavity". No post entry in this position.
Notes: 1. All housings listed above will accept Locking Clip Contact **Part Nos. 87269** and **87278**, see above.
2. Refer to AMP Instruction Sheet No. 408-7676 for proper contact orientation within the housings.

Specifications subject to change.

1-800-522-6752
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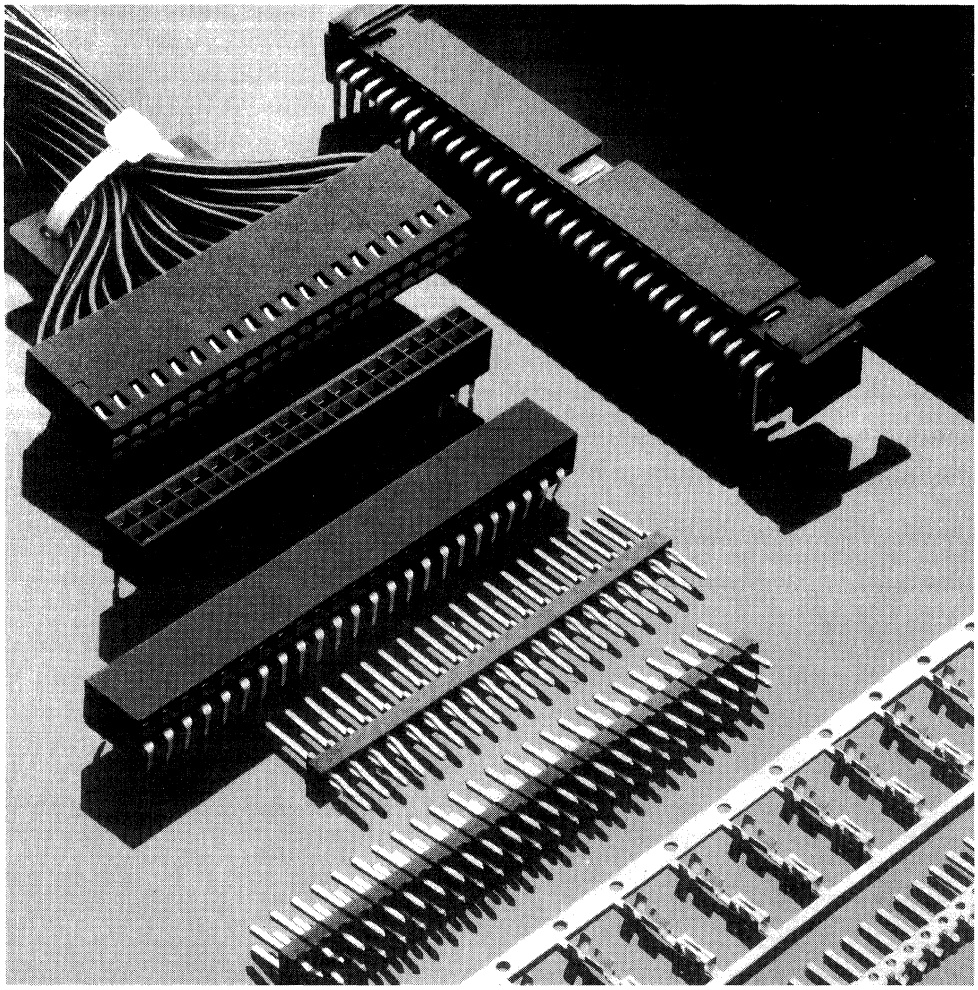
AMPMODU .025 [0.64] Square Interconnection System



The AMPMODU Interconnection System provides interconnections with a unique modular concept, utilizing precision formed receptacles and mating posts.

Mating of the post and receptacle of this system is very tolerant. This is made possible by a post with a burr-free lead in and a receptacle featuring double cantilever beams and anti-overstress stops.

AMPMODU receptacles and posts categorically fall into three general classifications of products, which include: board mounted posts and receptacle assemblies, posted header assemblies and wire-applied contact housings for crimp snap-in pin and receptacle contacts.

Board mounted receptacle assemblies are available in various geometries, offering packaging interconnections that include perpendicular, parallel and stacking capabilities.

Crimp snap-in pins for 26-22 AWG [0.12-0.4 mm^2] wire and crimp snap-in receptacles for 32-20 AWG [0.03-0.6 mm^2] wire provide excellent discrete wire terminations. Housings for these contacts provide ease of handling terminations in high density applications

Machine applied terminations, through matched application equipment, are geared for virtually any production volume requirement, providing for the lowest possible applied cost.

AMPMODU mating posts are supplied typically as header assemblies. They are available in various populations to meet the interconnection and packaging requirements of your system. However, in instances where packaging configurations do not lend themselves to the economies of header assemblies, AMP can provide application equipment for the discrete location of individual posts.

Looking at the electronic industry's standard "levels of packaging," the AMPMODU .025 [0.64] square interconnection system is primarily used in levels three and four.

In level three it is used as a connection between two or more printed circuits. A mother/daughter board connection is typical. In level four it is used as a connection between two subassemblies, such as a power supply and an associated subassembly.

It is also important to note this product can serve as an interconnection in more than one level, depending on the application.

The .025 [0.64] square interconnection system offers the most complete line of post/receptacle packaging products available today. This system, rated at 3 amperes per contact, has been used by almost every industry and marketplace over the last decade and is one of the most versatile and reliable interconnection systems employing .025 [0.64] square packaging technology.

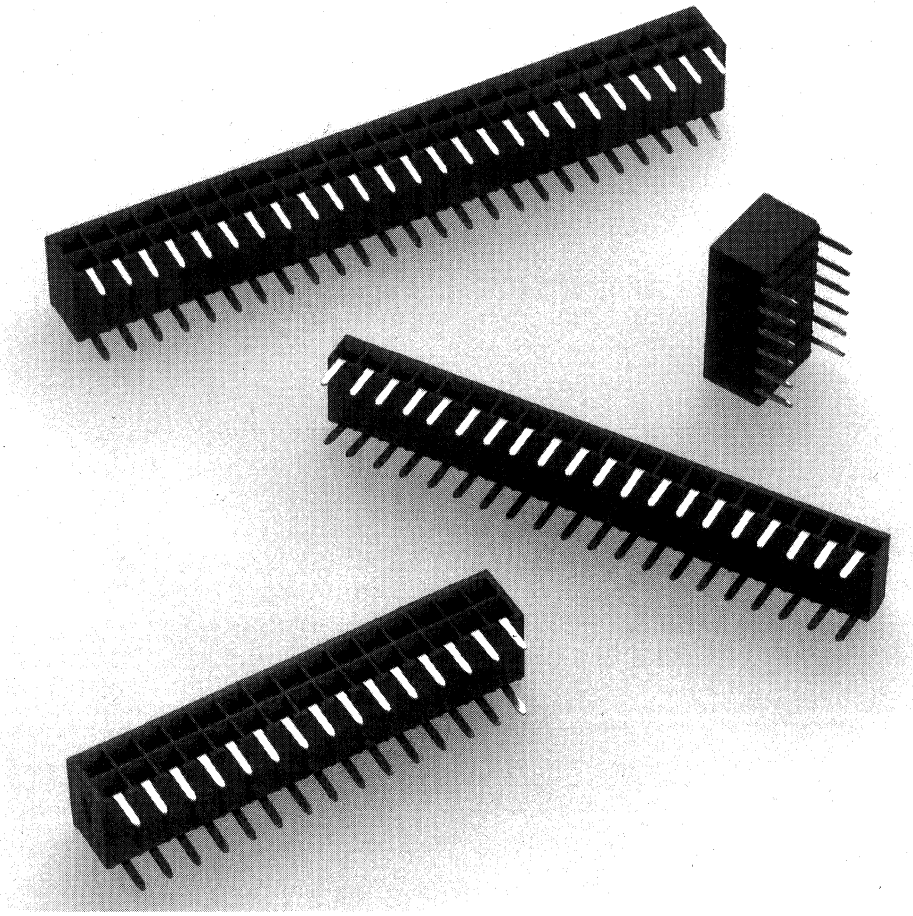
SOURCE: Catalog 65816

Specifications subject to change.

1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

Receptacle Assemblies, Horizontal Mount

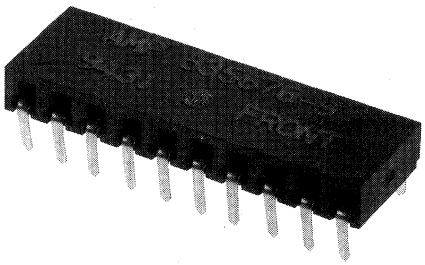


Product Facts

- Contact design employs dual cantilever beams with built-in anti-overstress feature
- Closed entry housings prevent post stubbing
- Wide range of sizes available
- Other versions available upon request
- Housings made of high temperature compatible thermoplastic material, 94V-O rated
- Duplex gold and bright tin-lead plated contacts have full nickel underplate
- Housings feature Pc board standoffs
- Solder tails accommodate a Pc board thickness of .062 [1.57]
- Recognized under the Component Program of Underwriters Laboratories Inc., File No. E28476
- Certified by Canadian Standards Association, File No. LR 7189

Mod. II Receptacle Assemblies, Single-Row, .100 [2.54] Centers

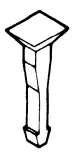
Closed Entry, End Stackable, Short Point-of-Contact, with Standoffs



Plating A—Duplex plated .000030 [0.00076] gold

Plating B—Duplex plated .000015 [0.00038] gold

Plating C—.000100-.000200 [0.00254-0.00508] bright tin-lead



Keying Plug
Part No. 86286-1
(Plugs into receptacle contact)

Note: 10 Pos. Housing Dim. (Typ.)—1.000 [25.40] L x .320 [8.13] W x .137 [3.48] H

No. of Pos.	Contact Plating/Part Nos.		
	Plating A	Plating B	Plating C
2	535676-1	146139-1	535677-5
3	535676-2	146139-2	535677-6
4	535676-3	146139-3	535677-7
5	535676-4	146139-4	535677-8
6	535676-5	146139-5	535677-1
7	535676-6	146139-6	535677-2
8	535676-7	146139-7	535677-9
9	535676-8	146139-8	1-535677-0
10	535676-9	146139-9	1-535677-1

Notes: 1. AMP, part number, date code and word "front" stamped on housing where size permits.
2. AMP recommends mating gold or duplex plated headers with duplex plated receptacle assemblies.
3. Additional receptacle assembly sizes are available; minimum order quantities may apply. Consult AMP.

SOURCE: Catalog 65816

Specifications subject to change.

1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
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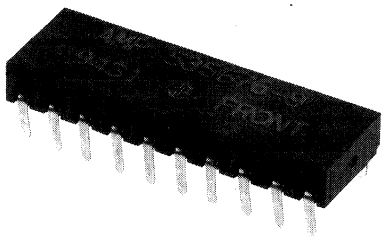
Mod. II Receptacle Assemblies, Single-Row, .100 [2.54] Centers

(Continued)

Closed Entry, End Stackable, Short Point-of-Contact, with Standoffs

(Continued)



Plating A—Duplex plated .000030 [0.00076] gold

Plating B—Duplex plated .000015 [0.00038] gold

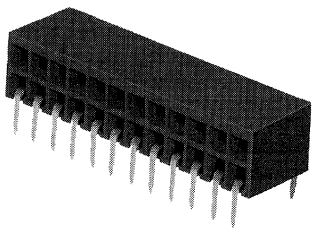
Plating C—.000100-.000200 [0.00254-0.00508] bright tin-lead

No. of Pos.	Contact Plating/Part Nos.		
	Plating A	Plating B	Plating C
11	1-535676-0	1-146139-0	1-535677-2
12	1-535676-1	1-146139-1	1-535677-3
13	1-535676-2	1-146139-2	535677-3
14	1-535676-3	1-146139-3	1-535677-4
15	1-535676-4	1-146139-4	1-535677-5
16	1-535676-5	1-146139-5	1-535677-6
17	1-535676-6	1-146139-6	1-535677-7
18	1-535676-7	1-146139-7	1-535677-8
19	1-535676-8	1-146139-8	1-535677-9
20	1-535676-9	1-146139-9	2-535677-0
30	2-535676-9	2-146139-0	2-535677-1
40	3-535676-9	2-146139-1	2-535677-2

Notes: 1. AMP, part number, date code and word "front" stamped on housing where size permits.
2. AMP recommends mating gold or duplex plated headers with duplex plated receptacle assemblies.
3. Additional receptacle assembly sizes are available; minimum order quantities may apply. Consult AMP.

Mod. II Receptacle Assemblies, Double-Row, .100 x .100 [2.54 x 2.54] Centers

Closed Entry, End Stackable, Short Point-of-Contact, with Standoffs



Note: 20 Pos. Housing Dim. (Typ.)—1.000 [25.40] L x .320 [8.13] W x .238 [6.05] H

Keying Plug
Part No. 86286-1
(Plugs into receptacle contact)

Plating A—Duplex plated .000030 [0.00076] gold

Plating B—Duplex plated .000015 [0.00038] gold

Plating C—.000100-.000200 [0.00254-0.00508] bright tin-lead

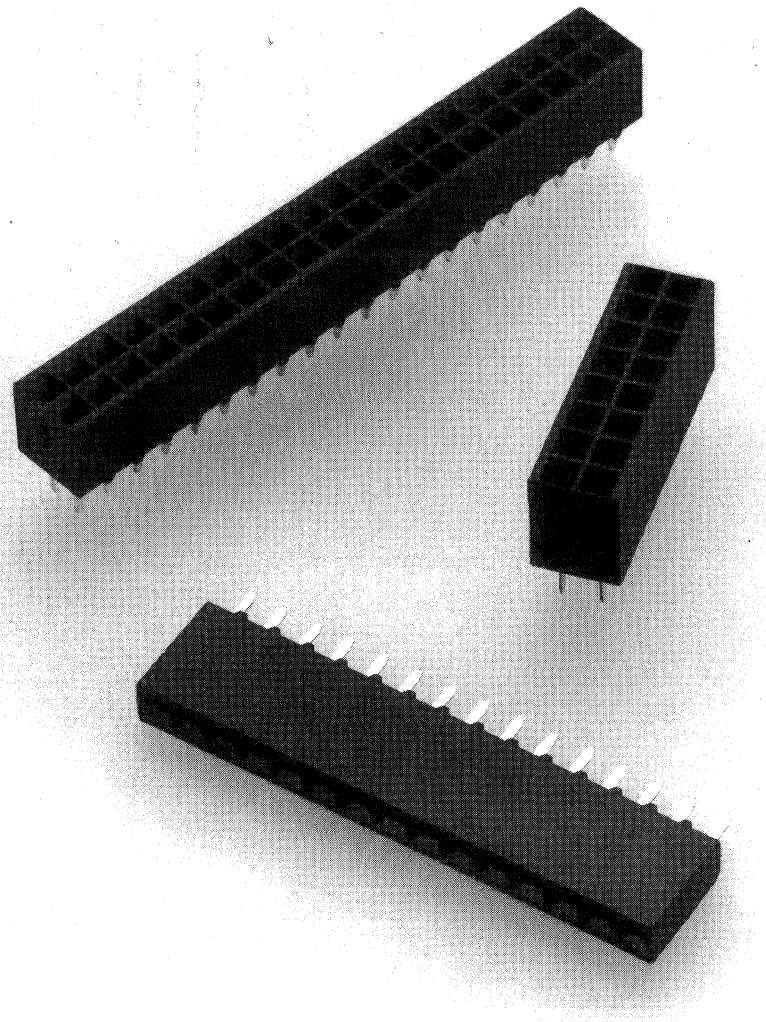
No. of Pos.	Contact Plating/Part Nos.		
	Plating A	Plating B	Plating C
4	6-535512-1	146140-1	6-102084-4
6	6-535512-2	146140-2	6-102084-3
8	6-535512-3	146140-3	6-102084-2
10	6-535512-4	146140-4	6-102084-1
12	535512-1	146140-5	6-102084-0
14	1-535512-7	146140-6	5-102084-9
16	1-535512-8	146140-7	5-102084-8
18	1-535512-6	146140-8	5-102084-7
20	535512-2	146140-9	5-102084-6
22	1-535512-9	1-146140-0	5-102084-5
24	535512-3	1-146140-1	5-102084-4
26	2-535512-0	1-146140-2	5-102084-3
28	2-535512-1	1-146140-3	5-102084-2
30	2-535512-2	1-146140-4	5-102084-1
32	2-535512-3	1-146140-5	5-102084-0
34	535512-4	1-146140-6	4-102084-9
36	535512-5	1-146140-7	4-102084-8
38	2-535512-4	1-146140-8	4-102084-7
40	2-535512-5	1-146140-9	4-102084-6
50	535512-7	2-146140-0	4-102084-1
60	3-535512-0	2-146140-1	3-102084-6

Notes: 1. AMP, part number, date code and word "front" stamped on housing where size permits.
2. AMP recommends mating gold or duplex plated headers with duplex plated receptacle assemblies.
3. Additional receptacle assembly sizes are available; minimum order quantities may apply. Consult AMP.

SOURCE: Catalog 65816

Specifications subject to change.
1-800-522-6752 Product Information Center/ AMP FAX Service
1-800-722-1111 Tooling/Technical Assistance Center

Receptacle Assemblies, Vertical Mount



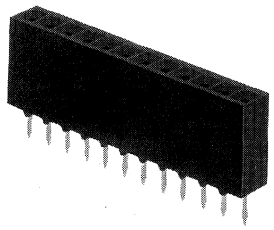
Product Facts

- Dual-cantilever beam contact with box design and anti-overstress protection
- Single-row assemblies have .100 [2.54] centerline contact spacing; double-row assemblies have .100 x .100 [2.54 x 2.54] centerline contact spacing
- 3 through 40 positions in single-row assemblies; 2 through 80 positions in double-row assemblies
- Mod. II standard .340 [8.64] and Mod. IV low .265 [6.73] profiles
- Mod. II standard profile available in top entry
- Mod. IV low profile available in top and bottom entry
- Duplex gold and bright tin-lead plated contacts have full nickel underplate
- Thermoplastic housings, 94V-0 rated
- Standoffs for easy flux cleaning
- Recognized under the Component Program of Underwriters Laboratories Inc., File No. E28476
- Certified by Canadian Standards Association, File No. LR 7189

Mod. II Receptacle Assemblies, Single-Row, .100 [2.54] Centers

Closed Top Entry, End Stackable, with Single Tine Contacts

Keying Plug
Part No. 86286-1
(Plugs into receptacle contact)



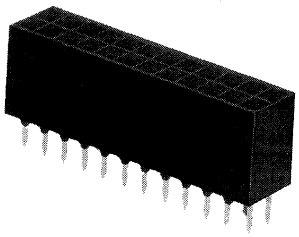
Note: 10 Pos. Housing Dim. (Typ.)—1.000 [25.40] L x .140 [3.56] W x .340 [8.64] H

No. of Pos.	Part Nos.	No. of Pos.	Part Nos.
3	534237-1	12	1-534237-0
4	534237-2	13	1-534237-1
5	534237-3	14	1-534237-2
6	534237-4	15	1-534237-3
7	534237-5	16	1-534237-4
8	534237-6	17	1-534237-5
9	534237-7	18	1-534237-6
10	534237-8	19	1-534237-7
11	534237-9	20	1-534237-8

Notes: 1. AMP part number and date code stamped on housing where size permits.
2. AMP recommends mating gold or duplex plated headers with duplex plated receptacle assemblies.
3. Additional receptacle assembly sizes are available; minimum order quantities may apply. Consult AMP.

SOURCE: Catalog 65816

Mod. II Receptacle Assemblies, Double-Row, .100 x .100 [2.54 x 2.54] Centers



Closed Top Entry, End Stackable, .100 x .100 [2.54 x 2.54] Mounting Pattern

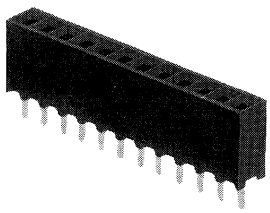
Keying Plug
Part No. 86286-1
(Plugs into receptacle contact)

Note: 20 Pos. Housing Dim. (Typ.)—1.000 [25.40] L x .238 [6.05] W x .340 [8.64] H

No. of Pos.	Part Nos.	No. of Pos.	Part Nos.
2	534206-1	22	1-534206-1
4	534206-2	24	1-534206-2
6	534206-3	26	1-534206-3
8	534206-4	28	1-534206-4
10	534206-5	30	1-534206-5
12	534206-6	32	1-534206-6
14	534206-7	34	1-534206-7
16	534206-8	36	1-534206-8
18	534206-9	38	1-534206-9
20	1-534206-0	40	2-534206-0

Notes: 1. AMP part number and date code stamped on housing where size permits.
2. AMP recommends mating gold or duplex plated headers with duplex plated receptacle assemblies.
3. Additional receptacle assembly sizes are available; minimum order quantities may apply. Consult AMP.

Mod. IV Receptacle Assemblies, Single-Row, .100 [2.54] Centers



Closed Top Entry, End Stackable, Low Profile with Single Tine Contacts

Keying Plug
Part No. 86286-1
(Plugs into receptacle contact)

Plating A—Duplex plated .000030 [0.00076] gold
Plating B—Duplex plated .000015 [0.00038] gold
Plating C—.000100-.000200 [0.00254-0.00508] bright tin-lead

Note: 10 Pos. Housing Dim. (Typ.)—1.000 [25.40] L x .140 [3.56] W x .265 [6.73] H

No. of Pos.	Contact Plating/Part Nos.		
	Plating A	Plating B	Plating C
3	535541-1	146138-1	535584-3
4	535541-2	146138-2	535584-4
5	535541-3	146138-3	535584-5
6	535541-4	146138-4	535584-1
7	535541-5	146138-5	535584-6
8	535541-6	146138-6	535584-7
9	535541-7	146138-7	535584-8
10	535541-8	146138-8	535584-9
11	535541-9	146138-9	1-535584-0
12	1-535541-0	1-146138-0	1-535584-1
13	1-535541-1	1-146138-1	1-535584-2
14	1-535541-2	1-146138-2	1-535584-3
15	1-535541-3	1-146138-3	1-535584-4
16	1-535541-4	1-146138-4	1-535584-5
17	1-535541-5	1-146138-5	1-535584-6
18	1-535541-6	1-146138-6	535584-2
19	1-535541-7	1-146138-7	1-535584-7
20	1-535541-8	1-146138-8	1-535584-8
30	2-535541-8	1-146138-9	1-535584-9
40	3-535541-8	2-146138-0	2-535584-0

Notes: 1. AMP part number and date code stamped on housing where size permits.
2. AMP recommends mating gold or duplex plated headers with select gold plated receptacle assemblies.
3. Additional receptacle assembly sizes are available; minimum order quantities may apply. Consult AMP.

SOURCE: Catalog 65816

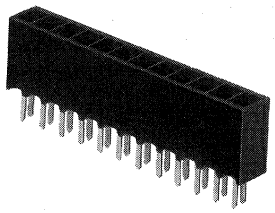
Specifications subject to change.

1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

Mod. IV Receptacle Assemblies, Single-Row, .100 [2.54] Centers
(Continued)

Bottom Entry, End Stackable, Low Profile with Dual Tine Contacts



Note: 12 Pos. Housing Dim. (Typ.)—1.200 [30.48] L x .140 [3.56] W x .265 [6.73] H

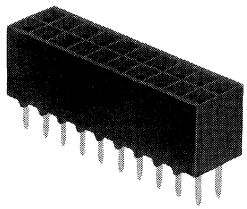
No. of Pos.	Part Nos.	No. of Pos.	Part Nos.
3	103243-1	13	1-103243-1
4	103243-2	14	1-103243-2
5	103243-3	15	1-103243-3
6	103243-4	16	1-103243-4
7	103243-5	17	1-103243-5
8	103243-6	18	1-103243-6
9	103243-7	19	1-103243-7
10	103243-8	20	1-103243-8
11	103243-9	30	2-103243-8
12	1-103243-0	40	3-103243-8

Notes: 1. AMP part number and date code stamped on housing where size permits.
2. AMP recommends mating gold or duplex plated headers with select gold plated receptacle assemblies.
3. Additional receptacle assembly sizes are available; minimum order quantities may apply. Consult AMP.

Keying Plug
Part No. 86286-1
(Plugs into receptacle contact)

Mod. IV Receptacle Assemblies, Double-Row, .100 x .100 [2.54 x 2.54] Centers

Closed Top Entry, End Stackable, Low Profile, .100 x .100 [2.54 x 2.54] Mounting Pattern



Note: 24 Pos. Housing Dim. (Typ.)—1.200 [30.48] L x .240 [6.10] W x .265 [6.73] H

No. of Pos.	Contact Plating/Part Nos.		
	Plating A	Plating B	Plating C
2	534998-1	535598-2	535585-3
4	534998-2	535598-3	535585-4
6	534998-3	535598-4	535585-5
8	534998-4	535598-5	535585-6
10	534998-5	535598-6	535585-1
12	534998-6	535598-7	535585-2
14	534998-7	535598-1	535585-7
16	534998-8	535598-8	535585-8
18	534998-9	535598-9	535585-9
20	1-534998-0	1-535598-0	1-535585-0
22	1-534998-1	1-535598-1	1-535585-1
24	1-534998-2	1-535598-2	1-535585-2

No. of Pos.	Contact Plating/Part Nos.		
	Plating A	Plating B	Plating C
26	1-534998-3	1-535598-3	1-535585-3
28	1-534998-4	1-535598-4	1-535585-4
30	1-534998-5	1-535598-5	1-535585-5
32	1-534998-6	1-535598-6	1-535585-6
34	1-534998-7	1-535598-7	1-535585-7
36	1-534998-8	1-535598-8	1-535585-8
38	1-534998-9	1-535598-9	1-535585-9
40	2-534998-0	2-535598-0	2-535585-0
50	2-534998-5	2-535598-1	2-535585-1
60	3-534998-0	2-535598-2	2-535585-2
80	4-534998-0	2-535598-3	2-535585-3

Notes: 1. AMP part number and date code stamped on housing where size permits.
2. AMP recommends mating gold or duplex plated headers with duplex plated receptacle assemblies.
3. Through-hole version shown. Surface-mount compatible receptacle assemblies are available; minimum order quantities may apply. Consult AMP.

Keying Plug
Part No. 86286-1
(Plugs into receptacle contact)

Plating A— Duplex plated .000030 [0.00076] gold

Plating B— Duplex plated .000015 [0.00038] gold

Plating C— .000100-.000200 [0.00254-0.00508] bright tin-lead

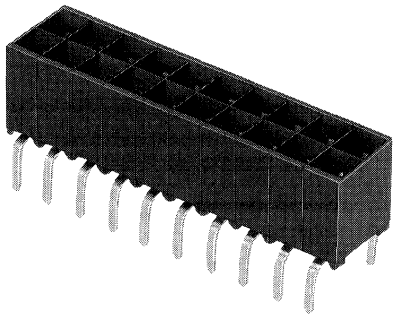
SOURCE: Catalog 65816

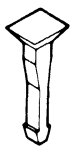
Specifications subject to change.
1-800-522-6752 Product Information Center/ AMP FAX Service
1-800-722-1111 Tooling/Technical Assistance Center

Mod. IV Receptacle Assemblies, Double-Row, .100 x .100 [2.54 x 2.54] Centers

(Continued)

Bottom Entry, End Stackable, Low Profile, .100 x .300 [2.54 x 7.62] Mounting Pattern





Keying Plug
Part No. 86286-1
(Plugs into receptacle contact)

Note: 24 Pos. Housing Dim. (Typ.)—1.200 [30.48] L x .240 [6.10] W x .265 [6.73] H

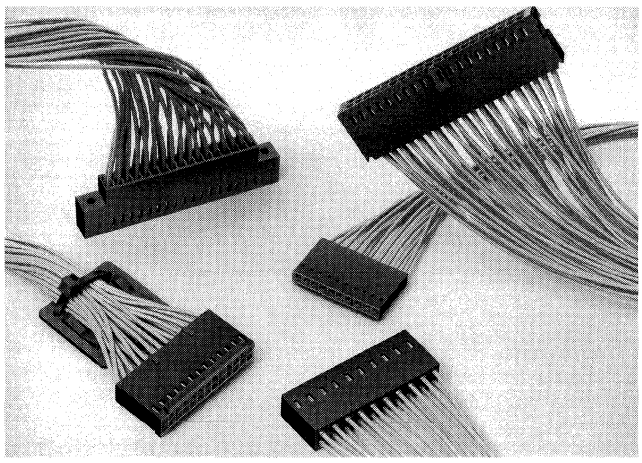
No. of Pos.	Part Nos.	No. of Pos.	Part Nos.
2	1-534267-3	30	1-534267-2
4	1-534267-7	36	1-534267-5
6	1-534267-4	40	534267-7
8	534267-5	48	1-534267-1
14	534267-1	50	1-534267-8
18	1-534267-0	60	534267-8
20	534267-2	76	1-534267-6
24	534267-9	80	534267-4
26	534267-6		

Notes: 1. AMP part number and date code stamped on housing where size permits.
2. AMP recommends mating gold or duplex plated headers with select gold plated receptacle assemblies.
3. Additional receptacle assembly sizes, receptacle assemblies with .000015 [0.00038] gold duplex plated contacts and single-row receptacle assemblies are available; minimum order quantities may apply. Consult AMP.

Mod. IV Wire-Applied Contacts and Housings

Product Facts

- Terminates 32-20 AWG [0.03-0.6 mm²] discrete wire
- Contacts have insulation support
- Choice of three contact mating pressures
- Available in a variety of gold and tin platings
- Receptacles mate with .025 [0.64] square or round posts
- Dual cantilever contact beam with built-in anti-overstress feature for reliable matings
- Housings accept a variety of receptacle and pin contacts
- Housing sizes range up to 100 positions
- Housing configurations include single and double rows on .100 [2.54] centerlines
- Housing options include detent latching, polarization and bonded strain relief/pull tabs
- Recognized under the Component Program of Underwriters Laboratories Inc., File No E28476
- Certified by Canadian Standards Association, File No. LR 7189

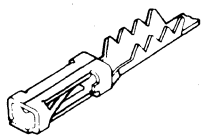


SOURCE: Catalog 65816

Specifications subject to change.
1-800-522-6752 Product Information Center/ AMP FAX Service
1-800-722-1111 Tooling/Technical Assistance Center

Mod. IV Pin and Receptacle Contacts

Crimp Snap-In (No-strip) Receptacles



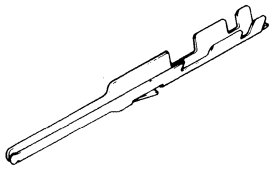
No-Strip Receptacle

Plating A—Selectively plated .000030 [0.00076] gold on contact area, with gold flash over .000050 [0.00127] nickel on entire contact

Plating C—.000100-.000200 [0.00254-0.00508] bright tin-lead over .000030 [0.00076] nickel on entire contact

Ins. Dia. Range	Finish	Part Nos.		Quick-Change Applicator No. (for AMP-O-LECTRIC Machine)	Hand Tool Part No.
		Strip Form	Loose Piece		
.040-.055 [1.02-1.40]	Plating A	87107-5	102348-2	567307-2	90381-1
	Plating C	87107-6	102348-3		

Crimp Snap-In Pins with Insulation Support



Pin with Insulation Support

Plating A—Selectively plated .000030 [0.00076] gold on contact area, with gold flash over .000050 [0.00127] nickel on entire contact

Plating B—Selectively plated .000015 [0.00038] gold on contact area, with gold flash over .000050 [0.00127] nickel on entire contact

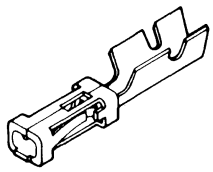
Plating C—.000100-.000200 [0.00254-0.00508] bright tin-lead over .000030 [0.00076] nickel on entire contact

Wire Size Range AWG [mm²]	Ins. Dia. (Max.)	Finish	Part Nos.		Quick-Change Applicator No. (for AMP-O-LECTRIC Machine)	Hand Tool Part No.
			Strip Form	Loose Piece		
26-22 [0.12-0.4]	.061 [1.55]	Plating A	102095-3	102107-2	466812-2	90418-1
		Plating B	102095-2	102107-1		
		Plating C	102095-4	102107-3		

SOURCE: Catalog 65816

Mod. IV Receptacle Contacts

Crimp Snap-In Receptacles with Insulation Support (Standard, Intermediate and High Pressure)



Plating A—Duplex plated .000030 [0.00076] gold on contact area, .000100-.000200 [0.00254-0.00508] tin-lead on crimp area, with entire contact underplated .000050 [0.00127] nickel

Plating B—Duplex plated .000015 [0.00038] gold on contact area, .000100-.000200 [0.00254-0.00508] tin-lead in crimp area, with entire contact underplated .000050 [0.00127] nickel

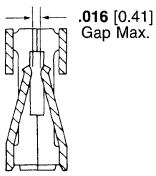
Plating C—Selectively plated .000075 [0.00191] gold on contact area, with gold flash over .000050 [0.00127] nickel on entire contact

Plating D—Selectively plated .000050 [0.00127] gold on contact area, with gold flash over .000050 [0.00127] nickel on entire contact

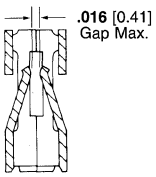
Plating E—Selectively plated .000030 [0.00076] gold on contact area, with gold flash over .000050 [0.00127] nickel on entire contact

Plating F—Selectively plated .000015 [0.00038] gold on contact area, with gold flash over .000050 [0.00127] nickel on entire contact

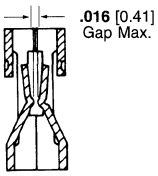
Plating G—.000100-.000200 [0.00254-0.00508] bright tin-lead over .000030 [0.00076] nickel on entire contact



Standard Pressure



Intermediate Pressure



High Pressure

Standard Pressure (Mod. IV)

Wire Size Range AWG [mm²]	Ins. Dia. (Max.)	Material	Finish	Part Nos. Strip Form	Part Nos. Loose Piece	Quick-Change Applicator for AMP-O-LECTRIC Machine	Applicator for Stripper/ Crimper Machine	Hand Tool Part Nos.
32-27 [0.03-0.1]	.040 [1.02]	Cu-Sn-Ph Bz	Plating A	102316-8	1-102316-4	466655-2	466921-1	90417-1
		Cu-Sn-Ph Bz	Plating B	102316-6	1-102316-3			
		Be Cu	Plating C	104456-1	104456-2			
		Be Cu	Plating D	1-102917-1	1-102917-2			
		Be Cu	Plating E	102917-1	102917-2			
		Be Cu	Plating F	102917-5	—			
		Cu-Sn-Ph Bz	Plating G	102316-5	—			
26-22 [0.12-0.4]	.061 [1.55]	Cu-Sn-Ph Bz	Plating A	1-87756-7	1-87756-8	466571-2	466918-1	90418-1
		Cu-Sn-Pn Bz	Plating B	1-87756-2	1-87756-6			
		Be Cu	Plating D	1-87666-6	—			
		Be Cu	Plating E	87666-2	87667-2			
		Be Cu	Plating F	87666-5	87667-5			
		Cu-Sn-Ph Bz	Plating G	87756-6	87756-7			
		Be Cu	Plating G	87666-3	87667-3			
24-20 [0.2-0.6]	.069 [1.75]	Cu-Sn-Ph Bz	Plating A	1-87523-8	1-87523-9	466562-2	466905-1	90202-2
		Cu-Sn-Ph Bz	Plating B	1-87523-5	1-87523-6			
		Be Cu	Plating C	104455-1	—			
		Be Cu	Plating E	85969-8	86016-2			
		Be Cu	Plating F	85969-6	86016-5			
		Be Cu	Plating G	85969-9	86016-3			
		Cu-Sn-Ph Bz	Plating G	87523-5	87523-6			

Intermediate Pressure (Mod. IV.v)

Wire Size Range AWG [mm²]	Ins. Dia. (Max.)	Material	Finish	Part Nos. Strip Form	Part Nos. Loose Piece	Quick-Change Applicator for AMP-O-LECTRIC Machine	Applicator for Stripper/ Crimper Machine	Hand Tool Part Nos.
32-27 [0.03-0.1]	.040 [1.02]	Cu-Sn-Ph Bz	Plating A	102920-1	102920-2	466655-2	466921-1	90417-1
		Be Cu	Plating E	102918-1	102918-2			
26-22 [0.12-0.4]	.061 [1.55]	Cu-Sn-Ph Bz	Plating A	103171-4	103171-5	466571-2	466918-1	90418-1
		Cu-Sn-Ph Bz	Plating B	103171-1	—			
		Be Cu	Plating E	102548-5	102548-6			
		Be Cu	Plating F	102548-1	102548-3			
24-20 [0.2-0.6]	.069 [1.75]	Cu-Sn-Ph Bz	Plating A	2-87195-0	2-87195-1	466562-2	466905-1	90202-2
		Cu-Sn-Ph Bz	Plating B	1-87195-7	1-87195-8			
		Be Cu	Plating E	86492-6	87046-3			
		Be Cu	Plating F	86492-2	87046-1			
		Be Cu	Plating G	86492-9	87046-4			

High Pressure (Mod. V)
Material: Phosphor Bronze

Wire Size Range AWG [mm²]	Ins. Dia. (Max.)	Finish	Part Nos. Strip Form	Part Nos. Loose Piece	Quick-Change Applicator for AMP-O-LECTRIC Machine	Applicator for Stripper/ Crimper Machine	Hand Tool Part Nos.
32-27 [0.03-0.1]	.040 [1.02]	Plating E	103455-1	103455-2	466655-2	466921-1	90417-1
26-22 [0.12-0.4]	.061 [1.55]	Plating E	87809-1	102128-1	466571-2	466918-1	90418-1
		Plating G	87809-2	102128-2			
24-20 [0.2-0.6]	.069 [1.75]	Plating E	87309-9	1-87309-4	466562-2	466905-1	90202-2
		Plating G	87309-8	1-87309-3			

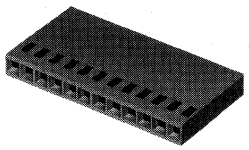
SOURCE: Catalog 65816

Specifications subject to change.

1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

Mod. IV Wire-Applied Housings, Single Row, .100 [2.54] Centers



Non-Polarized

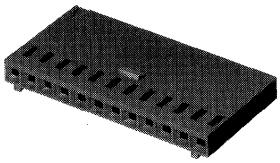
Note: 12 Pos. Housing Dim. (Typ.)—1.205 [30.61] L x .140 [3.56] W x .600 [15.24] H

No. of Pos.	Part Numbers Stamped*	Part Numbers Unstamped**
1	—	7-87499-2
2	87499-3	87499-4
3	87499-5	87499-6
4	87499-7	87499-8
5	87499-9	1-87499-0
6	1-87499-1	1-87499-2
7	87499-1	87499-2
8	1-87499-3	1-87499-4
9	1-87499-5	1-87499-6
10	1-87499-7	1-87499-8
11	1-87499-9	2-87499-0

No. of Pos.	Part Numbers Stamped*	Part Numbers Unstamped**
12	2-87499-1	2-87499-2
13	2-87499-3	2-87499-4
14	2-87499-5	2-87499-6
15	2-87499-7	2-87499-8
16	2-87499-9	3-87499-0
18	3-87499-3	3-87499-4
20	3-87499-7	3-87499-8
22	—	4-87499-2
26	—	5-87499-0
30	—	5-87499-8

* Cavity identification, AMP, part number and date code stamped on housing where size permits.
** No marking on housing.
Notes: 1. Strain reliefs are available and may be purchased separately. Consult AMP.
2. Contact Extraction/Lance Reset Tool—**Part No. 843996-3**.

Polarized (with Detent Latching)



Note: 12 Pos. Housing Dim. (Typ.)—1.200 [30.48] L x .182 [4.62] W x .600 [15.24] H

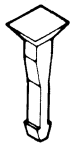
No. of Pos.	Part Numbers Unstamped*
3	102241-1
4	102241-2
5	102241-3
6	102241-4
7	102241-5
8	102241-6

No. of Pos.	Part Numbers Unstamped*
9	102241-7
10	102241-8
12	1-102241-0
13	1-102241-1
14	1-102241-2

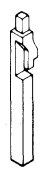
No. of Pos.	Part Numbers Unstamped*
15	1-102241-3
16	1-102241-4
18	1-102241-6
20	1-102241-8
22	2-102241-0

* No marking on housing.
Note: Contact Extraction/Lance Reset Tool—**Part No. 843996-3**.

Keying Plugs



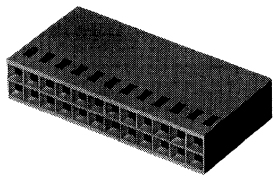
Part No. 86286-1
(Plugs into standard or intermediate pressure receptacle contact)



Part No. 87077-2
(Plugs directly into housing)

SOURCE: Catalog 65816

Mod. IV Wire-Applied Housings, Double Row, .100 x .100 [2.54 x 2.54] Centers



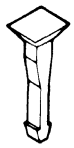
Non-Polarized

Note: 20 Pos. Housing Dim. (Typ.)—1.000 [25.40] L x .240 [6.10] W x .600 [15.24] or .645 [16.38] H

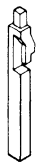
No. of Pos.	Part Nos. Height = .600 [15.24] Stamped*	Height = .600 [15.24] Unstamped**	Height = .645 [16.38] Unstamped**
2	—	5-87456-3	—
4	5-87456-0	4-87456-9	—
6	87456-2	87456-1	1-86177-8
8	87456-4	87456-3	—
10	87456-6	87456-5	1-86177-2
12	87456-8	87456-7	1-86177-3
14	1-87456-0	87456-9	1-86177-4
16	1-87456-2	1-87456-1	1-86177-5
18	1-87456-4	1-87456-3	—
20	1-87456-6	1-87456-5	86177-1
22	—	1-87456-7	—
24	2-87456-0	1-87456-9	—
26	2-87456-2	2-87456-1	86177-4
28	2-87456-4	2-87456-3	86177-5
30	2-87456-6	2-87456-5	—
34	3-87456-0	2-87456-9	—
38	3-87456-4	3-87456-3	—
40	3-87456-6	3-87456-5	1-86177-1
50	4-87456-0	3-87456-9	2-86177-1
54	4-87456-6	4-87456-5	—
60	5-87456-2	5-87456-1	—
70	—	5-87456-5	—

* Cavity identification, AMP, part number and date code stamped on housing where size permits.
** No marking on housing.
Notes: 1. Strain reliefs are available and may be purchased separately. Consult AMP.
2. Contact Extraction/Lance Reset Tool—**Part No. 843996-3**.

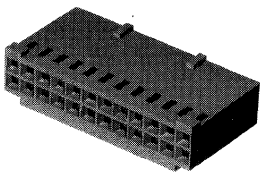
Keying Plugs



Part No. 86286-1
(Plugs into standard or intermediate pressure receptacle contact)



Part No. 87077-1
(for .645 [16.38] high housings)
Part No. 87077-2
(for .600 [15.24] high housings)
(Plugs directly into housing)



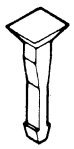
Polarized

Note: 20 Pos. Housing Dim. (Typ.)—1.000 [25.40] L x .240 [6.10] W x .600 [15.24] H

No. of Pos.	Part Nos. Stamped*	Unstamped**
6	87977-1	2-87977-8
8	87977-2	2-87977-9
10	87977-3	3-87977-0
12	87977-4	3-87977-1
14	—	3-87977-2
16	—	3-87977-3
18	—	3-87977-4
20	—	3-87977-5
24	1-87977-0	3-87977-7
26	1-87977-1	3-87977-8
28	—	3-87977-9
34	—	4-87977-2
40	—	4-87977-5
56	—	5-87977-8

* Cavity identification, AMP, part number and date code stamped on housing where size permits.
** No marking on housing.
Notes: 1. Strain reliefs are available and may be purchased separately. Consult AMP.
2. Contact Extraction/Lance Reset Tool—**Part No. 843996-3**.

Keying Plugs



Part No. 86286-1
(Plugs into standard or intermediate pressure receptacle contact)

Part No. 87077-2
(Plugs directly into housing)

SOURCE: Catalog 65816

Specifications subject to change.

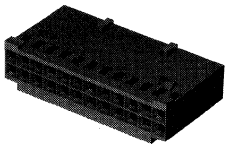
1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

Mod. IV Wire-Applied Housings, Double Row, .100 x .100 [2.54 x 2.54] Centers

(Continued)

Polarized (with Detent Latching, with and without Strain Relief/Pull Tab)



Note: 24 Pos. Housing Dim. (Typ.)—1.200 [30.48] L x .240 [6.10] W x .600 [15.24] H

No.of Pos.	No. of Detents	Part Numbers		
		Without Strain Relief		With Strain Relief
		Stamped*	Unstamped**	Stamped*
6	1	87631-2	87631-1	—
8	1	87631-4	87631-3	—
10	1	87631-6	87631-5	87922-1
12	1	87631-8	87631-7	87922-2
14	1	1-87631-0	87631-9	87922-3
16	1	1-87631-2	1-87631-1	87922-4
18	1	1-87631-4	1-87631-3	87922-5
20	2	1-87631-6	1-87631-5	87733-1
22	2	—	1-87631-7	—
24	2	2-87631-0	1-87631-9	87733-3
26	2	2-87631-2	2-87631-1	87733-4
28	2	2-87631-4	2-87631-3	—
30	2	2-87631-6	2-87631-5	87733-6
32	2	2-87631-8	2-87631-7	87733-7
34	2	3-87631-0	2-87631-9	87733-8
40	2	3-87631-6	3-87631-5	1-87733-1
44	2	—	3-87631-9	—
50	2	4-87631-2	4-87631-1	1-87733-4
60	2	5-87631-2	5-87631-1	1-87733-7
66	2	—	5-87631-3	—

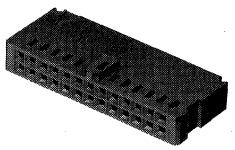
* Cavity identification, AMP, part number and date code stamped on housing and/or strain relief where size permits.
** No marking on housing or strain relief.
Notes: 1. The Strain Relief/Pull Tab can be bonded to any thermoplastic connector housing.
2. Strain reliefs may be purchased separately.
3. Contact Extraction/Lance Reset Tool— **Part No. 843996-3.**

Strain Reliefs

Part No. 87921-1
(10 thru 18 positions)

Part No. 87710-1
(20 positions and larger)

Center Polarized

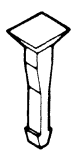


Note: 26 Pos. Housing Dim. (Typ.)—1.480 [37.59] L x .240 [6.10] W x .600 [15.24] H

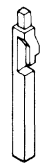
No. of Pos.	Part Numbers Unstamped*	No. of Pos.	Part Numbers Unstamped*
10	102387-1	30	102387-7
14	102387-2	34	102387-8
16	102387-3	40	102387-9
20	102387-4	44	1-102387-3
22	1-102387-5	50	1-102387-0
24	102387-5	60	1-102387-1
26	102387-6	64	1-102387-2

* No marking on housing.
Note: Contact Extraction/Lance Reset Tool—**Part No. 843996-3**.

Keying Plugs



Part No. 86286-1
(Plugs into standard or intermediate pressure receptacle contact)

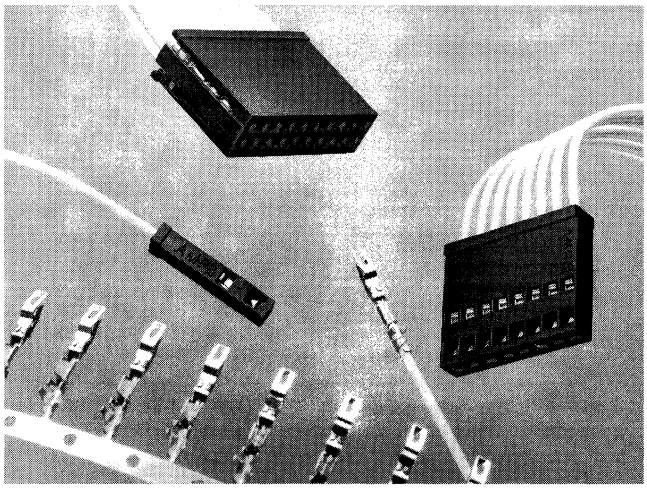


Part No. 87077-2
(Plugs directly into housing)

SOURCE: Catalog 65816

Specifications subject to change.
1-800-522-6752 Product Information Center/ AMP FAX Service
1-800-722-1111 Tooling/Technical Assistance Center

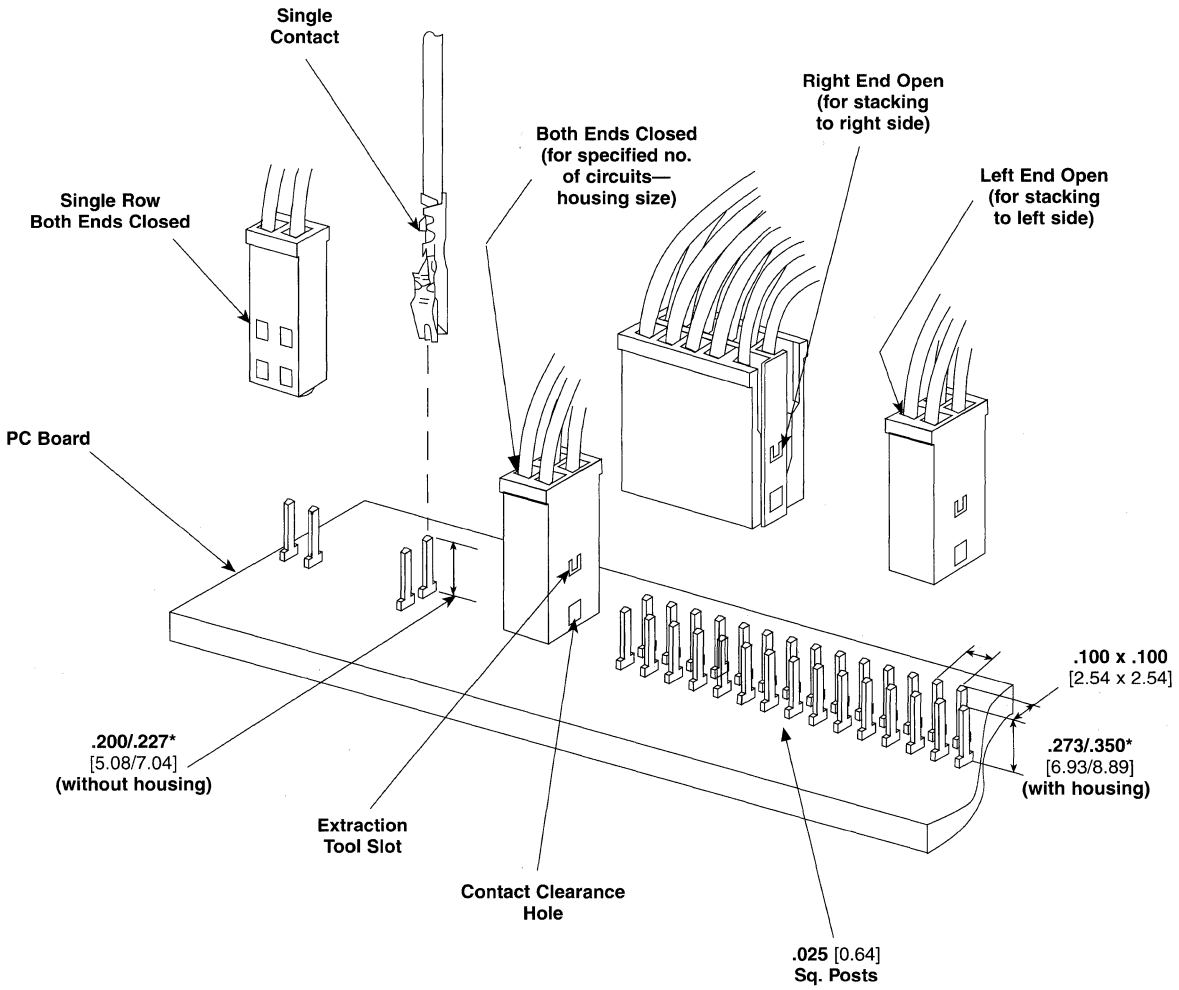
Locking Clip Contacts and Housings



Product Facts

- Self-retaining contacts provide permanent connection with quick connect and disconnect
- Fast, easy installation with no additional locking hardware required
- Mates with .025 [0.64] square posts in a variety of configurations
- Single- and double-row configurations in up to 20 positions on .100 [2.54] centers
- Modular design permits end-to-end stacking (double row only) for circuit grouping
- Choice of tin or select gold plating
- Housings made of 94V-0 rated glass-filled polyester
- Recognized under the Component Program of Underwriters Laboratories Inc., File No. E28476
- Certified by Canadian Standards Association, File No. LR 7189

Typical Application



*If post is longer than maximum specified, post tip may butt against wire ends.

SOURCE: Catalog 65816

Specifications subject to change.

1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

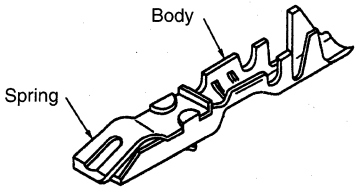
Locking Clip Contacts

Wire Crimp Contacts with Insulation Support

Plating A—Selectively plated .000050 [0.00127] gold on contact area, with gold flash over .000050 [0.00127] nickel on entire contact

Plating B—Selectively plated .000030 [0.00076] gold on contact area, with gold flash over .000050 [0.00127] nickel on entire contact

Plating C—.000100-.000200 [0.00254-0.00508] bright tin-lead over .000050 [0.00127] nickel on entire contact

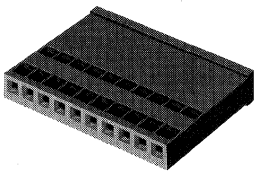


Wire Size Range AWG [mm²]	Ins. Dia. Range	Finish	Part Nos. Strip Form	Part Nos. Loose Piece	Quick-Change Applicator for AMP-O-LECTRIC Machine	Hand Tool Part No.
30-28 [0.05-0.09]	**.029-.039** [0.74-0.99]	Plating B	87190-1	87191-1	687792-2	90295-1
		Plating C	87190-2	87191-2		
26-22 [0.12-0.4]	**.038-.062** [0.97-1.57]	Plating A	87124-3	—	466721-2	90289-1
		Plating B	87124-1	87165-1		
		Plating C	87124-2	87165-2		
20 [0.5-0.6]	**.038-.062** [0.97-1.57]	Plating B	867052-2	—	466721-2	90431-1
		Plating C	867052-1	—		

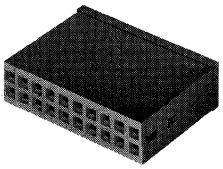
Notes: 1. These contacts must be crimped in accordance with AMP Specification No. 114-25006 in order to function properly in a connector housing.
2. Extraction Tool **Part No. 91084-1** is used for removing individual contacts from connector housings and for detaching contacts from mating posts.

Wire-Applied Housings for Locking Clip Contacts

Single Row, .100 [2.54] Centers and Double Row, .100 x .100 [2.54 x 2.54] Centers



Single Row



Double Row

Note: 10 Pos. Housing Dim. (Typ.)—Single Row, 1.016 [25.81] L x .145 [3.68] W x .700 [17.78] H;
Double Row, .516 [13.11] L x .270 [6.86] W x .700 [17.78] H

Housing Configuration	No. of Pos.	Housing Part Nos. Unstamped
Single Row Both Ends Closed	1	87175-2
	2	87175-6
	3	87175-8
	4	1-87175-0
	5	1-87175-2
	6	1-87175-4
	7	1-87175-6
	8	1-87175-8
	9	2-87175-0
	10	2-87175-2
	12	2-87175-6
	13	2-87175-8
	14	3-87175-0
	15	87175-4

Housing Configuration	No. of Pos.	Housing Part Nos. Unstamped
Double Row Both Ends Closed	2	87176-2
	4	87133-1
	6	87133-7
	8	87133-9
	10	87133-2
	12	1-87133-1
	20	87133-3
Double Row Right End Open	4	87132-1
	10	87132-2
Double Row Left End Open	4	87131-1
	10	87131-2

Notes: 1. See AMP Instruction Sheet 408-7606 for proper contact orientation within the housings.
2. Housing illustrated above is the "Both Ends Closed" version.

Keying Plug

Part No. 87179-1
(Plugs directly into housings for .025 [0.64] square-post contacts)

Specifications subject to change.
1-800-522-6752 Product Information Center/ AMP FAX Service
1-800-722-1111 Tooling/Technical Assistance Center

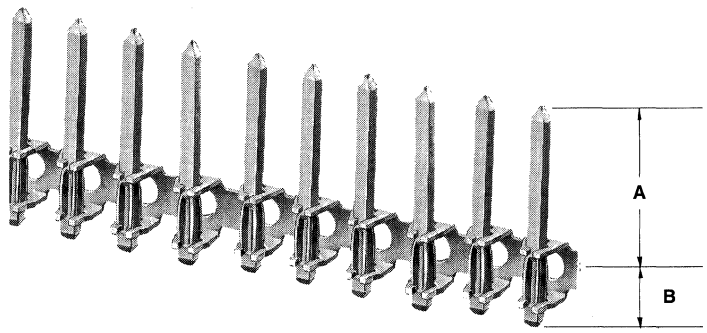
.025 [0.64] Square Posts

Bandolier Posts (Uninsulated)

Plating A—Duplex plated .000030 [0.00076] gold on contact area, .000100-000200 [0.00254-0.00508] tin-lead on solder area, with entire post underplated .000050 [0.00127] nickel

Plating B—Duplex plated .000015 [0.00038] gold on contact area, .000100-.000200 [0.00254-0.00508] tin-lead on solder area, with entire post underplated .000050 [0.00127] nickel

Plating C—.000100-.000200 [0.00254-0.00508] tin-lead over .000050 [0.00127] nickel on entire post



Dimensions		Post Plating/Part Numbers			Bandolier Insertion Head
A	B	Plating A	Plating B	Plating C	
.353 8.97	.071 1.80	103577-1	1-103577-3	103577-7	816576-1
.318 8.08	.071 1.80	103577-3	1-103577-5	103577-9	816576-2
.270 6.86	.071 1.80	103577-5	1-103577-7	1-103577-1	816576-3
		146079-1	—	—	—

Notes: 1. Posts can be applied using Hand Tool **Part No. 91419-1.**
2. Posts per reel—30,000.
3. The Bandolier Insertion head can be used on the Comp-U-Sertor II machine or the Modular Insertion System Bench machine.

Strip Form Posts (Uninsulated)

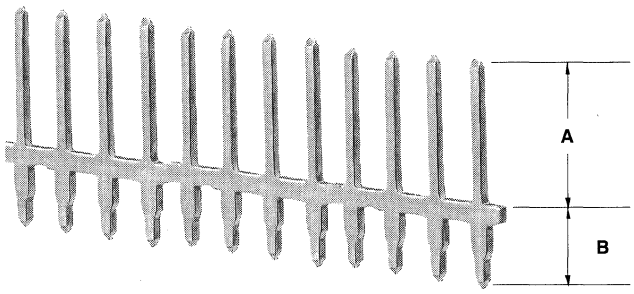
Plating A—Duplex plated .000030 [0.00076] gold on contact area, .000100-.000200 [0.00254-0.00508] tin-lead on solder area, with entire post underplated .000050 [0.00127] nickel

Plating B—Duplex plated .000015 [0.00038] gold on contact area, .000100-.000200 [0.00254-0.00508] tin-lead on solder area, with entire post underplated .000050 [0.00127] nickel

Plating C—.000030 [0.00076] gold over .000050 [0.00127] nickel on entire post

Plating D—.000100-.000200 [0.00254-0.00508] tin-lead over .000050 [0.00127] nickel on entire post

- **Recognized under the Component Program of Underwriters Laboratories Inc., File No. E28476**
- **Certified by Canadian Standards Association, File No. LR 7189**



Dimensions		Post Plating/Part Numbers				Post Tab Insertion Head
A	B	Plating A	Plating B	Plating C	Plating D	
.210 5.33	.227 5.77	—	—	87878-6	1-87022-4	1-813959-1
.278 7.06	.165 4.19	87623-1	87623-4	87022-1	1-87022-0	813959-1
.278 7.06	.284 7.21	—	—	1-87022-3	—	—
.278 7.06	.738 18.75	—	—	87022-2	87022-4	—
.318 8.08	.165 4.19	—	—	4-87022-1	4-87022-3	1-813959-0
.445 11.30	.165 4.19	—	—	—	9-87022-6	—

Notes: 1. Posts per reel—20,000.
2. Other post lengths are available, consult AMP.
3. The Post/Tab Insertion head can be used on the Comp-U-Sertor II machine or the Modular Insertion System Bench machine.

SOURCE: Catalog 65816

Specifications subject to change.

1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

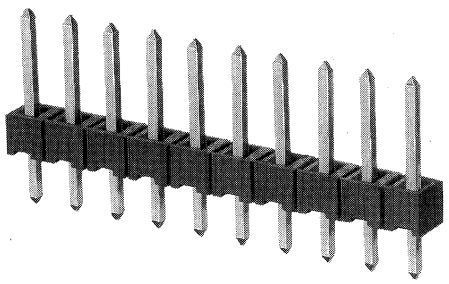
Breakaway and Retention Headers—Unshrouded

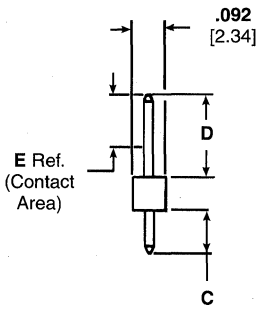
Product Facts

- Design and inventory versatility—headers can be broken into any size needed
- Variety of popular sizes available
- Substantial time/labor savings—install all posts at one time
- Vertical and right-angle versions available in single- and double-row configurations
- Copper alloy posts
- Choice of gold duplex or tin-lead plated posts
- Post lengths include .230 [5.84] and .318 [8.08] for connector mating
- Board retention feature available
- Flame retardant, black thermoplastic housings, 94V-O rated
- Recognized under the Component Program of Underwriters Laboratories Inc., File No. E28476
- Certified by Canadian Standards Association, File No. LR 7189

Breakaway Headers—Unshrouded, Single-Row, .100 [2.54] Centers

.025 [0.64] Square Straight Post





Plating A—Duplex plated .000030 [0.00076] gold on contact area, .000100-.000200 [0.00254-0.00508] tin-lead on solder area, with entire post underplated .000050 [0.00127] nickel

Plating B—Duplex plated .000015 [0.00038] gold on contact area, .000100-.000200 [0.00254-0.00508] tin-lead on solder area, with entire post underplated .000050 [0.00127] nickel

Plating C—.000100-.000200 [0.00254-0.00508] tin-lead over .000050 [0.00127] nickel on entire post

Note: 20 Pos. Housing Dim. (Typ.)—1.984 [50.39] L x .092 [2.34] W x .090 [2.29] H

No. of Pos.	C = .090 [2.29] D = .230 [5.84] E = .185 [4.70] Post Plating/Part Nos.		C = .120 [3.05] D = .230 [5.84] E = .185 [.470] Post Plating/Part Nos.			C = .125 [3.18] D = .318 [8.08] E = .200 [5.08] Post Plating/Part Nos.		
	Plating A	Plating C	Plating A	Plating B	Plating C	Plating A	Plating B	Plating C
1	103747-1	103741-1	103239-1	103185-1	103327-1	102976-1	102972-1	103321-1
2	103747-2	103741-2	103239-2	103185-2	103327-2	102976-2	102972-2	103321-2
3	103747-3	103741-3	103239-3	103185-3	103327-3	102976-3	102972-3	103321-3
4	103747-4	103741-4	103239-4	103185-4	103327-4	102976-4	102972-4	103321-4
5	103747-5	103741-5	103239-5	103185-5	103327-5	102976-5	102972-5	103321-5
6	103747-6	103741-6	103239-6	103185-6	103327-6	102976-6	102972-6	103321-6
7	103747-7	103741-7	103239-7	103185-7	103327-7	102976-7	102972-7	103321-7
8	103747-8	103741-8	103239-8	103185-8	103327-8	102976-8	102972-8	103321-8
9	103747-9	103741-9	103239-9	103185-9	103327-9	102976-9	102972-9	103321-9
10	1-103747-0	1-103741-0	1-103239-0	1-103185-0	1-103327-0	1-102976-0	1-102972-0	1-103321-0

Notes: 1. Headers may be broken to desired number of positions using Hand Tool **Part No. 91406-1.**
2. Other tail lengths are available, consult AMP.

SOURCE: Catalog 65816

Breakaway Headers— Unshrouded, Single-Row, .100 [2.54] Centers

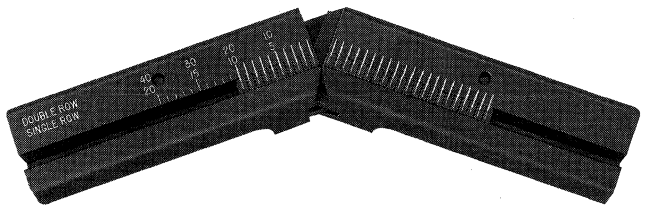
(Continued)

.025 [0.64] Square Straight Post

(Continued)

No. of Pos.	C = .090 [2.29] D = .230 [5.84] E = .185 [4.70]		C = .120 [3.05] D = .230 [5.84] E = .185 [4.70]			C = .125 [3.18] D = .318 [8.08] E = .200 [5.08]		
	Post Plating/Part Nos.		Post Plating/Part Nos.			Post Plating/Part Nos.		
	Plating A	Plating C	Plating A	Plating B	Plating C	Plating A	Plating B	Plating C
11	1-103747-1	1-103741-1	1-103239-1	1-103185-1	1-103327-1	1-102976-1	1-102972-1	1-103321-1
12	1-103747-2	1-103741-2	1-103239-2	1-103185-2	1-103327-2	1-102976-2	1-102972-2	1-103321-2
13	1-103747-3	1-103741-3	1-103239-3	1-103185-3	1-103327-3	1-102976-3	1-102972-3	1-103321-3
14	1-103747-4	1-103741-4	1-103239-4	1-103185-4	1-103327-4	1-102976-4	1-102972-4	1-103321-4
15	1-103747-5	1-103741-5	1-103239-5	1-103185-5	1-103327-5	1-102976-5	1-102972-5	1-103321-5
16	1-103747-6	1-103741-6	1-103239-6	1-103185-6	1-103327-6	1-102976-6	1-102972-6	1-103321-6
17	1-103747-7	1-103741-7	1-103239-7	1-103185-7	1-103327-7	1-102976-7	1-102972-7	1-103321-7
18	1-103747-8	1-103741-8	1-103239-8	1-103185-8	1-103327-8	1-102976-8	1-102972-8	1-103321-8
19	1-103747-9	1-103741-9	1-103239-9	1-103185-9	1-103327-9	1-102976-9	1-102972-9	1-103321-9
20	2-103747-0	2-103741-0	2-103239-0	2-103185-0	2-103327-0	2-102976-0	2-102972-0	2-103321-0
21	2-103747-1	2-103741-1	2-103239-1	2-103185-1	2-103327-1	2-102976-1	2-102972-1	2-103321-1
22	2-103747-2	2-103741-2	2-103239-2	2-103185-2	2-103327-2	2-102976-2	2-102972-2	2-103321-2
23	2-103747-3	2-103741-3	2-103239-3	2-103185-3	2-103327-3	2-102976-3	2-102972-3	2-103321-3
24	2-103747-4	2-103741-4	2-103239-4	2-103185-4	2-103327-4	2-102976-4	2-102972-4	2-103321-4
25	2-103747-5	2-103741-5	2-103239-5	2-103185-5	2-103327-5	2-102976-5	2-102972-5	2-103321-5
26	2-103747-6	2-103741-6	2-103239-6	2-103185-6	2-103327-6	2-102976-6	2-102972-6	2-103321-6
27	2-103747-7	2-103741-7	2-103239-7	2-103185-7	2-103327-7	2-102976-7	2-102972-7	2-103321-7
28	2-103747-8	2-103741-8	2-103239-8	2-103185-8	2-103327-8	2-102976-8	2-102972-8	2-103321-8
29	2-103747-9	2-103741-9	2-103239-9	2-103185-9	2-103327-9	2-102976-9	2-102972-9	2-103321-9
30	3-103747-0	3-103741-0	3-103239-0	3-103185-0	3-103327-0	3-102976-0	3-102972-0	3-103321-0
31	3-103747-1	3-103741-1	3-103239-1	3-103185-1	3-103327-1	3-102976-1	3-102972-1	3-103321-1
32	3-103747-2	3-103741-2	3-103239-2	3-103185-2	3-103327-2	3-102976-2	3-102972-2	3-103321-2
33	3-103747-3	3-103741-3	3-103239-3	3-103185-3	3-103327-3	3-102976-3	3-102972-3	3-103321-3
34	3-103747-4	3-103741-4	3-103239-4	3-103185-4	3-103327-4	3-102976-4	3-102972-4	3-103321-4
35	3-103747-5	3-103741-5	3-103239-5	3-103185-5	3-103327-5	3-102976-5	3-102972-5	3-103321-5
36	3-103747-6	3-103741-6	3-103239-6	3-103185-6	3-103327-6	3-102976-6	3-102972-6	3-103321-6
37	3-103747-7	3-103741-7	3-103239-7	3-103185-7	3-103327-7	3-102976-7	3-102972-7	3-103321-7
38	3-103747-8	3-103741-8	3-103239-8	3-103185-8	3-103327-8	3-102976-8	3-102972-8	3-103321-8
39	3-103747-9	3-103741-9	3-103239-9	3-103185-9	3-103327-9	3-102976-9	3-102972-9	3-103321-9
40	4-103747-0	4-103741-0	4-103239-0	4-103185-0	4-103327-0	4-102976-0	4-102972-0	4-103321-0

Notes: 1. Headers may be broken to desired number of positions using Hand Tool **Part No. 91406-1**, or Tool Kit **Part No. 314818-1** (not shown).
2. Other tail lengths are available, consult AMP.



Hand Tool Part No. 91406-1

SOURCE: Catalog 65816

Specifications subject to change.

1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

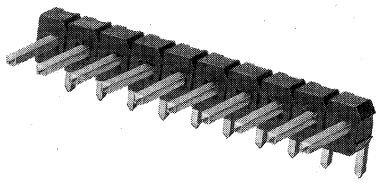
Breakaway Headers— Unshrouded, Single-Row, .100 [2.54] Centers
(Continued)

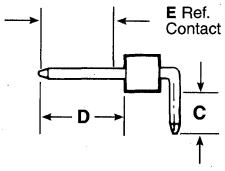
.025 [0.64] Square Right-Angle Post

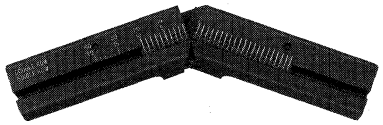
Plating A—Duplex plated .000030 [0.00076] gold on contact area

Plating B—Duplex plated .000015 [0.00038] gold on contact area

Plating C—.000100-.000200 [0.00254-0.00508] tin-lead







Hand Tool Part No. 91406-1

Note: 20 Pos. Housing Dim. (Typ.)—1.984 [50.39] L x .138 [3.51] H

No. of Pos.	C = .090 [2.29] D = .230 [5.84] E = .185 [4.70] Post Plating/Part Nos.		C = .120 [3.05] D = .230 [5.84] E = .185 [4.70] Post Plating/Part Nos.			C = .110 [2.79] D = .318 [8.08] E = .200 [5.08] Post Plating/Part Nos.		
	Plating A	Plating C	Plating A	Plating B	Plating C	Plating A	Plating B	Plating C
1	103765-1	103759-1	103148-1	103325-1	103329-1	102978-1	102974-1	103323-1
2	103765-2	103759-2	103148-2	103325-2	103329-2	102978-2	102974-2	103323-2
3	103765-3	103759-3	103148-3	103325-3	103329-3	102978-3	102974-3	103323-3
4	103765-4	103759-4	103148-4	103325-4	103329-4	102978-4	102974-4	103323-4
5	103765-5	103759-5	103148-5	103325-5	103329-5	102978-5	102974-5	103323-5
6	103765-6	103759-6	103148-6	103325-6	103329-6	102978-6	102974-6	103323-6
7	103765-7	103759-7	103148-7	103325-7	103329-7	102978-7	102974-7	103323-7
8	103765-8	103759-8	103148-8	103325-8	103329-8	102978-8	102974-8	103323-8
9	103765-9	103759-9	103148-9	103325-9	103329-9	102978-9	102974-9	103323-9
10	1-103765-0	1-103759-0	1-103148-0	1-103325-0	1-103329-0	1-102978-0	1-102974-0	1-103323-0
11	1-103765-1	1-103759-1	1-103148-1	1-103325-1	1-103329-1	1-102978-1	1-102974-1	1-103323-1
12	1-103765-2	1-103759-2	1-103148-2	1-103325-2	1-103329-2	1-102978-2	1-102974-2	1-103323-2
13	1-103765-3	1-103759-3	1-103148-3	1-103325-3	1-103329-3	1-102978-3	1-102974-3	1-103323-3
14	1-103765-4	1-103759-4	1-103148-4	1-103325-4	1-103329-4	1-102978-4	1-102974-4	1-103323-4
15	1-103765-5	1-103759-5	1-103148-5	1-103325-5	1-103329-5	1-102978-5	1-102974-5	1-103323-5
16	1-103765-6	1-103759-6	1-103148-6	1-103325-6	1-103329-6	1-102978-6	1-102974-6	1-103323-6
17	1-103765-7	1-103759-7	1-103148-7	1-103325-7	1-103329-7	1-102978-7	1-102974-7	1-103323-7
18	1-103765-8	1-103759-8	1-103148-8	1-103325-8	1-103329-8	1-102978-8	1-102974-8	1-103323-8
19	1-103765-9	1-103759-9	1-103148-9	1-103325-9	1-103329-9	1-102978-9	1-102974-9	1-103323-9
20	2-103765-0	2-103759-0	2-103148-0	2-103325-0	2-103329-0	2-102978-0	2-102974-0	2-103323-0
21	2-103765-1	2-103759-1	2-103148-1	2-103325-1	2-103329-1	2-102978-1	2-102974-1	2-103323-1
22	2-103765-2	2-103759-2	2-103148-2	2-103325-2	2-103329-2	2-102978-2	2-102974-2	2-103323-2
23	2-103765-3	2-103759-3	2-103148-3	2-103325-3	2-103329-3	2-102978-3	2-102974-3	2-103323-3
24	2-103765-4	2-103759-4	2-103148-4	2-103325-4	2-103329-4	2-102978-4	2-102974-4	2-103323-4
25	2-103765-5	2-103759-5	2-103148-5	2-103325-5	2-103329-5	2-102978-5	2-102974-5	2-103323-5
26	2-103765-6	2-103759-6	2-103148-6	2-103325-6	2-103329-6	2-102978-6	2-102974-6	2-103323-6
27	2-103765-7	2-103759-7	2-103148-7	2-103325-7	2-103329-7	2-102978-7	2-102974-7	2-103323-7
28	2-103765-8	2-103759-8	2-103148-8	2-103325-8	2-103329-8	2-102978-8	2-102974-8	2-103323-8
29	2-103765-9	2-103759-9	2-103148-9	2-103325-9	2-103329-9	2-102978-9	2-102974-9	2-103323-9
30	3-103765-0	3-103759-0	3-103148-0	3-103325-0	3-103329-0	3-102978-0	3-102974-0	3-103323-0
31	3-103765-1	3-103759-1	3-103148-1	3-103325-1	3-103329-1	3-102978-1	3-102974-1	3-103323-1
32	3-103765-2	3-103759-2	3-103148-2	3-103325-2	3-103329-2	3-102978-2	3-102974-2	3-103323-2
33	3-103765-3	3-103759-3	3-103148-3	3-103325-3	3-103329-3	3-102978-3	3-102974-3	3-103323-3
34	3-103765-4	3-103759-4	3-103148-4	3-103325-4	3-103329-4	3-102978-4	3-102974-4	3-103323-4
35	3-103765-5	3-103759-5	3-103148-5	3-103325-5	3-103329-5	3-102978-5	3-102974-5	3-103323-5
36	3-103765-6	3-103759-6	3-103148-6	3-103325-6	3-103329-6	3-102978-6	3-102974-6	3-103323-6
37	3-103765-7	3-103759-7	3-103148-7	3-103325-7	3-103329-7	3-102978-7	3-102974-7	3-103323-7
38	3-103765-8	3-103759-8	3-103148-8	3-103325-8	3-103329-8	3-102978-8	3-102974-8	3-103323-8
39	3-103765-9	3-103759-9	3-103148-9	3-103325-9	3-103329-9	3-102978-9	3-102974-9	3-103323-9
40	4-103765-0	4-103759-0	4-103148-0	4-103325-0	4-103329-0	4-102978-0	4-102974-0	4-103323-0

Notes: 1. Headers may be broken to desired number of positions using Hand Tool **Part No. 91406-1**, or Tool Kit **Part No. 314818-1** (not shown).
2. Other tail lengths are available, consult AMP.

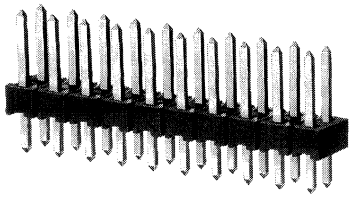
SOURCE: Catalog 65816

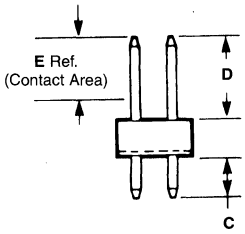
Specifications subject to change.

1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

Breakaway Headers—Unshrouded, Double-Row, .100 x .100 [2.54 x 2.54] Centers



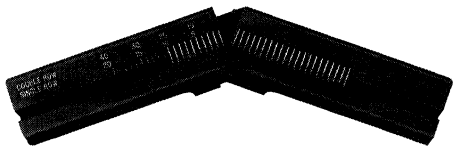


.025 [0.64] Square Straight Post

Plating A—Duplex plated .000030 [0.00076] gold on contact area

Plating B—Duplex plated .000015 [0.00038] gold on contact area

Plating C—.000100-.000200 [0.00254-0.00508] tin-lead



Hand Tool Part No. 91406-1

Note: 40 Pos. Housing Dim. (Typ.)—1.984 [50.39] L x .192 [4.88] W x .090 [2.29] H

No. of Pos.	C = .090 [2.29] D = .230 [5.84] E = .185 [4.70] Post Plating/Part Nos.		C = .120 [3.05] D = .230 [5.84] E = .185 [4.70] Post Plating/Part Nos.			C = .125 [3.18] D = .318 [8.08] E = .200 [5.08] Post Plating/Part Nos.		
	Plating A	Plating C	Plating A	Plating B	Plating C	Plating A	Plating B	Plating C
2	103783-1	103777-1	103240-1	103186-1	103328-1	102977-1	102973-1	103322-1
4	103783-2	103777-2	103240-2	103186-2	103328-2	102977-2	102973-2	103322-2
6	103783-3	103777-3	103240-3	103186-3	103328-3	102977-3	102973-3	103322-3
8	103783-4	103777-4	103240-4	103186-4	103328-4	102977-4	102973-4	103322-4
10	103783-5	103777-5	103240-5	103186-5	103328-5	102977-5	102973-5	103322-5
12	103783-6	103777-6	103240-6	103186-6	103328-6	102977-6	102973-6	103322-6
14	103783-7	103777-7	103240-7	103186-7	103328-7	102977-7	102973-7	103322-7
16	103783-8	103777-8	103240-8	103186-8	103328-8	102977-8	102973-8	103322-8
18	103783-9	103777-9	103240-9	103186-9	103328-9	102977-9	102973-9	103322-9
20	1-103783-0	1-103777-0	1-103240-0	1-103186-0	1-103328-0	1-102977-0	1-102973-0	1-103322-0
22	1-103783-1	1-103777-1	1-103240-1	1-103186-1	1-103328-1	1-102977-1	1-102973-1	1-103322-1
24	1-103783-2	1-103777-2	1-103240-2	1-103186-2	1-103328-2	1-102977-2	1-102973-2	1-103322-2
26	1-103783-3	1-103777-3	1-103240-3	1-103186-3	1-103328-3	1-102977-3	1-102973-3	1-103322-3
28	1-103783-4	1-103777-4	1-103240-4	1-103186-4	1-103328-4	1-102977-4	1-102973-4	1-103322-4
30	1-103783-5	1-103777-5	1-103240-5	1-103186-5	1-103328-5	1-102977-5	1-102973-5	1-103322-5
32	1-103783-6	1-103777-6	1-103240-6	1-103186-6	1-103328-6	1-102977-6	1-102973-6	1-103322-6
34	1-103783-7	1-103777-7	1-103240-7	1-103186-7	1-103328-7	1-102977-7	1-102973-7	1-103322-7
36	1-103783-8	1-103777-8	1-103240-8	1-103186-8	1-103328-8	1-102977-8	1-102973-8	1-103322-8
38	1-103783-9	1-103777-9	1-103240-9	1-103186-9	1-103328-9	1-102977-9	1-102973-9	1-103322-9
40	2-103783-0	2-103777-0	2-103240-0	2-103186-0	2-103328-0	2-102977-0	2-102973-0	2-103322-0
42	2-103783-1	2-103777-1	2-103240-1	2-103186-1	2-103328-1	2-102977-1	2-102973-1	2-103322-1
44	2-103783-2	2-103777-2	2-103240-2	2-103186-2	2-103328-2	2-102977-2	2-102973-2	2-103322-2
46	2-103783-3	2-103777-3	2-103240-3	2-103186-3	2-103328-3	2-102977-3	2-102973-3	2-103322-3
48	2-103783-4	2-103777-4	2-103240-4	2-103186-4	2-103328-4	2-102977-4	2-102973-4	2-103322-4
50	2-103783-5	2-103777-5	2-103240-5	2-103186-5	2-103328-5	2-102977-5	2-102973-5	2-103322-5
52	2-103783-6	2-103777-6	2-103240-6	2-103186-6	2-103328-6	2-102977-6	2-102973-6	2-103322-6
54	2-103783-7	2-103777-7	2-103240-7	2-103186-7	2-103328-7	2-102977-7	2-102973-7	2-103322-7
56	2-103783-8	2-103777-8	2-103240-8	2-103186-8	2-103328-8	2-102977-8	2-102973-8	2-103322-8
58	2-103783-9	2-103777-9	2-103240-9	2-103186-9	2-103328-9	2-102977-9	2-102973-9	2-103322-9
60	3-103783-0	3-103777-0	3-103240-0	3-103186-0	3-103328-0	3-102977-0	3-102973-0	3-103322-0
62	3-103783-1	3-103777-1	3-103240-1	3-103186-1	3-103328-1	3-102977-1	3-102973-1	3-103322-1
64	3-103783-2	3-103777-2	3-103240-2	3-103186-2	3-103328-2	3-102977-2	3-102973-2	3-103322-2
66	3-103783-3	3-103777-3	3-103240-3	3-103186-3	3-103328-3	3-102977-3	3-102973-3	3-103322-3
68	3-103783-4	3-103777-4	3-103240-4	3-103186-4	3-103328-4	3-102977-4	3-102973-4	3-103322-4
70	3-103783-5	3-103777-5	3-103240-5	3-103186-5	3-103328-5	3-102977-5	3-102973-5	3-103322-5
72	3-103783-6	3-103777-6	3-103240-6	3-103186-6	3-103328-6	3-102977-6	3-102973-6	3-103322-6
74	3-103783-7	3-103777-7	3-103240-7	3-103186-7	3-103328-7	3-102977-7	3-102973-7	3-103322-7
76	3-103783-8	3-103777-8	3-103240-8	3-103186-8	3-103328-8	3-102977-8	3-102973-8	3-103322-8
78	3-103783-9	3-103777-9	3-103240-9	3-103186-9	3-103328-9	3-102977-9	3-102973-9	3-103322-9
80	4-103783-0	4-103777-0	4-103240-0	4-103186-0	4-103328-0	4-102977-0	4-102973-0	4-103322-0

Notes: 1. Headers may be broken to desired number of positions using Hand Tool **Part No. 91406-1**, or Tool Kit **Part No. 314818-1** (not shown).
2. Other tail lengths are available, consult AMP.

SOURCE: Catalog 65816

Specifications subject to change.

1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

Breakaway Headers—Unshrouded, Double-Row, .100 x .100 [2.54 x 2.54] Centers

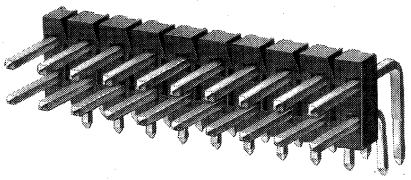
(Continued)

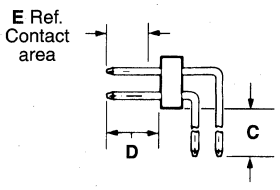
.025 [0.64] Square Right-Angle Post

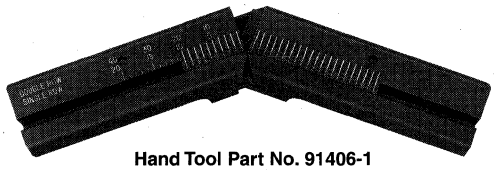
Plating A—Duplex plated .000030 [0.00076] gold on contact area

Plating B—Duplex plated .000015 [0.00038] gold on contact area

Plating C—.000100-.000200 [0.00254-0.00508] tin-lead







Hand Tool Part No. 91406-1

Note: 40 Pos. Housing Dim. (Typ.)—1.984 [50.39] L x .238 [6.05] H

No. of Pos.	C = .090 [2.29] D = .230 [5.84] E = .185 [4.70] Post Plating/Part Nos.		C = .120 [3.05] D = .230 [5.84] E = .185 [4.70] Post Plating/Part Nos.			C = .110 [2.74] D = .318 [8.08] E = .200 [5.08] Post Plating/Part Nos.		
	Plating A	Plating C	Plating A	Plating B	Plating C	Plating A	Plating B	Plating C
2	103801-1	103795-1	103149-1	103326-1	103330-1	102979-1	102975-1	103324-1
4	103801-2	103795-2	103149-2	103326-2	103330-2	102979-2	102975-2	103324-2
6	103801-3	103795-3	103149-3	103326-3	103330-3	102979-3	102975-3	103324-3
8	103801-4	103795-4	103149-4	103326-4	103330-4	102979-4	102975-4	103324-4
10	103801-5	103795-5	103149-5	103326-5	103330-5	102979-5	102975-5	103324-5
12	103801-6	103795-6	103149-6	103326-6	103330-6	102979-6	102975-6	103324-6
14	103801-7	103795-7	103149-7	103326-7	103330-7	102979-7	102975-7	103324-7
16	103801-8	103795-8	103149-8	103326-8	103330-8	102979-8	102975-8	103324-8
18	103801-9	103795-9	103149-9	103326-9	103330-9	102979-9	102975-9	103324-9
20	1-103801-0	1-103795-0	1-103149-0	1-103326-0	1-103330-0	1-102979-0	1-102975-0	1-103324-0
22	1-103801-1	1-103795-1	1-103149-1	1-103326-1	1-103330-1	1-102979-1	1-102975-1	1-103324-1
24	1-103801-2	1-103795-2	1-103149-2	1-103326-2	1-103330-2	1-102979-2	1-102975-2	1-103324-2
26	1-103801-3	1-103795-3	1-103149-3	1-103326-3	1-103330-3	1-102979-3	1-102975-3	1-103324-3
28	1-103801-4	1-103795-4	1-103149-4	1-103326-4	1-103330-4	1-102979-4	1-102975-4	1-103324-4
30	1-103801-5	1-103795-5	1-103149-5	1-103326-5	1-103330-5	1-102979-5	1-102975-5	1-103324-5
32	1-103801-6	1-103795-6	1-103149-6	1-103326-6	1-103330-6	1-102979-6	1-102975-6	1-103324-6
34	1-103801-7	1-103795-7	1-103149-7	1-103326-7	1-103330-7	1-102979-7	1-102975-7	1-103324-7
36	1-103801-8	1-103795-8	1-103149-8	1-103326-8	1-103330-8	1-102979-8	1-102975-8	1-103324-8
38	1-103801-9	1-103795-9	1-103149-9	1-103326-9	1-103330-9	1-102979-9	1-102975-9	1-103324-9
40	2-103801-0	2-103795-0	2-103149-0	2-103326-0	2-103330-0	2-102979-0	2-102975-0	2-103324-0
42	2-103801-1	2-103795-1	2-103149-1	2-103326-1	2-103330-1	2-102979-1	2-102975-1	2-103324-1
44	2-103801-2	2-103795-2	2-103149-2	2-103326-2	2-103330-2	2-102979-2	2-102975-2	2-103324-2
46	2-103801-3	2-103795-3	2-103149-3	2-103326-3	2-103330-3	2-102979-3	2-102975-3	2-103324-3
48	2-103801-4	2-103795-4	2-103149-4	2-103326-4	2-103330-4	2-102979-4	2-102975-4	2-103324-4
50	2-103801-5	2-103795-5	2-103149-5	2-103326-5	2-103330-5	2-102979-5	2-102975-5	2-103324-5
52	2-103801-6	2-103795-6	2-103149-6	2-103326-6	2-103330-6	2-102979-6	2-102975-6	2-103324-6
54	2-103801-7	2-103795-7	2-103149-7	2-103326-7	2-103330-7	2-102979-7	2-102975-7	2-103324-7
56	2-103801-8	2-103795-8	2-103149-8	2-103326-8	2-103330-8	2-102979-8	2-102975-8	2-103324-8
58	2-103801-9	2-103795-9	2-103149-9	2-103326-9	2-103330-9	2-102979-9	2-102975-9	2-103324-9
60	3-103801-0	3-103795-0	3-103149-0	3-103326-0	3-103330-0	3-102979-0	3-102975-0	3-103324-0
62	3-103801-1	3-103795-1	3-103149-1	3-103326-1	3-103330-1	3-102979-1	3-102975-1	3-103324-1
64	3-103801-2	3-103795-2	3-103149-2	3-103326-2	3-103330-2	3-102979-2	3-102975-2	3-103324-2
66	3-103801-3	3-103795-3	3-103149-3	3-103326-3	3-103330-3	3-102979-3	3-102975-3	3-103324-3
68	3-103801-4	3-103795-4	3-103149-4	3-103326-4	3-103330-4	3-102979-4	3-102975-4	3-103324-4
70	3-103801-5	3-103795-5	3-103149-5	3-103326-5	3-103330-5	3-102979-5	3-102975-5	3-103324-5
72	3-103801-6	3-103795-6	3-103149-6	3-103326-6	3-103330-6	3-102979-6	3-102975-6	3-103324-6
74	3-103801-7	3-103795-7	3-103149-7	3-103326-7	3-103330-7	3-102979-7	3-102975-7	3-103324-7
76	3-103801-8	3-103795-8	3-103149-8	3-103326-8	3-103330-8	3-102979-8	3-102975-8	3-103324-8
78	3-103801-9	3-103795-9	3-103149-9	3-103326-9	3-103330-9	3-102979-9	3-102975-9	3-103324-9
80	4-103801-0	4-103795-0	4-103149-0	4-103326-0	4-103330-0	4-102979-0	4-102975-0	4-103324-0

Notes: 1. Headers may be broken to desired number of positions using Hand Tool **Part No. 91406-1**, or Tool Kit **Part No. 314818-1** (not shown).
2. Other tail lengths are available, consult AMP.

SOURCE: Catalog 65816

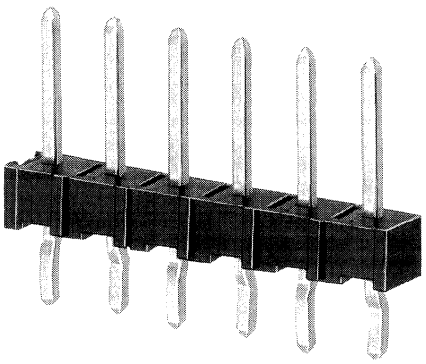
Specifications subject to change.

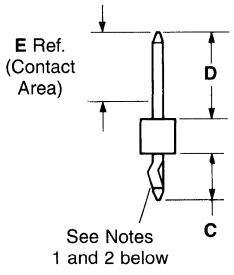
1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

Retention Headers—Unshrouded, Single-Row, .100 [2.54] Centers

.025 [0.64] Square Straight Post (with Board Retention Feature)





Plating A—Duplex plated .000030 [0.00076] gold on contact area, .000100-.000200 [0.00254-0.00508] tin-lead on solder area, with entire post underplated .000050 [0.00127] nickel

Plating B—Duplex plated .000015 [0.00038] gold on contact area, .000100-.000200 [0.00254-0.00508] tin-lead on solder area, with entire post underplated .000050 [0.00127] nickel

Plating C—.000100-.000200 [0.00254-0.00508] tin-lead over .000050 [0.00127] nickel on entire post

Note: 20 Pos. Housing Dim. (Typ.)—1.984 [50.39] L x .092 [2.34] W x .090 [2.29] H

No. of Pos.	C = .120 [3.05] D = .230 [5.84] E = .185 [4.70] Post Plating/Part Nos.			C = .125 [3.18] D = .318 [8.08] E = .200 [5.08] Post Plating/Part Nos.		
	Plating A	Plating B	Plating C	Plating A	Plating B	Plating C
3	104344-1	104345-1	104346-1	104426-1	104427-1	104428-1
4	104344-2	104345-2	104346-2	104426-2	104427-2	104428-2
5	104344-3	104345-3	104346-3	104426-3	104427-3	104428-3
6	104344-4	104345-4	104346-4	104426-4	104427-4	104428-4
7	104344-5	104345-5	104346-5	104426-5	104427-5	104428-5
8	104344-6	104345-6	104346-6	104426-6	104427-6	104428-6
9	104344-7	104345-7	104346-7	104426-7	104427-7	104428-7
10	104344-8	104345-8	104346-8	104426-8	104427-8	104428-8
11	104344-9	104345-9	104346-9	104426-9	104427-9	104428-9
12	1-104344-0	1-104345-0	1-104346-0	1-104426-0	1-104427-0	1-104428-0
13	1-104344-1	1-104345-1	1-104346-1	1-104426-1	1-104427-1	1-104428-1
14	1-104344-2	1-104345-2	1-104346-2	1-104426-2	1-104427-2	1-104428-2
15	1-104344-3	1-104345-3	1-104346-3	1-104426-3	1-104427-3	1-104428-3
16	1-104344-4	1-104345-4	1-104346-4	1-104426-4	1-104427-4	1-104428-4
17	1-104344-5	1-104345-5	1-104346-5	1-104426-5	1-104427-5	1-104428-5
18	1-104344-6	1-104345-6	1-104346-6	1-104426-6	1-104427-6	1-104428-6
19	1-104344-7	1-104345-7	1-104346-7	1-104426-7	1-104427-7	1-104428-7
20	1-104344-8	1-104345-8	1-104346-8	1-104426-8	1-104427-8	1-104428-8
21	1-104344-9	1-104345-9	1-104346-9	1-104426-9	1-104427-9	1-104428-9
22	2-104344-0	2-104345-0	2-104346-0	2-104426-0	2-104427-0	2-104428-0
23	2-104344-1	2-104345-1	2-104346-1	2-104426-1	2-104427-1	2-104428-1
24	2-104344-2	2-104345-2	2-104346-2	2-104426-2	2-104427-2	2-104428-2
25	2-104344-3	2-104345-3	2-104346-3	2-104426-3	2-104427-3	2-104428-3
26	2-104344-4	2-104345-4	2-104346-4	2-104426-4	2-104427-4	2-104428-4
30	2-104344-5	2-104345-5	2-104346-5	2-104426-5	2-104427-5	2-104428-5
35	2-104344-6	2-104345-6	2-104346-6	2-104426-6	2-104427-6	2-104428-6
40	2-104344-7	2-104345-7	2-104346-7	2-104426-7	2-104427-7	2-104428-7

Notes: 1. Board retention using kinked tails are for headers 6 positions and smaller; headers 7 positions and larger use swaged tails.
2. Refer to the product drawing to determine the number and location of the board retention tails.
3. Other tail lengths are available, consult AMP.

SOURCE: Catalog 65816

Specifications subject to change.

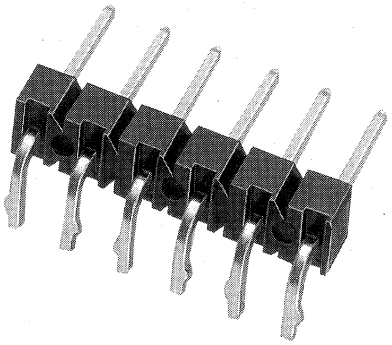
1-800-522-6752
Product Information Center/ AMP FAX Service

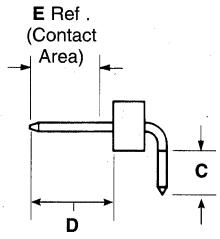
1-800-722-1111
Tooling/Technical Assistance Center

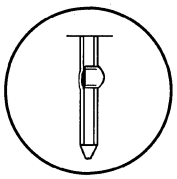
Retention Headers—Unshrouded, Single-Row, .100 [2.54] Centers

(Continued)

.025 [0.64] Square Right-Angle Post (with Board Retention Feature)







Board Retention using Swaged Tails (All Header Sizes)

Plating A—Duplex plated .000030 [0.00076] gold on contact area, .000100-.000200 [0.00254-0.00508] tin-lead on solder area, with entire post underplated .000050 [0.00127] nickel

Plating B—Duplex plated .000015 [0.00038] gold on contact area, .000100-.000200 [0.00254-0.00508] tin-lead on solder area, with entire post underplated .000050 [0.00127] nickel

Plating C—.000100-.000200 [0.00254-0.00508] tin-lead over .000050 [0.00127] nickel on entire post

Note: 20 Pos. Housing Dim. (Typ.)—1.984 [50.39] L x .090 [2.29] W x .138 [3.51] H

No. of Pos.	C = .120 [3.05] D = .230 [5.84] E = .185 [4.70] Post Plating/Part Nos.			C = .110 [2.79] D = .318 [8.08] E = .200 [5.08] Post Plating/Part Nos.		
	Plating A	Plating B	Plating C	Plating A	Plating B	Plating C
3	104347-1	104348-1	104349-1	104429-1	104430-1	104431-1
4	104347-2	104348-2	104349-2	104429-2	104430-2	104431-2
5	104347-3	104348-3	104349-3	104429-3	104430-3	104431-3
6	104347-4	104348-4	104349-4	104429-4	104430-4	104431-4
7	104347-5	104348-5	104349-5	104429-5	104430-5	104431-5
8	104347-6	104348-6	104349-6	104429-6	104430-6	104431-6
9	104347-7	104348-7	104349-7	104429-7	104430-7	104431-7
10	104347-8	104348-8	104349-8	104429-8	104430-8	104431-8
11	104347-9	104348-9	104349-9	104429-9	104430-9	104431-9
12	1-104347-0	1-104348-0	1-104349-0	1-104429-0	1-104430-0	1-104431-0
13	1-104347-1	1-104348-1	1-104349-1	1-104429-1	1-104430-1	1-104431-1
14	1-104347-2	1-104348-2	1-104349-2	1-104429-2	1-104430-2	1-104431-2
15	1-104347-3	1-104348-3	1-104349-3	1-104429-3	1-104430-3	1-104431-3
16	1-104347-4	1-104348-4	1-104349-4	1-104429-4	1-104430-4	1-104431-4
17	1-104347-5	1-104348-5	1-104349-5	1-104429-5	1-104430-5	1-104431-5
18	1-104347-6	1-104348-6	1-104349-6	1-104429-6	1-104430-6	1-104431-6
19	1-104347-7	1-104348-7	1-104349-7	1-104429-7	1-104430-7	1-104431-7
20	1-104347-8	1-104348-8	1-104349-8	1-104429-8	1-104430-8	1-104431-8
21	1-104347-9	1-104348-9	1-104349-9	1-104429-9	1-104430-9	1-104431-9
22	2-104347-0	2-104348-0	2-104349-0	2-104429-0	2-104430-0	2-104431-0
23	2-104347-1	2-104348-1	2-104349-1	2-104429-1	2-104430-1	2-104431-1
24	2-104347-2	2-104348-2	2-104349-2	2-104429-2	2-104430-2	2-104431-2
25	2-104347-3	2-104348-3	2-104349-3	2-104429-3	2-104430-3	2-104431-3
26	2-104347-4	2-104348-4	2-104349-4	2-104429-4	2-104430-4	2-104431-4
30	2-104347-5	2-104348-5	2-104349-5	2-104429-5	2-104430-5	2-104431-5
35	2-104347-6	2-104348-6	2-104349-6	2-104429-6	2-104430-6	2-104431-6
40	2-104347-7	2-104348-7	2-104349-7	2-104429-7	2-104430-7	2-104431-7

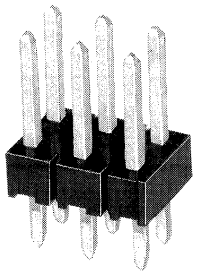
Notes: 1. Refer to the product drawing to determine the number and location of the board retention tails.
2. Other tail lengths are available, consult AMP.

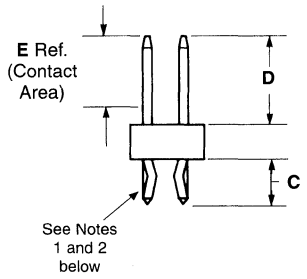
SOURCE: Catalog 65816

Specifications subject to change.
1-800-522-6752 Product Information Center/ AMP FAX Service
1-800-722-1111 Tooling/Technical Assistance Center

Retention Headers—Unshrouded, Double-Row, .100 x .100 [2.54 x 2.54] Centers

.025 [0.64] Square Straight Post (with Board Retention Feature)





Plating A—Duplex plated .000030 [0.00076] gold on contact area, .000100-.000200 [0.00254-0.00508] tin-lead on solder area, with entire post underplated .000050 [0.00127] nickel

Plating B—Duplex plated .000015 [0.00038] gold on contact area, .000100-.000200 [0.00254-0.00508] tin-lead on solder area, with entire post underplated .000050 [0.00127] nickel

Plating C—.000100-.000200 [0.00254-0.00508] tin-lead over .000050 [0.00127] nickel on entire post

Note: 20 Pos. Housing Dim. (Typ.)—.984 [24.99] L x .192 [4.88] W x .090 [2.29] H

No. of Pos.	C = .120 [3.05] D = .230 [5.84] E = .185 [4.70] Post Plating/Part Nos.			C = .125 [3.18] D = .318 [8.08] E = .200 [5.08] Post Plating/Part Nos.		
	Plating A	Plating B	Plating C	Plating A	Plating B	Plating C
2	104350-1	104351-1	104352-1	104432-1	104433-1	104434-1
4	104350-2	104351-2	104352-2	104432-2	104433-2	104434-2
6	104350-3	104351-3	104352-3	104432-3	104433-3	104434-3
8	104350-4	104351-4	104352-4	104432-4	104433-4	104434-4
10	104350-5	104351-5	104352-5	104432-5	104433-5	104434-5
12	104350-6	104351-6	104352-6	104432-6	104433-6	104434-6
14	104350-7	104351-7	104352-7	104432-7	104433-7	104434-7
16	104350-8	104351-8	104352-8	104432-8	104433-8	104434-8
18	104350-9	104351-9	104352-9	104432-9	104433-9	104434-9
20	1-104350-0	1-104351-0	1-104352-0	1-104432-0	1-104433-0	1-104434-0
22	1-104350-1	1-104351-1	1-104352-1	1-104432-1	1-104433-1	1-104434-1
24	1-104350-2	1-104351-2	1-104352-2	1-104432-2	1-104433-2	1-104434-2
26	1-104350-3	1-104351-3	1-104352-3	1-104432-3	1-104433-3	1-104434-3
28	1-104350-4	1-104351-4	1-104352-4	1-104432-4	1-104433-4	1-104434-4
30	1-104350-5	1-104351-5	1-104352-5	1-104432-5	1-104433-5	1-104434-5
34	1-104350-6	1-104351-6	1-104352-6	1-104432-6	1-104433-6	1-104434-6
40	1-104350-7	1-104351-7	1-104352-7	1-104432-7	1-104433-7	1-104434-7
50	1-104350-8	1-104351-8	1-104352-8	1-104432-8	1-104433-8	1-104434-8
60	1-104350-9	1-104351-9	1-104352-9	1-104432-9	1-104433-9	1-104434-9
80	2-104350-0	2-104351-0	2-104352-0	2-104432-0	2-104433-0	2-104434-0

Notes: 1. Board retention using kinked tails are for headers 6 positions and smaller; headers 7 positions and larger use swaged tails.
2. Refer to the product drawing to determine the number and location of the board retention tails.
3. Other tail lengths are available, consult AMP.

SOURCE: Catalog 65816

Specifications subject to change.

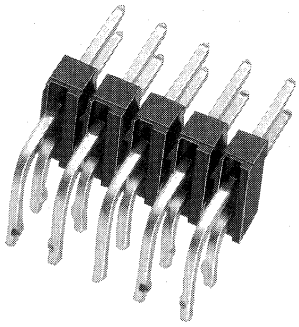
1-800-522-6752
Product Information Center/ AMP FAX Service

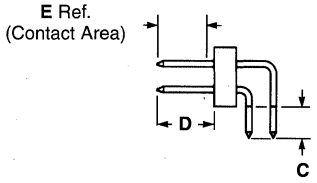
1-800-722-1111
Tooling/Technical Assistance Center

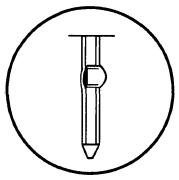
Retention Headers—Unshrouded, Double-Row, .100 x .100 [2.54 x 2.54] Centers

(Continued)

.025 [0.64] Square Right-Angle Post (with Board Retention Feature)







Board Retention using Swaged Tails (All Header Sizes)

Plating A—Duplex plated .000030 [0.00076] gold on contact area, .000100-.000200 [0.00254-0.00508] tin-lead on solder area, with entire post underplated .000050 [0.00127] nickel

Plating B—Duplex plated .000015 [0.00038] gold on contact area, .000100-.000200 [0.00254-0.00508] tin-lead on solder area, with entire post underplated .000050 [0.00127] nickel

Plating C—.000100-.000200 [0.00254-0.00508] tin-lead over .000050 [0.00127] nickel on entire post

Note: 20 Pos. Housing Dim. (Typ.)—.984 [24.99] L x .090 [2.29] W x .238 [6.05] H

No. of Pos.	C = .120 [3.05] D = .230 [5.84] E = .185 [4.70] Post Plating/Part Nos.			C = .125 [3.18] D = .318 [8.08] E = .200 [5.08] Post Plating/Part Nos.		
	Plating A	Plating B	Plating C	Plating A	Plating B	Plating C
2	104353-1	104354-1	104355-1	104435-1	104436-1	104437-1
4	104353-2	104354-2	104355-2	104435-2	104436-2	104437-2
6	104353-3	104354-3	104355-3	104435-3	104436-3	104437-3
8	104353-4	104354-4	104355-4	104435-4	104436-4	104437-4
10	104353-5	104354-5	104355-5	104435-5	104436-5	104437-5
12	104353-6	104354-6	104355-6	104435-6	104436-6	104437-6
14	104353-7	104354-7	104355-7	104435-7	104436-7	104437-7
16	104353-8	104354-8	104355-8	104435-8	104436-8	104437-8
18	104353-9	104354-9	104355-9	104435-9	104436-9	104437-9
20	1-104353-0	1-104354-0	1-104355-0	1-104435-0	1-104436-0	1-104437-0
22	1-104353-1	1-104354-1	1-104355-1	1-104435-1	1-104436-1	1-104437-1
24	1-104353-2	1-104354-2	1-104355-2	1-104435-2	1-104436-2	1-104437-2
26	1-104353-3	1-104354-3	1-104355-3	1-104435-3	1-104436-3	1-104437-3
28	1-104353-4	1-104354-4	1-104355-4	1-104435-4	1-104436-4	1-104437-4
30	1-104353-5	1-104354-5	1-104355-5	1-104435-5	1-104436-5	1-104437-5
34	1-104353-6	1-104354-6	1-104355-6	1-104435-6	1-104436-6	1-104437-6
40	1-104353-7	1-104354-7	1-104355-7	1-104435-7	1-104436-7	1-104437-7
50	1-104353-8	1-104354-8	1-104355-8	1-104435-8	1-104436-8	1-104437-8
60	1-104353-9	1-104354-9	1-104355-9	1-104435-9	1-104436-9	1-104437-9
80	2-104353-0	2-104354-0	2-104355-0	2-104435-0	2-104436-0	2-104437-0

Notes: 1. Refer to the product drawing to determine the number and location of the board retention tails.
2. Other tail lengths are available, consult AMP.

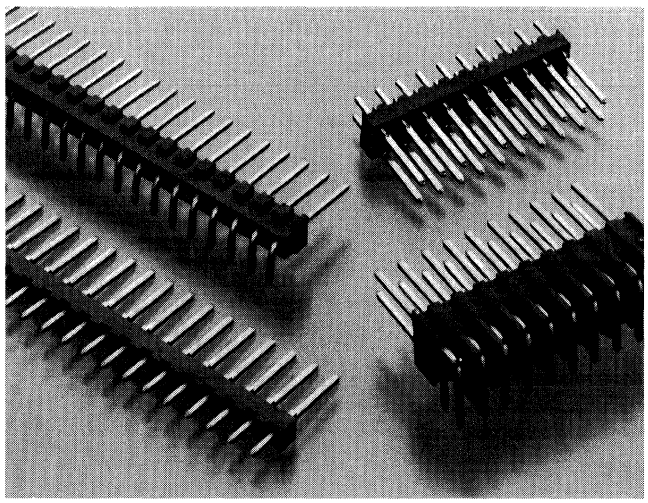
SOURCE: Catalog 65816

Specifications subject to change.

1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

Standard Headers—Unshrouded

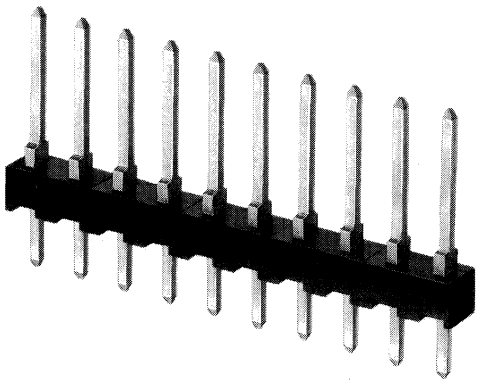


Product Facts

- Variety of popular sizes available
- Substantial time/labor savings—install all posts at one time
- Vertical and right-angle versions available in single- and double-row configurations
- Triple-row version available in vertical configurations
- Copper alloy, drawn wire posts
- Choice of select gold or tin-lead plated posts
- Mating post length is .318 [8.08]
- Flame retardant, black thermoplastic housings 94V-0 rated
- Recognized under the Component Program of Underwriters Laboratories Inc., File No. E28476
- Certified by Canadian Standards Association, File No. LR 7189

Standard Headers—Unshrouded, Single-Row, .100 [2.54] Centers

.025 [0.64] Square Straight Post



Plating A—Selectively plated .000030 [0.00076] gold on contact area, with gold flash over .000050 [0.00127] nickel on entire post

Plating B—Selectively plated .000015 [0.00038] gold on contact area, with gold flash over .000050 [0.00127] nickel on entire post

Tin-Lead/Nickel—Plating option available; minimum order quantities may apply. Consult AMP.

Note: 6 Pos. Housing Dim. (Typ.)—.584 [14.83] L; Mating Post Length, .318 [8.08]; Solder Tail Length, .125 [3.18]

No. of Pos.	Post Plating/Part Nos.	
	Plating A	Plating B
1	87220-1	87224-1
2	87220-2	87224-2
3	87220-3	87224-3
4	87220-4	87224-4
5	87220-5	87224-5
6	87220-6	87224-6
7	87220-7	87224-7
8	87220-8	87224-8
9	87220-9	87224-9
10	1-87220-0	1-87224-0
40	4-87220-0	4-87224-0

Note: Additional header sizes are available; minimum order quantities may apply. Consult AMP.

SOURCE: Catalog 65816

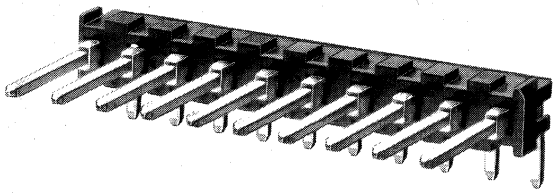
Specifications subject to change.

1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

Standard Headers—Unshrouded, Single-Row, .100 [2.54] Centers (Continued)

.025 [0.64] Square Right-Angle Post



Plating A—Selectively plated .000030 [0.00076] gold on contact area, with gold flash over .000050 [0.00127] nickel on entire post

Plating B—Selectively plated .000015 [0.00038] gold on contact area, with gold flash over .000050 [0.00127] nickel on entire post

Tin-Lead/Nickel—Plating option available; minimum order quantities may apply. Consult AMP.

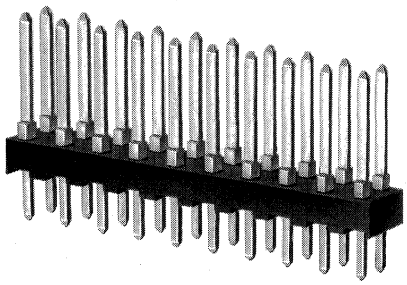
Note: 6 Pos. Housing Dim. (Typ.)—.584 [14.83] L x .139 [3.53] W x .138 [3.51] H; Mating Post Length, .318 [8.08]; Solder Tail Length, .110 [2.79]

No. of Pos.	Post Plating/Part Nos.	
	Plating A	Plating B
1	87232-1	87233-1
2	87232-2	87233-2
3	87232-3	87233-3
4	87232-4	87233-4
5	87232-5	87233-5
6	87232-6	87233-6
7	87232-7	87233-7
8	87232-8	87233-8
9	87232-9	87233-9
10	1-87232-0	1-87233-0
40	4-87232-0	4-87233-0

Note: Additional header sizes are available; minimum order quantities may apply. Consult AMP.

Standard Headers—Unshrouded, Double-Row, .100 x .100 [2.54 x 2.54] Centers

.025 [0.64] Square Straight Post



Plating A—Selectively plated .000030 [0.00076] gold on contact area, with gold flash over .000050 [0.00127] nickel on entire post

Plating B—Selectively plated .000015 [0.00038] gold on contact area, with gold flash over .000050 [0.00127] nickel on entire post

Tin-Lead/Nickel—Plating option available; minimum order quantities may apply. Consult AMP.

Note: 16 Pos. Housing Dim. (Typ.)—.784 [19.91] L; Mating Post Length, .318 [8.08]; Solder Tail Length, .125 [3.18]

No. of Pos.	Post Plating/Part Nos.	
	Plating A	Plating B
2	1-87215-0	87227-1
4	1-87215-1	87227-2
6	1-87215-2	87227-3
8	87215-1	87227-4
10	87215-2	87227-5
12	87215-3	87227-6
14	87215-4	87227-7
16	87215-5	87227-8
18	87215-6	87227-9
20	87215-7	1-87227-0
30	1-87215-5	1-87227-5
40	2-87215-0	2-87227-0
50	2-87215-5	2-87227-5
80	4-87215-0	4-87227-0

Note: Additional header sizes are available; minimum order quantities may apply. Consult AMP.

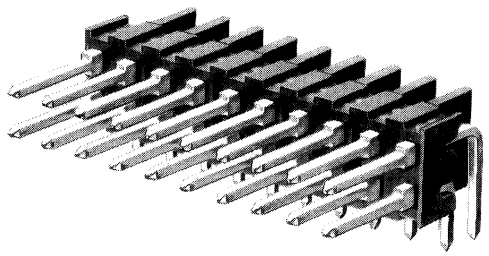
SOURCE: Catalog 65816

Specifications subject to change.
1-800-522-6752 Product Information Center/ AMP FAX Service
1-800-722-1111 Tooling/Technical Assistance Center

Standard Headers—Unshrouded, Double-Row, .100 x .100 [2.54 x 2.54] Centers

(Continued)

.025 [0.64] Square Right-Angle Post



Plating A—Selectively plated .000030 [0.00076] gold on contact area, with gold flash over .000050 [0.00127] nickel on entire post

Plating B—Selectively plated .000015 [0.00038] gold on contact area, with gold flash over .000050 [0.00127] nickel on entire post

Tin-Lead/Nickel—Plating option available; minimum order quantities may apply. Consult AMP.

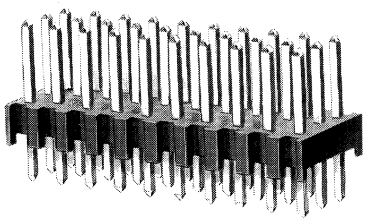
Note: 16 Pos. Housing Dim. (Typ.)—.784 [19.91] L; Mating Post Length, .318 [8.08]; Solder Tail Length, .110 [2.79]

No. of Pos.	Post Plating/Part Nos.	
	Plating A	Plating B
2	1-86479-3	87230-1
4	1-86479-4	87230-2
6	1-86479-5	87230-3
8	1-86479-6	87230-4
10	86479-3	87230-5
12	86479-4	87230-6
14	86479-5	87230-7
16	86479-2	87230-8
18	86479-6	87230-9
20	86479-1	1-87230-0
30	1-86479-9	1-87230-5
40	2-86479-4	2-87230-0
50	2-86479-9	2-87230-5
80	4-86479-4	4-87230-0

Note: Additional header sizes are available; minimum order quantities may apply. Consult AMP.

Standard Headers—Unshrouded, Triple-Row, .100 [2.54] Centers

.025 [0.64] Square Straight Post



Posts—Copper alloy , duplex plated .000030 [0.00076] gold on contact area, .000100-.000200 [0.000254-0.00508] bright tin-lead on solder area, with entire post underplated .000050 [0.00127] nickel

Note: 24 Pos. Housing Dim. (Typ.)—.784 [19.91] L; Mating Post Length, .230 [5.84]; Solder Tail Length, .120 [3.05]

No. of Pos.	Part Nos.
9	103817-1
12	103817-2
15	103817-3
18	103817-4
21	103817-5
24	103817-6
27	103817-7
30	103817-8
42	1-103817-2
60	1-103817-8
96	3-103817-0
120	3-103817-8

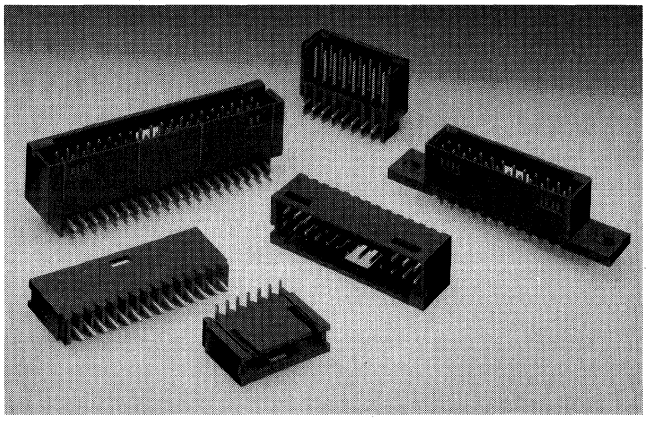
SOURCE: Catalog 65816

Specifications subject to change.
1-800-522-6752 Product Information Center/ AMP FAX Service
1-800-722-1111 Tooling/Technical Assistance Center

Standard Profile Headers—Shrouded

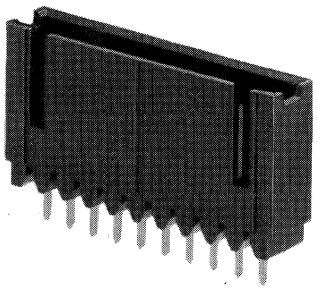
Product Facts

- Available in several styles—right-angle with three- and four-sided pin protection, and straight post with pin protection and mounting ears
- Can be used for feed-to and feed-thru applications
- Housings are black thermoplastic, flame retardant 94V-0 rated
- Contacts are copper alloy
- Available in gold duplex, gold over nickel and tin-lead over nickel platings
- Headers with .066 [1.68] and .150 [3.81] end dimensions are available in select sizes up to 60 positions
- Can be select loaded, consult AMP
- Recognized under the Component Program of Underwriters Laboratories Inc., File No. E28476
- Certified by Canadian Standards Association, File No. LR 7189



Standard Profile Headers—Shrouded, Single-Row, .100 [2.54] Centers

.025 [0.64] Square Straight Post (with Standoffs)



Plating A—Duplex plated .000030 [0.00076] gold on contact area, .000100-.000200 [0.00254-0.00508] tin-lead on solder area, with entire post underplated .000050 [0.00127] nickel

Plating B—Duplex plated .000015 [0.00038] gold on contact area, .000100-.000200 [0.00254-0.00508] tin-lead on solder area, with entire post underplated .000050 [0.00127] nickel

Plating C—.000100-.000200 [0.00254-0.00508] tin-lead over .000050 [0.00127] nickel on entire post

Note: 15 Pos. Housing Dim. (Typ.)—1.620 [41.15] L x .214 [5.44] W x .549 [13.94] H

No. of Pos.	Post Plating Part Nos.		
	Plating A	Plating B	Plating C
3	103414-1	3-102202-4	103080-1
4	103414-2	102202-1	103080-2
5	103414-3	102202-2	103080-3
6	103414-4	102202-3	103080-4
7	103414-5	102202-4	103080-5
8	103414-6	102202-5	103080-6
9	103414-7	102202-6	103080-7
10	103414-8	102202-7	103080-8
11	103414-9	102202-8	103080-9
12	1-103414-0	102202-9	1-103080-0
13	1-103414-1	1-102202-0	1-103080-1
14	1-103414-2	1-102202-1	1-103080-2
15	1-103414-3	1-102202-2	1-103080-3
16	1-103414-4	1-102202-3	1-103080-4
17	1-103414-5	1-102202-4	1-103080-5
18	1-103414-6	1-102202-5	1-103080-6
19	1-103414-7	1-102202-6	1-103080-7
20	1-103414-8	1-102202-7	1-103080-8
22	2-103414-0	1-102202-9	2-103080-0
24	2-103414-2	2-102202-1	2-103080-2
25	2-103414-3	2-102202-2	2-103080-3
30	2-103414-8	2-102202-7	2-103080-8
35	3-103414-3	3-102202-2	3-103080-3

Note: Additional header sizes are available; minimum order quantities may apply. Consult AMP.

SOURCE: Catalog 65816

Specifications subject to change.
1-800-522-6752 Product Information Center/ AMP FAX Service
1-800-722-1111 Tooling/Technical Assistance Center

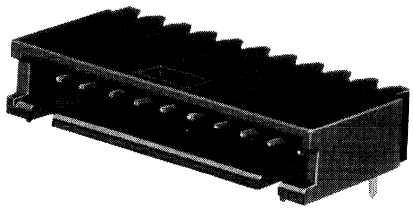
Standard Profile Headers—Shrouded, Single-Row, .100 [2.54] Centers
(Continued)

.025 [0.64] Square Right-Angle Post (with Standoffs)

Plating A—Duplex plated .000030 [0.00076] gold on contact area, .000100-.000200 [0.00254-0.00508] tin-lead on solder area, with entire post underplated .000050 [0.00127] nickel

Plating B—Duplex plated .000015 [0.00038] gold on contact area, .000100-.000200 [0.00254-0.00508] tin-lead on solder area, with entire post underplated .000050 [0.00127] nickel

Plating C—.000100-.000200 [0.00254-0.00508] tin-lead over .000050 [0.00127] nickel on entire post



Note: 9 Pos. Housing Dim. (Typ.)—1.020 [25.91] L x .549 [13.94] W x .214 [5.44] H

No. of Pos.	Post Plating/Part Nos.		
	Plating A	Plating B	Plating C
3	103361-1	3-102203-4	102523-2
4	103361-2	102203-1	102523-1
5	103361-3	102203-2	102523-3
6	103361-4	102203-3	102523-4
7	103361-5	102203-4	102523-5
8	103361-6	102203-5	102523-6
9	103361-7	102203-6	102523-7
10	103361-8	102203-7	102523-8
12	1-103361-0	102203-9	1-102523-0
14	1-103361-2	1-102203-1	1-102523-2
16	1-103361-4	1-102203-3	1-102523-4
18	1-103361-6	1-102203-5	1-102523-6
20	1-103361-8	1-102203-7	1-102523-8

Note: Additional header sizes are available; minimum order quantities may apply. Consult AMP.

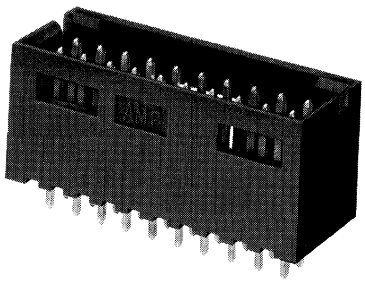
Standard Profile Headers—Shrouded, with .066 [1.68] End Dimension, Double-Row, .100 x .100 [2.54 x 2.54] Centers

.025 [0.64] Square Straight Post (with Detent Windows)

Plating A—Duplex plated .000030 [0.00076] gold on contact area, .000100-.000200 [0.00254-0.00508] tin-lead on solder area, with entire post underplated .000050 [0.00127] nickel

Plating B—Duplex plated .000015 [0.00038] gold on contact area, .000100-.000200 [0.00254-0.00508] tin-lead on solder area, with entire post underplated .000050 [0.00127] nickel

Plating C—.000100-.000200 [0.00254-0.00508] tin-lead over .000050 [0.00127] nickel on entire post



Note: 24 Pos. Housing Dim. (Typ.)—1.312 [33.32] L x .400 [10.16] W x .440 [11.18] H

No. of Pos.	Post Plating/Part Nos.		
	Plating A	Plating B	Plating C
6	103168-1	102618-1	3-87589-6
8	103168-2	102618-2	3-87589-5
10	103168-3	102618-3	87589-1
12	103168-4	102618-4	87589-2
14	103168-5	102618-5	87589-3
16	103168-6	102618-6	87589-4
18	103168-7	102618-7	87589-5
20	103168-8	102618-8	87589-6
22	103168-9	102618-9	87589-7
24	1-103168-0	1-102618-0	87589-8
26	1-103168-1	1-102618-1	87589-9
28	1-103168-2	1-102618-2	1-87589-0
30	1-103168-3	1-102618-3	1-87589-1
32	1-103168-4	1-102618-4	1-87589-2
34	1-103168-5	1-102618-5	1-87589-3
36	1-103168-6	1-102618-6	1-87589-4
38	1-103168-7	1-102618-7	1-87589-5
40	1-103168-8	1-102618-8	1-87589-6
50	2-103168-3	2-102618-3	2-87589-1
60	2-103168-8	2-102618-8	2-87589-6

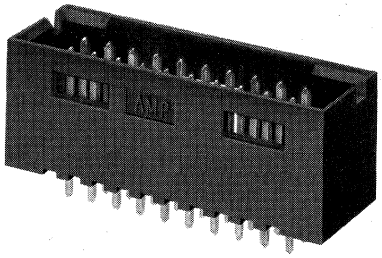
Note: Additional header sizes are available; minimum order quantities may apply. Consult AMP.

SOURCE: Catalog 65816

Specifications subject to change.
1-800-522-6752 Product Information Center/ AMP FAX Service
1-800-722-1111 Tooling/Technical Assistance Center

Standard Profile Headers—Shrouded, with .150 [3.81] End Dimension, Double-Row, .100 x .100 [2.54 x 2.54] Centers

.025 [0.64] Square Straight Post (with Detent Windows)



Plating A—Duplex plated .000030 [0.00076] gold on contact area, .000100-.000200 [0.00254-0.00508] tin-lead on solder area, with entire post underplated .000050 [0.00127] nickel

Plating B—Duplex plated .000015 [0.00038] gold on contact area, .000100-.000200 [0.00254-0.00508] tin-lead on solder area, with entire post underplated .000050 [0.00127] nickel

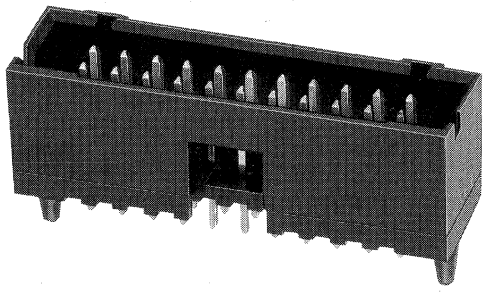
Plating C—.000100-.000200 [0.00254-0.00508] tin-lead over .000050 [0.00127] nickel on entire post

Note: 24 Pos. Housing Dim. (Typ.)—1.480 [37.59] L x .400 [10.16] W x .440 [11.18] H

No. of Pos.	Post Plating/Part Nos.		
	Plating A	Plating B	Plating C
6	103169-1	102619-1	3-87587-3
8	103169-2	102619-2	3-87587-4
10	103169-3	102619-3	87587-1
12	103169-4	102619-4	87587-2
14	103169-5	102619-5	87587-3
16	103169-6	102619-6	87587-4
18	103169-7	102619-7	87587-5
20	103169-8	102619-8	87587-6
22	103169-9	102619-9	87587-7
24	1-103169-0	1-102619-0	87587-8
26	1-103169-1	1-102619-1	87587-9
28	1-103169-2	1-102619-2	1-87587-0
30	1-103169-3	1-102619-3	1-87587-1
32	1-103169-4	1-102619-4	1-87587-2
34	1-103169-5	1-102619-5	1-87587-3
36	1-103169-6	1-102619-6	1-87587-4
38	1-103169-7	1-102619-7	1-87587-5
40	1-103169-8	1-102619-8	1-87587-6
50	2-103169-3	2-102619-3	2-87587-1
60	2-103169-8	2-102619-8	2-87587-6

Note: Additional header sizes are available; minimum order quantities may apply. Consult AMP.

.025 [0.64] Square Straight Post (with Plastic Holddowns)



Note: 24 Pos. Housing Dim. (Typ.)—1.480 [37.59] L x .400 [10.16] W x .440 [11.18] H

No. of Pos.	Part Nos.
6	104317-1
12	104317-3
14	104317-4
16	1-104317-6
18	104317-5
20	104317-6
22	104317-7
24	104317-8
26	104317-9

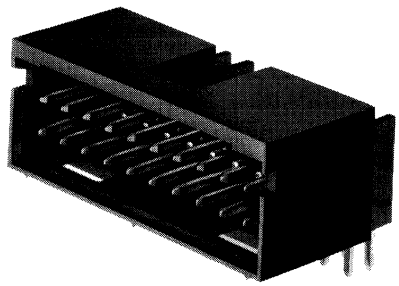
No. of Pos.	Part Nos.
30	1-104317-0
32	1-104317-1
34	1-104317-8
36	1-104317-7
40	1-104317-2
42	1-104317-5
48	1-104317-3
50	1-104317-4

Note: Additional header sizes are available; minimum order quantities may apply. Consult AMP.

SOURCE: Catalog 65816

Standard Profile Headers—Shrouded, with .066 [1.68] End Dimension, Double-Row, .100 x .100 [2.54 x 2.54] Centers

.025 [0.64] Square Right-Angle Post (with Detent Windows)



Plating A—Duplex plated .000030 [0.00076] gold on contact area, .000100-.000200 [0.00254-0.00508] tin-lead on solder area, with entire post underplated .000050 [0.00127] nickel

Plating B—Duplex plated .000015 [0.00038] gold on contact area, .000100-.000200 [0.00254-0.00508] tin-lead on solder area, with entire post underplated .000050 [0.00127] nickel

Plating C—.000100-.000200 [0.00254-0.00508] tin-lead over .000050 [0.00127] nickel on entire post

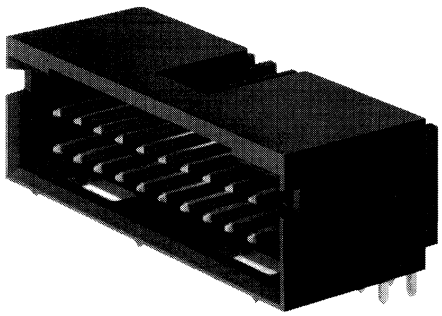
Note: 16 Pos. Housing Dim. (Typ.)—.912 [23.16] L x .639 [16.23] W x .400 [10.16] H

No. of Pos.	Post Plating/Part Nos.		
	Plating A	Plating B	Plating C
6	103166-1	102617-1	3-87579-5
8	103166-2	102617-2	87579-1
10	103166-3	102617-3	87579-2
12	103166-4	102617-4	87579-3
14	103166-5	102617-5	87579-4
16	103166-6	102617-6	87579-5
18	103166-7	102617-7	87579-6
20	103166-8	102617-8	87579-7
40	1-103166-8	1-102617-8	1-87579-7
50	2-103166-3	2-102617-3	2-87579-2
60	2-103166-8	2-102617-8	2-87579-7

Note: Additional header sizes are available; minimum order quantities may apply. Consult AMP.

Standard Profile Headers—Shrouded, with .150 [3.81] End Dimension, Double-Row, .100 x .100 [2.54 x 2.54] Centers

.025 [0.64] Square Right-Angle Post (with Detent Windows)



Plating A—Duplex plated .000030 [0.00076] gold on contact area, .000100-.000200 [0.00254-0.00508] tin-lead on solder area, with entire post underplated .000050 [0.00127] nickel

Plating B—Duplex plated .000015 [0.00038] gold on contact area, .000100-.000200 [0.00254-0.00508] tin-lead on solder area, with entire post underplated .000050 [0.00127] nickel

Plating C—.000100-.000200 [0.00254-0.00508] tin-lead over .000050 [0.00127] nickel on entire post

Note: 16 Pos. Housing Dim. (Typ.)—1.080 [27.43] L x .639 [16.23] W x .400 [10.16] H

No. of Pos.	Post Plating/Part Nos.		
	Plating A	Plating B	Plating C
8	103167-1	102570-2	87577-1
10	103167-2	102570-3	87577-2
12	103167-3	102570-4	87577-3
14	103167-4	102570-5	87577-4
16	103167-5	102570-6	87577-5
18	103167-6	102570-7	87577-6
20	103167-7	102570-8	87577-7
40	1-103167-7	102570-1	1-87577-7
50	2-103167-2	2-102570-2	2-87577-2
60	2-103167-7	2-102570-7	2-87577-7

Note: Additional header sizes are available; minimum order quantities may apply. Consult AMP.

SOURCE: Catalog 65816

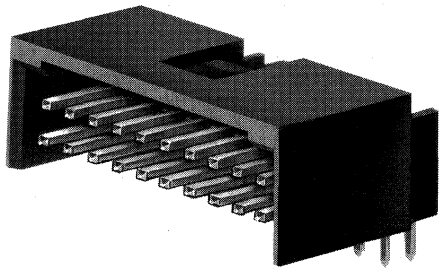
Specifications subject to change.

1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

Standard Profile Headers—Shrouded, with .066 [1.68] End Dimension, Double-Row, .100 x .100 [2.54 x 2.54] Centers

.025 [0.64] Square Right-Angle Post (with Pin Protection on 3 Sides)



Note: 16 Pos. Housing Dim (Typ.)—.912 [23.16] L x .639 [16.23] W x .361 [9.17] H

No. of Pos.	Post Plating/Part Nos.		
	Plating A	Plating B	Plating C
6	103164-1	102055-2	3-87572-5
8	103164-2	102055-3	87572-1
10	103164-3	102055-4	87572-2
12	103164-4	102055-5	87572-3
14	103164-5	102055-6	87572-4
16	103164-6	102055-7	87572-5
18	103164-7	102055-8	87572-6
20	103164-8	102055-1	87572-7
34	1-103164-5	1-102055-5	1-87572-4
40	1-103164-8	1-102055-8	1-87572-7
50	2-103164-3	2-102055-3	2-87572-2
60	2-103164-8	2-102055-8	2-87572-7

Note: Additional header sizes are available; minimum order quantities may apply. Consult AMP.

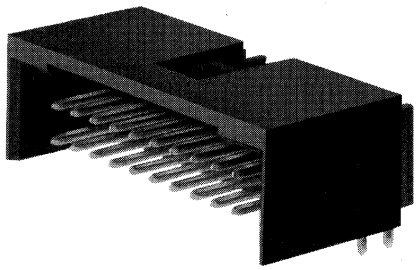
Plating A—Duplex plated .000030 [0.00076] gold on contact area, .000100-.000200 [0.00254-0.00508] tin-lead on solder area, with entire post underplated .000050 [0.00127] nickel

Plating B—Duplex plated .000015 [0.00038] gold on contact area, .000100-.000200 [0.00254-0.00508] tin-lead on solder area, with entire post underplated .000050 [0.00127] nickel

Plating C—.000100-.000200 [0.00254-0.00508] tin-lead over .000050 [0.00127] nickel on entire post

Standard Profile Headers—Shrouded, with .150 [3.81] End Dimension, Double-Row, .100 x .100 [2.54 x 2.54] Centers

.025 [0.64] Square Right-Angle Post (with Pin Protection on 3 Sides)



Note: 18 Pos. Housing Dim. (Typ.)—1.180 [29.97] L x .639 [16.23] W x .361 [9.17] H

No. of Pos.	Post Plating/Part Nos.		
	Plating A	Plating B	Plating C
10	103165-1	102620-1	87568-1
12	103165-2	102620-2	87568-2
14	103165-3	102620-3	87568-3
16	103165-4	102620-4	87568-4
18	103165-5	102620-5	87568-5
20	103165-6	102620-6	87568-6
40	1-103165-6	1-102620-6	1-87568-6
50	2-103165-1	2-102620-1	2-87568-1
60	2-103165-6	2-102620-6	2-87568-6

Note: Additional header sizes are available; minimum order quantities may apply. Consult AMP.

Plating A—Duplex plated .000030 [0.00076] gold on contact area, .000100-.000200 [0.00254-0.00508] tin-lead on solder area, with entire post underplated .000050 [0.00127] nickel

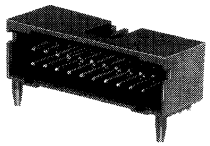
Plating B—Duplex plated .000015 [0.00038] gold on contact area, .000100-.000200 [0.00254-0.00508] tin-lead on solder area, with entire post underplated .000050 [0.00127] nickel

Plating C—.000100-.000200 [0.00254-0.00508] tin-lead over .000050 [0.00127] nickel on entire post

SOURCE: Catalog 65816

Standard Profile Headers—Shrouded, with .150 [3.81] End Dimension, Double-Row, .100 x .100 [2.54 x 2.54] Centers (Continued)

.025 [0.64] Square Right-Angle Post (with Plastic Holddowns)

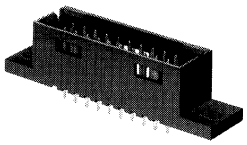


Note: 20 Pos. Housing Dim. (Typ.)—1.280 [32.51] L x .639 [16.23] W x .400 [10.16] H

No. of Pos.	Part Nos.	No. of Pos.	Part Nos.
10	104319-7	30	104319-3
12	104319-8	34	104319-6
14	104319-5	40	104319-4
16	104319-1	48	104319-9
20	104319-2		

Note: Additional header sizes are available; minimum order quantities may apply. Consult AMP.

.025 [0.64] Square Straight Post (with Detent Windows and Mounting Ears)



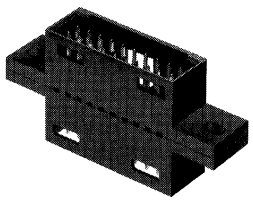
Note: 34 Pos. Housing Dim. (Typ.)—2.504 [63.60] L x .400 [10.16] W x .440 [11.18] H

No. of Pos.	Part Nos.	No. of Pos.	Part Nos.
10	87474-1	40	87474-6
20	87474-2	50	87474-7
24	87474-3		

Note: Additional header sizes are available; minimum order quantities may apply. Consult AMP.

Standard Profile Headers—Shrouded Bulkhead Type; with .066 [1.68] End Dimension, Double-Row, .100 x .100 [2.54 x 2.54] Centers

.025 [0.64] Square Straight Post (with Detent Windows and Mounting Ears)



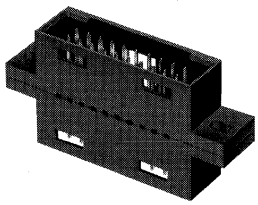
Note: 34 Pos. Housing Dim. (Typ.)—2.504 [63.60] L x .400 [10.16] W x .880 [22.35] H

No. of Pos.	Part Nos.	No. of Pos.	Part Nos.
10	87608-1	34	1-87608-3
12	87608-2	40	1-87608-6
20	87608-6	50	2-87608-1

Note: Additional header sizes are available; minimum order quantities may apply. Consult AMP.

Standard Profile Headers—Shrouded Bulkhead Type; with .150 [3.81] End Dimension, Double-Row, .100 x .100 [2.54 x 2.54] Centers

.025 [0.64] Square Straight Post (with Detent Windows and Mounting Ears)



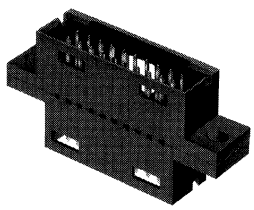
Note: 26 Pos. Housing Dim. (Typ.)—2.104 [63.60] L x .400 [10.16] W x .880 [22.35] H

No. of Pos.	Part Nos.	No. of Pos.	Part Nos.
10	87605-1	34	1-87605-3
20	87605-6	40	1-87605-6
24	87605-8	50	2-87605-1
26	87605-9		

Note: Additional header sizes are available; minimum order quantities may apply. Consult AMP.

Standard Profile Headers—Shrouded Bulkhead Type; with .066/.150 [1.68/3.81] End Dimension, Double-Row, .100 x .100 [2.54 x 2.54] Centers

.025 [0.64] Square Straight Post (with Detent Windows and Mounting Ears)



Note: 34 Pos. Housing Dim. (Typ.)—2.504 [71.22] L x .400 [10.16] W x .880 [22.35] H

No. of Pos.	Part Nos.
24	87496-9
34	1-87496-4
40	1-87496-7

Note: Additional header sizes are available; minimum order quantities may apply. Consult AMP.

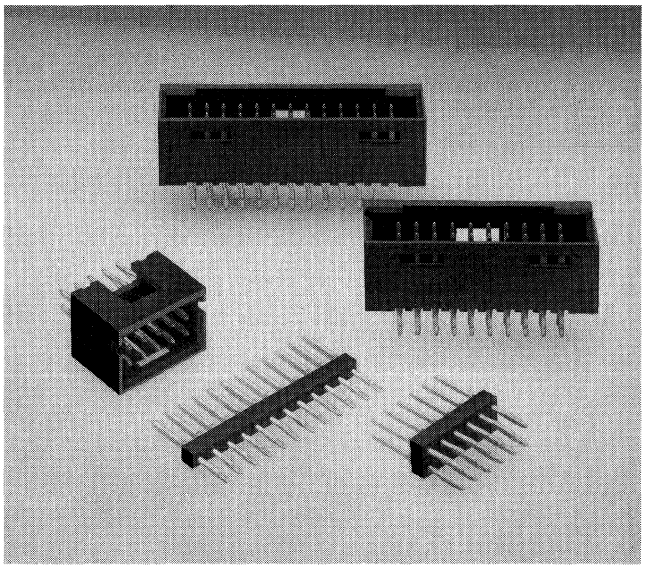
SOURCE: Catalog 65816

Specifications subject to change.
1-800-522-6752 Product Information Center/ AMP FAX Service
1-800-722-1111 Tooling/Technical Assistance Center

ACTION PIN Headers—Unshrouded and Shrouded

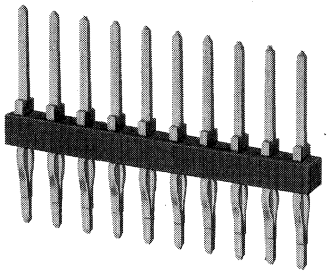
Product Facts

- Straight posted unshrouded and shrouded versions
- .025 [0.64] square posts with ACTION PIN contact features
- ACTION PIN posts make a gas-tight, press-fit connection in plated-through holes
- Does not damage plated-through holes
- Available in selected positions 4 through 80 (double-row headers)
- Flame retardant, black thermoplastic housings, 94V-0 rated
- Available in .100 [2.54] centerline spacing in an insulator header that is directly mounted on a printed circuit board
- Mates with AMP Ribbon Cable Connectors (See Section 5)
- Recognized under the Component Program of Underwriters Laboratories Inc., File No. E28476
- Certified by Canadian Standards Association, File No. LR 7189



ACTION PIN Headers—Unshrouded, Single Row, .100 [2.54] Centers

.025 [0.64] Square Straight Post



Note: 16 Pos. Housing Dim. (Typ.)—1.584 [40.23] L x .092 [2.34] W x .090 [2.29] H; Mating Post Length, .320 [8.13]

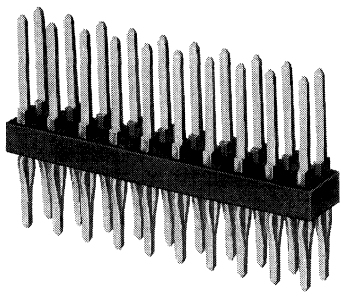
No. of Pos.	Part Nos. For .062 [1.57] Thick Pc Boards	Part Nos. For .093-.125 [2.36-3.18] Thick Pc Boards
1	3-103336-5	3-102898-5
2	3-103336-4	3-102898-4
3	4-103336-0	4-102898-0
4	3-103336-6	3-102898-6
5	3-103336-8	3-102898-8
6	3-103336-7	3-102898-7
7	3-103336-9	3-102898-9
8	103336-1	102898-1
9	103336-2	102898-2
10	103336-3	102898-3
11	103336-4	102898-4
12	103336-5	102898-5
13	103336-6	102898-6
14	103336-7	102898-7
15	103336-8	102898-8
16	103336-9	102898-9
17	1-103336-0	1-102898-0
18	1-103336-1	1-102898-1
19	1-103336-2	1-102898-2
25	1-103336-8	1-102898-8
30	2-103336-3	2-102898-3
40	3-103336-3	3-102898-3

Notes: 1. To insert header into pc board, use seating tool with arbor tool or air powered machine.
2. Additional header sizes are available; minimum order quantities may apply. Consult AMP.

SOURCE: Catalog 65816

ACTION PIN Headers—Unshrouded, Double Row, .100 x .100 [2.54 x 2.54] Centers

.025 [0.64] Square Straight Post



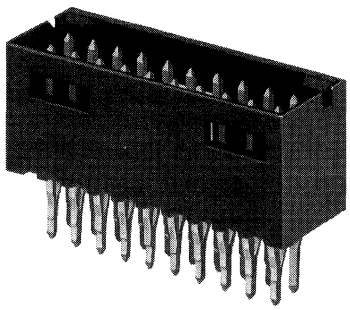
Note: 26 Pos. Housing Dim. (Typ.)—1.284 [32.61] L x .192 [4.88] W x .090 [2.29] H; Mating Post Length, .320 [8.13]

No. of Pos.	Part Nos. For .062 [1.57] Thick Pc Boards	Part Nos. For .093-.125 [2.36-3.18] Thick Pc Boards	Part Nos. Seating Tool*
4	103542-1	103233-1	91170-1
6	103542-2	103233-2	91170-1
8	103542-3	103233-3	91170-2
10	103542-4	103233-4	91170-3
12	103542-5	103233-5	91170-4
14	103542-6	103233-6	91170-5
16	103542-7	103233-7	91170-6
18	103542-8	103233-8	91170-7
20	103542-9	103233-9	91170-8
22	1-103542-0	1-103233-0	91170-9
24	1-103542-1	1-103233-1	1-91170-0
26	1-103542-2	1-103233-2	1-91170-1
28	1-103542-3	1-103233-3	1-91170-2
30	1-103542-4	1-103233-4	1-91170-3
32	1-103542-5	1-103233-5	1-91170-4
34	1-103542-6	1-103233-6	1-91170-5
36	1-103542-7	1-103233-7	1-91170-6
38	1-103542-8	1-103233-8	1-91170-7
40	1-103542-9	1-103233-9	1-91170-8
50	2-103542-4	2-103233-4	2-91170-3
60	2-103542-9	2-103233-9	2-91170-8
80	3-103542-9	3-103233-9	3-91170-2

*To insert header into pc board, use seating tool with arbor tool or air powered machine.
Note: Additional header sizes are available; minimum order quantities may apply. Consult AMP.

ACTION PIN Headers—Shrouded with .066 [1.68] End Dimension Double Row, .100 x .100 [2.54 x 2.54] Centers

.025 [0.64] Square Straight Post (with Detent Windows, for .093-.125 [2.36-3.18] Thick Pc Board)



Note: 26 Pos. Housing Dim. (Typ.)—1.412 [35.87] L x .400 [10.16] W x .440 [11.18] H

No. of Pos.	Part Nos. Header	Part Nos. Seating Tool*
6	102699-2	91170-1
8	102699-3	—
10	102699-4	91170-3
12	102699-5	91170-4
14	102699-6	91170-5
16	102699-7	—
18	102699-8	—
20	102699-9	—
26	1-102699-2	1-91170-1
30	1-102699-4	1-91170-3
40	1-102699-9	1-91170-8
60	2-102699-8	—

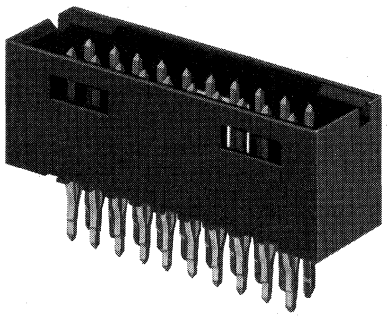
*To insert header into pc board, use seating tool with arbor tool or air powered machine.
Note: Additional header sizes are available; minimum order quantities may apply. Consult AMP.

SOURCE: Catalog 65816

Specifications subject to change.
1-800-522-6752 Product Information Center/ AMP FAX Service
1-800-722-1111 Tooling/Technical Assistance Center

ACTION PIN Headers—Shrouded with .150 [3.18] End Dimension Double Row, .100 x .100 [2.54 x 2.54] Centers

.025 [0.64] Square Straight Post (with Detent Windows, for .093-.125 [2.36-3.18] Thick Pc Board)



Note: 26 Pos. Housing Dim. (Typ.)—1.580 [40.13] L x .400 [10.16] W x .440 [11.18] H

No. of Pos.	Part Nos.	
	Header	Seating Tool*
6	1-102557-0	—
8	1-102557-1	91170-3
10	102557-9	91170-4
12	1-102557-2	—
14	1-102557-3	—
16	1-102557-4	91170-7
18	1-102557-5	—
20	102557-2	91170-9
26	102557-3	1-91170-2
30	102557-4	—
40	102557-1	1-91170-9
60	102557-7	2-91170-9

*To insert header into pc board, use seating tool with arbor tool or air powered machine.
Note: Additional header sizes are available; minimum order quantities may apply. Consult AMP.

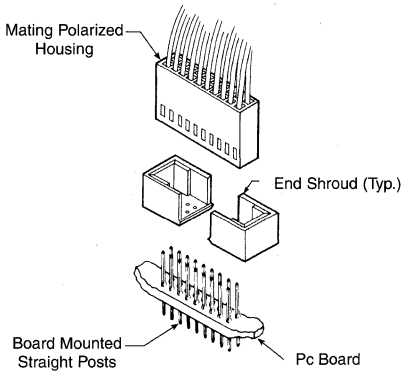
Accessories

End Shrouds for Machine-Applied Posts

Double Row, .100 x .100 [2.54 x 2.54] Centers
Part No. 102114-1

Single Row, .100 [2.54] Centers
Part No. 102338-1

Typical Assembly



Barrier Insert

Part No. 87743-1

Barrier Insert Cutoffs

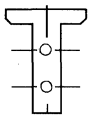


Fig. 1
Partial Cutoff
(Left and Right Sides)

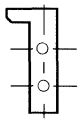


Fig. 2
Partial Cutoff
(Left Side)
Complete Cutoff
(Right Side)

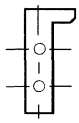


Fig. 3
Complete Cutoff
(Left Side)
Partial Cutoff
(Right Side)

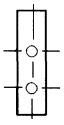
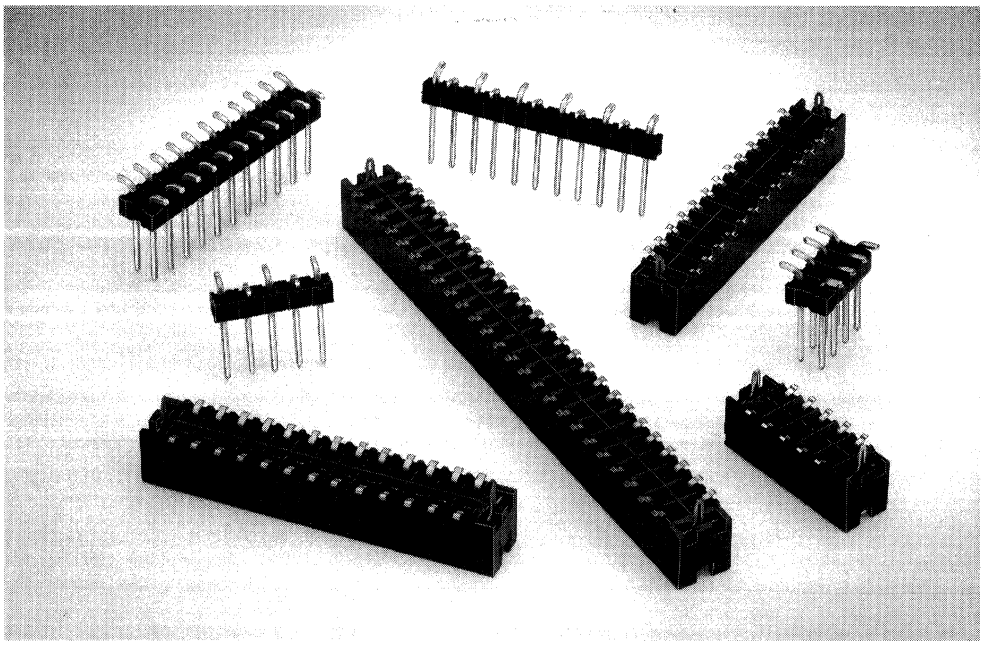


Fig. 4
Complete Cutoff
(Left and Right Sides)

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

AMPMODU Surface-Mount Receptacle Assemblies and Unshrouded Breakaway Headers .100 [2.54] Centers



Product Facts

- .100 x .100 [2.54 x 2.54] contact centerline spacing
- Surface-mount leads
- Contact material: phosphor bronze
- High temperature, black thermoplastic housings, 94V-0 rated, capable of withstanding IR or vapor-phase reflow
- Recognized under the Component Program of Underwriters Laboratories Inc., File No. E28476
- Certified by Canadian Standards Association, File No. LR 7189

(Receptacle Assemblies Only)

- Gold/tin-lead duplex plating for reliable mating interconnection and solder interface
- Metallic holddowns provide retention in the Pc board prior to and during the reflow process...and strain relief after soldering
- Holddowns ensure proper lead-to-pad registration
- Closed-entry receptacle housings provide lead-in ramp for positive mating
- Receptacle contacts employ dual cantilever beams and built-in anti-overstress for reliable connections

(Headers Only)

- Choice of gold duplex or tin-lead plated posts
- Posts coplanar within .006 [0.15]

The AMPMODU .025 [0.64] square interconnection system is an industry standard that has provided Level III and IV through-hole interconnections to almost every industry and marketplace for years. As technology advances, so has the AMPMODU connector product line.

Surface-mount unshrouded breakaway headers and surface-mount receptacle assemblies are now available to meet your Level III packaging needs as process technologies evolve from wave soldering to surface-mount reflow (infrared or vapor phase) processes. AMPMODU surface-mount receptacle assemblies are offered in vertical top entry and vertical bottom entry configurations. These receptacles are double row with a contact centerline spacing of .100 x .100 [2.54 x 2.54].

AMPMODU surface-mount receptacle assemblies continue to provide the proven features and benefits of the through-hole counterparts in the AMPMODU connector product family. Closed-entry style housing design on the vertical top entry products provides a lead-in ramp for positive mating of contacts, virtually eliminating the possibility of stubbing. The dual-beam receptacle contact design, coupled with gold plating in the contact area, provide a reliable interface. The contacts also provide built-in anti-overstress protection. Tin-lead plating on the solder leads also enhances solderability.

The incorporation of compliant metallic holddowns on receptacle assemblies offers multiple benefits. The holddowns ensure proper lead-to-pad registration and provide retention to the pc board prior to and during processing.

Used with a plated through-hole, the holddowns are soldered during the reflow process and serve as a strain relief for the solder joints during mating/unmating.

The design of the holddowns results in an excellent ratio of insertion/extraction forces (into the pc board); 20 lb. [89 N] maximum insertion force per pair and 10 lb. [44.5 N] minimum extraction force per pair (unsoldered). No tools are required for insertion.

The AMPMODU surface-mount unshrouded breakaway headers are available in single and double row vertical configurations with mating post lengths of .230 [5.84] and .320 [8.13]. Posts are offered with a choice of either .000030 [0.00076] gold duplex or tin-lead plating.

SOURCE: Catalog 65816

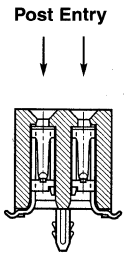
Specifications subject to change.

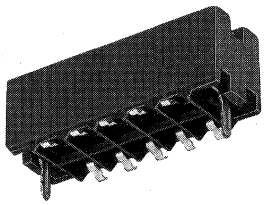
1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

Receptacle Assemblies Double Row, .100 x .100 [2.54 x 2.54] Centers

Vertical Mount, Closed Top Entry with Holddowns





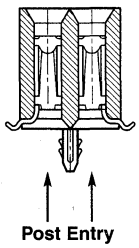
Mates with—AMPMODU Unshrouded Headers (Vertical or Right-Angle)

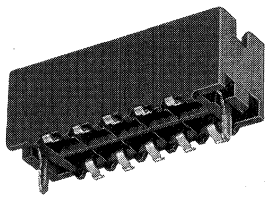
Note: 40 Pos. Housing Dim. (Typ.)— 2.200 [55.88] L x .238 [6.05] W x .265 [6.73] H

No. of Positions	Part Numbers
10	535923-2
14	2-535923-3
20	2-535923-4
26	535923-3
36	535923-8
40	535923-5
46	535923-9
50	535923-6
62	535923-1
66	1-535923-0
80	535923-7

Notes: 1. No center holddown, except **Part No. 535923-7.**
2. Receptacles are available without metal holddowns or with plastic holddowns. Consult AMP.
3. Additional receptacle sizes are available; minimum order quantities may apply. Consult AMP.

Vertical Mount, Bottom Entry with Holddowns





Mates with—AMPMODU Unshrouded Headers (Vertical or Right-Angle)

Note: 40 Pos. Housing Dim. (Typ.)— 2.200 [55.88] L x .220 [5.59] W x .260 [6.60] H

No. of Positions	Part Numbers
10	535959-1
12	1-535959-2
16	535959-9
20	535959-3
24	1-535959-0
26	535959-2
30	535959-4
40	535959-5
50	535959-6
60	535959-7
64	1-535959-1
80	535959-8

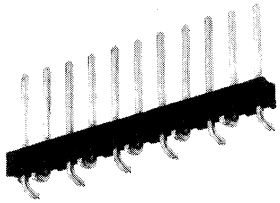
Notes: 1. No center holddown, except **Part No. 535959-8.**
2. Receptacles are available without metal holddowns or with plastic holddowns. Consult AMP.
3. Additional receptacle sizes are available; minimum order quantities may apply. Consult AMP.

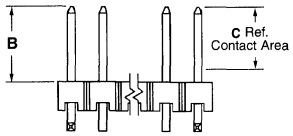
SOURCE: Catalog 65816

Breakaway Headers—Surface-Mount Unshrouded

Single Row, .100 [2.54] Centers

.025 [0.64] Square Straight Post



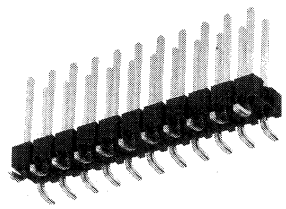


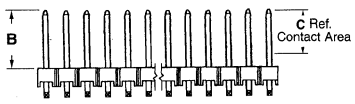
Note: 11 Pos. Housing Dim. (Typ.)—1.084 [27.53] L

No. of Pos.	B = .230 [5.84] C = .185 [4.70] Post Plating		B = .320 [8.13] C = .200 [5.08] Post Plating	
	.000030 [0.00076] Gold	Tin-Lead	.000030 [0.00076] Gold	Tin-Lead
3	146128-1	146132-1	146129-1	146133-1
4	146128-2	146132-2	146129-2	146133-2
5	146128-3	146132-3	146129-3	146133-3
6	146128-4	146132-4	146129-4	146133-4
7	146128-5	146132-5	146129-5	146133-5
8	146128-6	146132-6	146129-6	146133-6
9	146128-7	146132-7	146129-7	146133-7
10	146128-8	146132-8	146129-8	146133-8
11	146128-9	146132-9	146129-9	146133-9
12	1-146128-0	1-146132-0	1-146129-0	1-146133-0
13	1-146128-1	1-146132-1	1-146129-1	1-146133-1
14	1-146128-2	1-146132-2	1-146129-2	1-146133-2
15	1-146128-3	1-146132-3	1-146129-3	1-146133-3

Double Row, .100 x .100 [2.54 x 2.54] Centers

.025 [0.64] Square Straight Post





Note: 22 Pos. Housing Dim. (Typ.)—1.084 [27.53] L

No. of Pos.	B = .230 [5.84] C = .185 [4.70] Post Plating		B = .320 [8.13] C = .200 [5.08] Post Plating	
	.000030 [0.00076] Gold	Tin-Lead	.000030 [0.00076] Gold	Tin-Lead
4	146130-1	146134-1	146131-1	146135-1
6	146130-2	146134-2	146131-2	146135-2
8	146130-3	146134-3	146131-3	146135-3
10	146130-4	146134-4	146131-4	146135-4
12	146130-5	146134-5	146131-5	146135-5
14	146130-6	146134-6	146131-6	146135-6
16	146130-7	146134-7	146131-7	146135-7
18	146130-8	146134-8	146131-8	146135-8
20	146130-9	146134-9	146131-9	146135-9
22	1-146130-0	1-146134-0	1-146131-0	1-146135-0
24	1-146130-1	1-146134-1	1-146131-1	1-146135-1
26	1-146130-2	1-146134-2	1-146131-2	1-146135-2
28	1-146130-3	1-146134-3	1-146131-3	1-146135-3
30	1-146130-4	1-146134-4	1-146131-4	1-146135-4

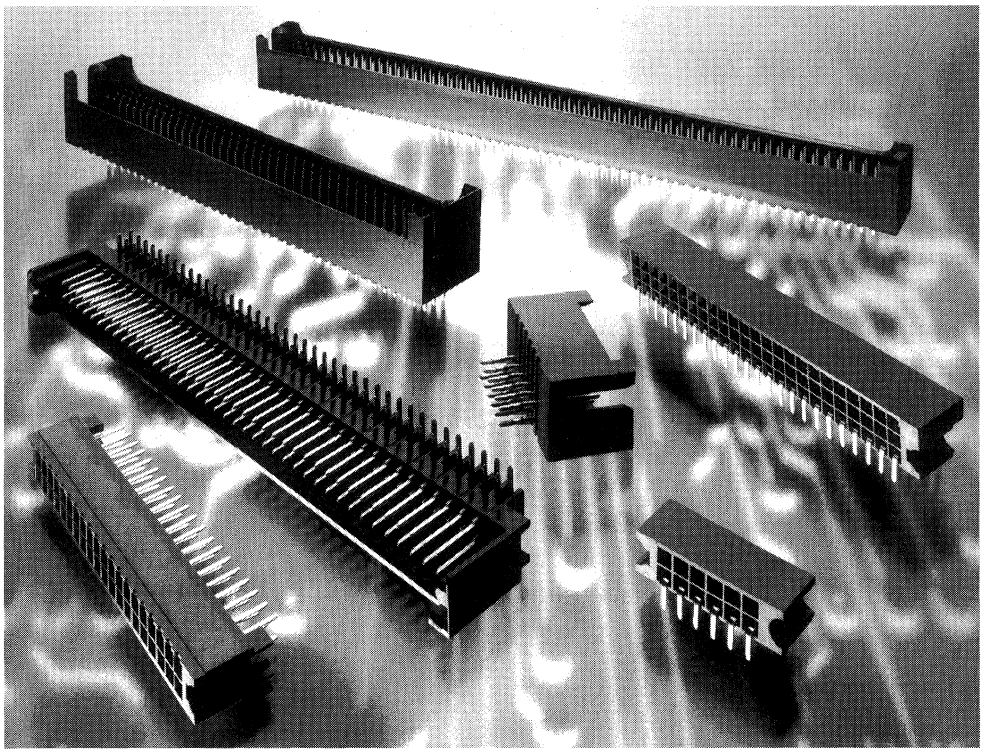
SOURCE: Catalog 65816

Specifications subject to change.

1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

AMPMODU Two-Piece Printed Circuit Board Connectors



Product Facts

- Two-piece reliability
- Double- and triple-row systems available
- Short signal path for VLSI applications
- Receptacles employ dual cantilever beams and built-in anti-overstress to provide reliable connections
- Built-in guides assure alignment before contact engagement
- Closed entry receptacle housings provide lead-in ramp for positive mating of contacts
- Shrouded headers provide full pin protection
- Polarized headers
- Vertical headers available with ACTION PIN posts or .025 [0.64] square solder posts
- Repairable ACTION PIN posts
- Simple seating tooling for headers with ACTION PIN posts
- Recognized under the Component Program of Underwriters Laboratories Inc., File No. E28476
- Certified by Canadian Standards Association, File No. LR 7189

AMPMODU Two-Piece Printed Circuit Board connectors are designed to reliably and economically meet the packaging and interconnection requirements of today's sophisticated electronics.

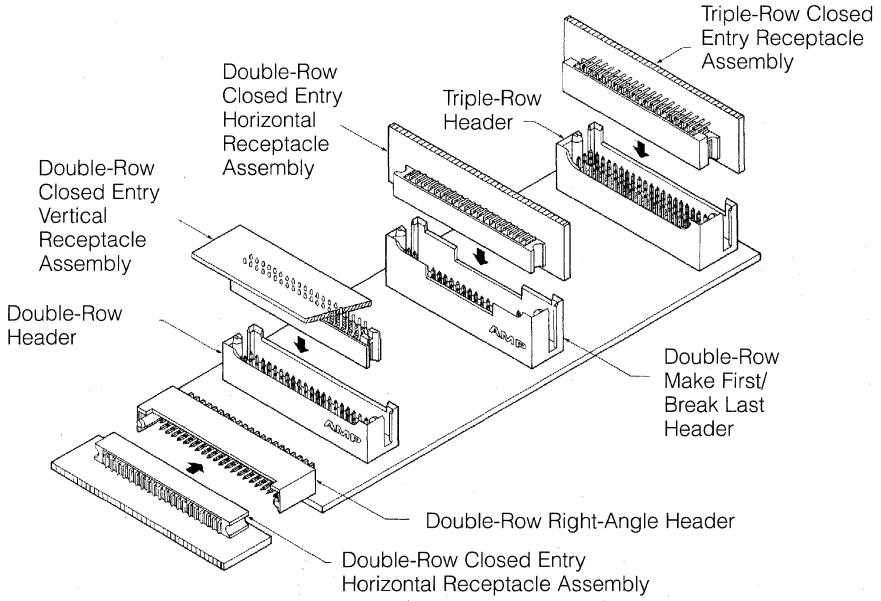
The double-row system is produced in 10 thru 200 positions in the vertical headers and horizontal receptacles, and 10 thru 160 positions in the right-angle headers and vertical receptacles.

The AMPMODU triple-row connector system is produced in 30 through 300 positions (straight post headers and mating horizontal receptacles).

Both double- and triple-row vertical headers are available with press-fit ACTION PIN posts or standard .025 [0.64] square solder posts. There is a simple seating tool for headers with ACTION PIN posts.

A board retention feature is offered in the double-row horizontal receptacles, double-row right-angle headers, and double- and triple-row vertical headers. Built-in guides assure accurate header and receptacle alignment before contact engagement.

Closed entry receptacle housings provide a lead-in ramp for positive mating of contacts.

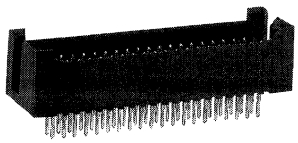


SOURCE: Catalog 65816

Double-Row Headers Straight Posts, .100 [2.54] Centers

Solder Posts and ACTION PIN Posts (with Pin Protection and Guide Pins)

Mates with—Closed End Receptacle Assemblies (Vertical or Horizontal Mount)



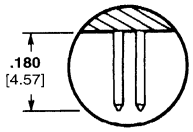
Note: 40 Pos. Housing Dim. (Typ.) — 2.380 [60.45] L x .515 [13.08] W x .550 [13.97] H

Posts—Phosphor bronze, plated as follows:

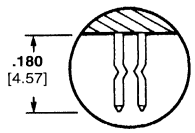
A—Duplex plated .000030 [0.00076] gold on contact area, .000100-.000200 [0.00254-0.00508] bright tin-lead on termination end, with entire post underplated .000050 [0.00127] nickel

B—Duplex plated .000015 [0.00038] gold on contact area, .000100-.000200 [0.00254-0.00508] bright tin-lead on termination end, with entire post underplated .000050 [0.00127] nickel

C—Selectively plated .000030 [0.00076] gold on contact area and .000015 [0.00038] gold on termination end, with gold flash over .000050 [0.00127] nickel on entire post



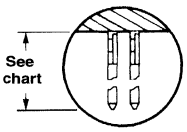
.025 [0.64] Square Solder Tails



.025 [0.64] Square Board Retention Tails

No. of Pos.	Header Part Numbers with .180 [4.57] Tail Length			
	Standard Solder Tails		Board Retention Tails	
	Plating A	Plating B	Plating A	Plating B
12	102692-1	102567-1	1-534978-6	534257-5
14	—	2-102567-3	—	—
16	1-102692-5	—	534978-2	1-534257-4
20	1-102692-6	1-102567-1	534978-3	—
24	102692-2	102567-2	534978-4	534257-7
30	1-102692-7	1-102567-3	534978-5	—
36	102692-3	102567-3	534978-6	534257-9
40	1-102692-3	1-102567-2	534978-7	1-534257-0
50	102692-4	102567-6	534978-8	1-534257-5
60	102692-5	102567-4	534978-9	—
70	1-102692-4	1-102567-0	1-534978-5	1-534257-2
72	1-102692-8	1-102567-6	1-534978-0	—
80	102692-6	102567-8	1-534978-1	—
86	1-102692-9	1-102567-7	—	—
90	1-102692-2	—	—	—
96	102692-7	—	—	1-534978-7
100	102692-8	102567-9	—	534257-2
110	1-102692-0	1-102567-5	1-534978-2	—
120	102692-9	102567-7	1-534978-3	534257-3
130	2-102692-0	—	—	—
140	—	—	—	1-534978-4
148	2-102692-3	—	—	—
160		2-102567-2	—	534257-4
180	—	2-102567-8	—	—
200	1-102692-1	—	534978-1	—

Notes: 1. Headers with make first/break last posts can be made available, consult AMP.
2. Additional header sizes are available; minimum order quantities may apply. Consult AMP.



.025 [0.64] Square ACTION PIN Tails

ACTION PIN Replacement Post Part Numbers

.250 [6.35] Tail Length
Plating A 102824-9
Plating B 1-102824-0

.480 [12.19] Tail Length
Plating A 102824-6
Plating C 102824-3

.680 [17.27] Tail Length
Plating C 102824-7

No. of Pos.	Header Part Numbers with ACTION PIN Posts				
	.250 [6.35] Tail Length		.480 [12.19] Tail Length		.680 [17.27] Tail Length
	Plating A	Plating B	Plating A	Plating C	Plating C
12	102690-1	—	—	—	—
14	—	103291-3	—	—	—
20	1-102690-3	—	—	—	—
24	102690-2	—	—	—	—
36	102690-3	—	—	—	—
40	1-102690-6	103291-2	—	—	—
50	102690-4	1-103291-0	—	—	—
60	102690-5	—	102691-5	—	102777-5
70	1-102690-7	—	—	—	—
80	102690-6	—	—	—	—
90	1-102690-1	—	—	—	—
96	102690-7	—	—	—	—
100	102690-8	—	102691-8	—	102777-3
120	102690-9	—	102691-9	1-102666-1	—
130	—	—	1-102691-1	102666-9	102777-2
140	—	—	1-102691-0	2-102666-0	—
160	2-102690-8	—	—	—	—

Notes: 1. Headers with ACTION PIN posts are for use with .093 [2.36] nominal or thicker pc boards.
2. Additional header sizes are available; minimum order quantities may apply. Consult AMP.
3. Headers with .250 [6.35] tail length can be made available with make first/break last posts, consult AMP.

SOURCE: Catalog 65816

Specifications subject to change.

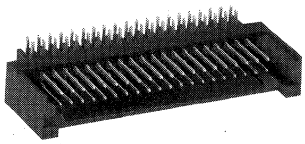
1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

Double-Row Headers Right-Angle Post .100 [2.54] Centers

Card Extender (with Pin Protection and Guide Pins)

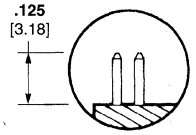
Mates with—Closed Entry Receptacle Assemblies (Vertical or Horizontal Mount)



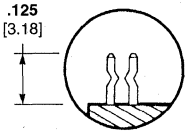
Posts—Phosphor bronze, duplex plated as follows:

A—.000030 [0.00076] gold on contact area, .000100-.000200 [0.00254-0.00508] bright tin-lead on solder area, with entire post underplated .000050 [0.00127] nickel

B—.000015 [0.00038] gold on contact area, .000100-.000200 [0.00254-0.00508] bright tin-lead on solder area, with entire post underplated .000050 [0.00127] nickel



.025 [0.64] Square Solder Tails



.025 [0.64] Square Board Retention Tails

Note: 40 Pos. Housing Dim. (Typ.)— 2.380 [60.45] L x .762 [19.35] W x .320 [8.13] H

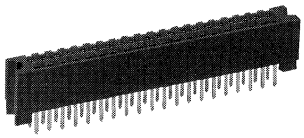
No. of Pos.	Header Part Numbers with .125 [3.18] Tail Length		
	Standard Solder Tails		Board Retention Tails
	Plating A	Plating B	Plating A
12	—	102589-8	—
16	—	—	534245-4
20	—	1-102589-2	534245-6
24	—	102589-6	—
30	1-102802-6	102589-4	534245-2
36	—	102589-2	—
40	102802-8	1-102589-3	—
44	2-102802-3	—	—
50	—	102589-5	534245-1
60	—	102589-7	—
72	—	1-102589-7	—
80	—	—	1-534245-0
90	—	1-102589-4	—
100	102802-6	102589-3	—
120	102802-2	1-102589-1	534245-3
130	1-102802-9	—	—

Notes: 1. Headers with make first/break last posts can be made available, consult AMP.
2. Additional header sizes are available; minimum order quantities may apply. Consult AMP.

Double-Row Closed Entry Receptacle Assemblies Board Mounted, .100 [2.54] Centers

Vertical Mount (with Guide Pin Slots and Standoffs)

Mates with—Headers (Straight or Right-Angle Post)

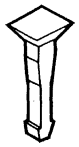


Posts—Phosphor bronze, duplex plated .000030 [0.00076] gold on contact area, .000050-.000100 [0.00127-0.00254] bright tin-lead on solder area, with entire post underplated .000050 [0.00127] nickel

Note: 40 Pos. Housing Dim. (Typ.)— 2.258 [57.35] L x .238 [6.05] W x .410 [10.41] H

No. of Pos.	Part Numbers .115 [2.92] Tail Length
40	534972-2
50	534972-3
120	1-534972-0

Note: Additional receptacle sizes and solder tail lengths are available; minimum order quantities may apply. Consult AMP.

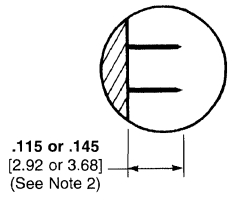


Keying Plug Part No. 86286-1

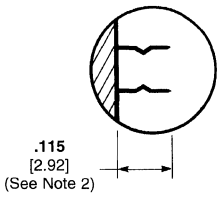
SOURCE: Catalog 65816

Double-Row Closed Entry Receptacle Assemblies Board Mounted, .100 [2.54] Centers

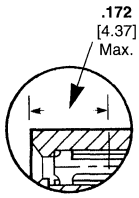
Horizontal Mount (with Guide Pin Slots and Standoffs)



Standard Solder Tails



Board Retention Tails



Point of Contact

Note: 40 Pos. Housing Dim. (Typ.)— 2.258 [57.35] L x .238 [6.05] W x .320 [8.13] H

Mates with—Headers (Straight or Right-Angle Post)

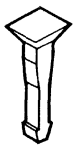
Posts—Phosphor bronze, duplex plated as follows:

A—.000030 [0.00076] gold on contact area, .000050-.000100 [0.00127-0.00254] bright tin-lead on solder area, with entire post underplated .000050 [0.00127] nickel

B—.000015 [0.00038] gold on contact area, .000050-.000100 [0.00127-0.00254] bright tin-lead on solder area, with entire post underplated .000050 [0.00127] nickel

No. of Pos.	Part Numbers					
	with .115 [2.92] Solder Posts				with .145 [3.68] Solder Tail Length	
	Standard Solder Tails		Board Retention Tails		Standard Solder Tails	
	Plating A	Plating B	Plating A	Plating B	Plating A	Plating B
12	532956-1	532955-1	534204-2	534975-5	533009-1	—
14	—	2-532955-5	—	—	—	—
16	532956-2	—	1-534204-0	1-534975-5	—	—
20	532956-3	532955-3	534204-9	—	—	—
24	532956-4	532955-4	1-534204-1	534975-7	—	—
30	532956-5	532955-5	534204-4	—	533009-5	—
36	532956-6	532955-6	534204-3	534975-9	—	—
40	532956-7	532955-7	1-534204-2	1-534975-0	—	532993-9
44	2-532956-8	2-532955-4	—	—	—	—
50	532956-8	532955-8	1-534204-1	1-534975-1	533009-8	—
60	532956-9	532955-9	534204-5	—	533009-9	—
70	1-532956-0	1-532955-0	1-534204-3	—	1-533009-0	—
72	1-532956-1	1-532955-1	1-534204-4	—	—	532993-2
80	1-532956-2	1-532955-2	534204-8	—	1-533009-2	—
86	—	—	—	—	1-533009-3	532993-3
90	1-532956-4	—	—	—	—	—
96	1-532956-5	1-532955-5	—	—	1-533009-5	—
100	1-532956-6	1-532955-6	534204-6	534975-1	1-533009-6	1-532993-6
110	1-532956-7	1-532955-7	1-534204-6	—	—	1-532993-7
120	1-532956-8	1-532955-8	534204-7	534975-2	1-533009-8	—
130	2-532956-0	—	—	—	—	—
140	2-532956-1	—	1-534204-8	—	2-533009-1	—
148	2-532956-2	—	—	—	—	—
160	—	2-532955-7	—	534975-3	—	—
180	2-532956-4		—	—	—	—
200	—	—	—	534975-4	—	—

Notes: 1. .115 [2.92] tail length is for use with .062 [1.57] pc boards; .145 [3.68] tail length is for use with .093 [2.36] pc boards.
2. Receptacle assemblies with low force contacts are available, consult AMP.
3. Additional receptacle sizes and solder tail lengths are available; minimum order quantities may apply. Consult AMP.



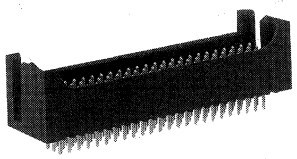
Keying Plug
Part No. 86286-1

SOURCE: Catalog 65816

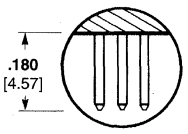
Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

Triple-Row Headers Straight Post, .100 [2.54] Centers

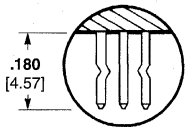
Solder Posts and ACTION PIN Posts (with Pin Protection and Guide Pins)



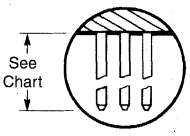
Mates with—Closed Entry Receptacle Assemblies



.025 [0.64] Square Solder Tails



.025 [0.64] Square Board Retention Tails



.025 [0.64] Square ACTION PIN Tails

Posts—Phosphor bronze, plated as follows:

A—Duplex plated .000030 [0.00076] gold on contact area, .000100-.000200 [0.00254-0.00508] bright tin-lead on termination end, with entire post underplated .000050 [0.00127] nickel

B—Selectively plated .000030 [0.00076] gold on contact area and .000015 [0.00038] gold on termination end, with gold flash over .000050 [0.00127] nickel on entire post

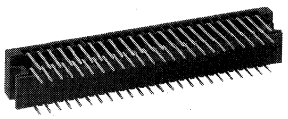
Note: 72 Pos. Housing Dim. (Typ.)—2.780 [70.61] L x .615 [15.62] W x .650 [16.51] H

No. of Pos.	Part Numbers with .180 [4.57] Solder Tail Length		with ACTION PIN Tail Length
	Standard Solder Tails	Board Retention Tails	.680 [17.27] Tail Length
	Plating A	Plating A	Plating B
72	103264-1	534258-1	—
93	—	534258-3	—
150	103264-3	—	—
195	103264-6	—	532960-1

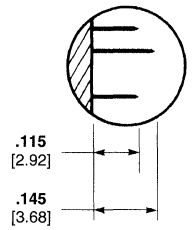
Note: Additional header sizes are available; minimum order quantities may apply. Consult AMP.

Triple-Row Closed Entry Receptacle Assemblies Board Mounted

Horizontal Mount (with Guide Pin Slots and Standoffs)



Mates with—Headers (Straight Post)



Tail Length

Posts—Phosphor bronze, duplex plated as follows:

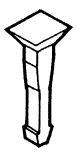
A—.000030 [0.00076] gold on contact area, .000050-.000100 [0.00127-0.00254] bright tin-lead on solder area, with entire post underplated .000050 [0.00254] nickel

B—.000015 [0.00038] gold on contact area, .000050-.000100 [0.00127-0.00254] bright tin-lead on solder area, with entire post underplated .000050 [0.00127] nickel

Note: 72 Pos. Housing Dim. (Typ.)—2.658 [67.51] L x .338 [8.59] W x .410 [10.41] H

No. of Pos.	Part Numbers	
	Plating A	Plating B
72	534974-3	—
75	—	534997-2
90	—	534997-1
93	534974-4	—
96	534974-5	—
120	534974-7	—
150	534974-8	—
195	534974-9	—

Note: Additional receptacle sizes and solder tail lengths are available; minimum order quantities may apply. Consult AMP.

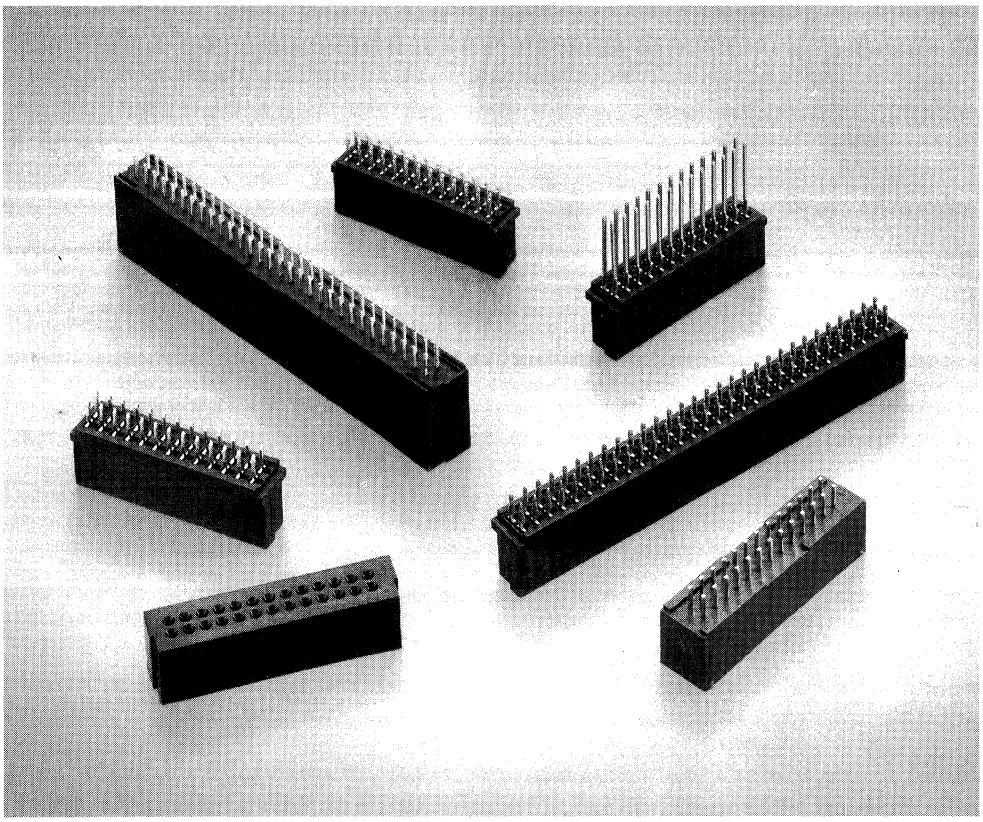


Keying Plug Part No. 86286-1

Specifications subject to change.
1-800-522-6752 Product Information Center/ AMP FAX Service
1-800-722-1111 Tooling/Technical Assistance Center

METRIC

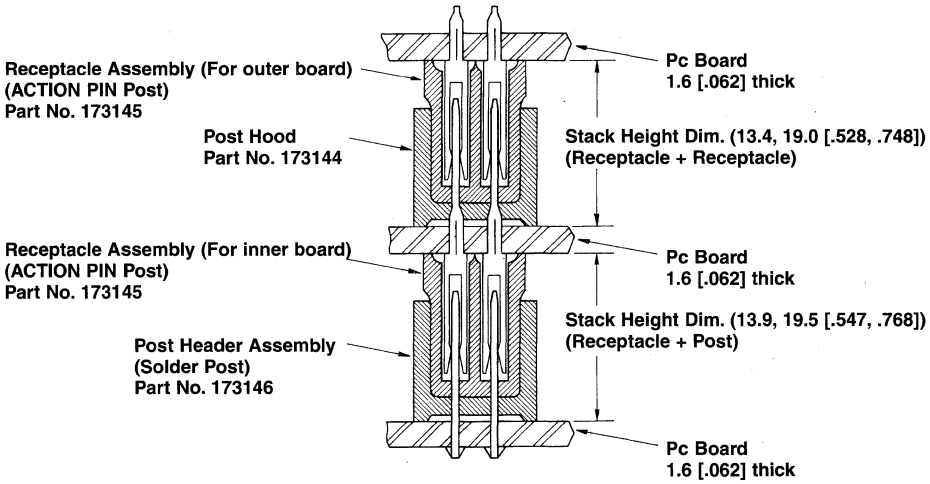
AMP ACTION PIN Stacking Connectors



Product Facts

- Can stack multiple printed circuit boards without the need of a motherboard
- Connect bus lines easily
- Receptacle assembly has ACTION PIN posts for solderless board mounting
- Can be mounted onto the board simply by press fitting with Mini-Press
- Receptacle assembly is easy to service and replace (up to 2 times)
- Receptacle contacts are of fork design to mate with posts at two points. Virtually no danger of scooping at mating/unmating
- Stacking dimensions are 13.4 [.528] or 19.0 [.748] when using receptacle assemblies together, and 13.9 [.547] or 19.5 [.768] when using a combination of receptacle and post header assemblies
- Accepts 1.6 [.062] thick boards
- Housing provided with polarization to prevent mismating
- Housing made of chemical-resistant glass-filled PBT, black color
- Contacts are of copper alloy material with high spring characteristics, gold-over-nickel plated
- Post hood available to protect the post portion of receptacle contacts. Can be selected depending on stacking dimensions
- Connectors available in sizes of 26, 30, 34, 40, 50 and 60 positions
- Product Specification 108-5197

Typical Application



SOURCE: Catalog 65816

Specifications subject to change.

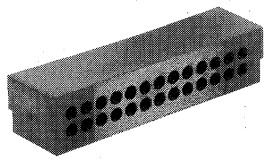
1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

METRIC

Post Hood

The post hood, mounted onto the post of the intermediary receptacle assembly, protects the post and serves as a header assembly when stacking several boards.



Note: 40 Pos. Housing Dim. (Typ.)— 55.9 [2.201] L x 8.9 [.350] W x 10.0 [.394] H

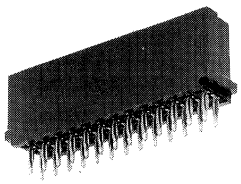
Acceptable Post Length	No. of Pos.	Part Numbers
For **8.9** [.350] (For Stack Height Dimension **13.4** [.528])	26	1-173144-1
	30	173144-2
	34	1-173144-2
	40	173144-3
	50	173144-4
	60	173144-5
For **14.5** [.570] or **16.5** [.650] (For Stack Height Dimension **19.0** [.748])	26	1-173144-3
	30	173144-7
	34	1-173144-4
	40	173144-8
		3-173144-8*
	50	173144-9
	60	1-173144-0

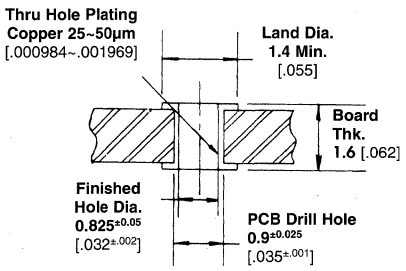
*0.60 [.024] Dia. applies to 16 holes on both sides. Except **Part No. 3-173144-8**

Receptacle Assemblies, Double Row (ACTION PIN Post and Solder Post) for Outer Board (With 0.55 [.022] Square Post)

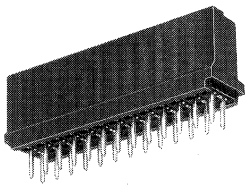
2.54 x 2.54 [.100 x .100] Centers

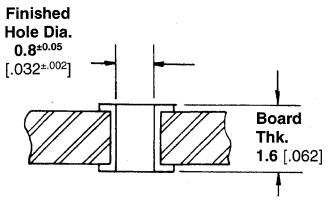
ACTION PIN Post





Solder Post





Pc Board Mounting Dimensions

Note: 40 Pos. Housing Dim. (Typ.)— 53.3 [2.098] L x 7.6 [.300] W x 11.9 [.469] H

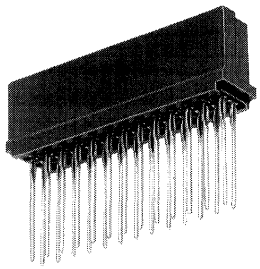
Type	Post Length	No. of Positions	Part Numbers
ACTION PIN Post	**4.2*** [.165]	26	1-173145-7
		30	173145-2
		34	1-173145-8
		40	173145-3
		50	173145-4
		60	173145-5
Solder Post	**4.2*** [.165]	26	2-173145-8
		30	2-173145-4
		34	2-173145-9
		40	2-173145-5
		50	2-173145-6
		60	2-173145-7
			3-173145-0**

*After receptacle assembly mounted on board, dimension of extrude length from board is 2.6 [.102].
**Post length = 17.0 [.669], Blank Width = 0.69 [.027]. (Finished hole dia.=1.0 [.039]).

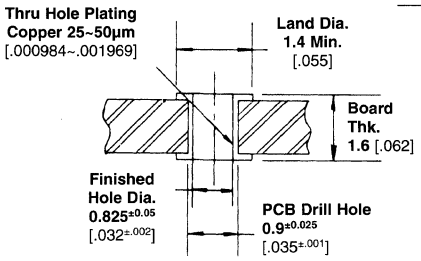
METRIC

Receptacle Assemblies, Double Row (ACTION PIN Post) for Inner Board (With 0.55 [.022] Square Post)

2.54 x 2.54 [.100 x .100] Centers



ACTION PIN Post



Pc Board Mounting Dimensions

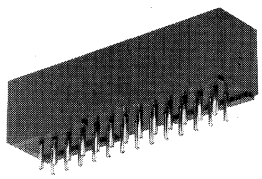
Note: 40 Pos. Housing Dim. (Typ.)— 53.3 [2.098] L x 7.6 [.300] W x 11.9 [.469] H

Stack Height Dimensions	Post Length	No. of Pos.	Part Numbers
13.4 [.528]	8.9 [.350]	26	3-173145-6
		30	3-173145-2
		34	3-173145-7
		40	3-173145-3
			3-173145-1**
		50	3-173145-4
		60	3-173145-5
	10.9 [.429]	26	1-173145-9
		30	173145-7
		34	2-173145-0
		40	173145-8
		50	173145-9
		60	1-173145-0
19.0 [.748]	14.5 [.570]	26	4-173145-2
		30	3-173145-8
		34	4-173145-3
		40	3-173145-9
		50	4-173145-0
		60	4-173145-1
	16.5 [.650]	26	2-173145-1
		30	1-173145-2
		34	2-173145-2
		40	1-173145-3
		50	1-173145-4
		60	1-173145-5

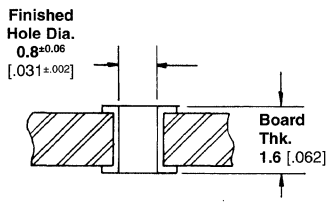
**Contact area and post mating area: 0.5 µm [.000020] min. gold over 1.3 µm [.000051] min. nickel plated; all other part nos.—0.2 µm [.000008] gold.

Post Header Assemblies, Double Row (Solder Post) (with 0.55 [.022] Square Post)

2.54 x 2.54 [.100 x .100] Centers



Solder Post



Pc Board Mounting Dimensions

Note: 40 Pos. Housing Dim. (Typ.)— 55.9 [2.201] L x 8.9 [.350] W x 10.5 [.413] H

Stack Height Dimensions	Post Length	No. of Pos.	Part Numbers
13.9 [.547]	5.8 [.228]	26	3-173146-5
		30	3-173146-1
		34	3-173146-6
		40	3-173146-2
			3-173146-0*
		50	3-173146-3
		60	3-173146-4
	7.8 [.307]	26	2-173146-1
		30	1-173146-7
		34	2-173146-2
		40	1-173146-8
			4-173146-3*
		50	1-173146-9
		60	2-173146-0
19.5 [.768]	11.4 [.449]	26	4-173146-1
		30	3-173146-7
		34	4-173146-2
		40	3-173146-8
		50	3-173146-9
		60	4-173146-0
	13.4 [.528]	26	2-173146-8
		30	2-173146-4
		34	2-173146-9
		40	2-173146-5
		50	2-173146-6
		60	2-173146-7

*Contact mating area: 0.5 µm [.000020] min. gold over 1.3 µm [.000051] nickel plated; all other part nos.—0.2 µm [.000008] gold.

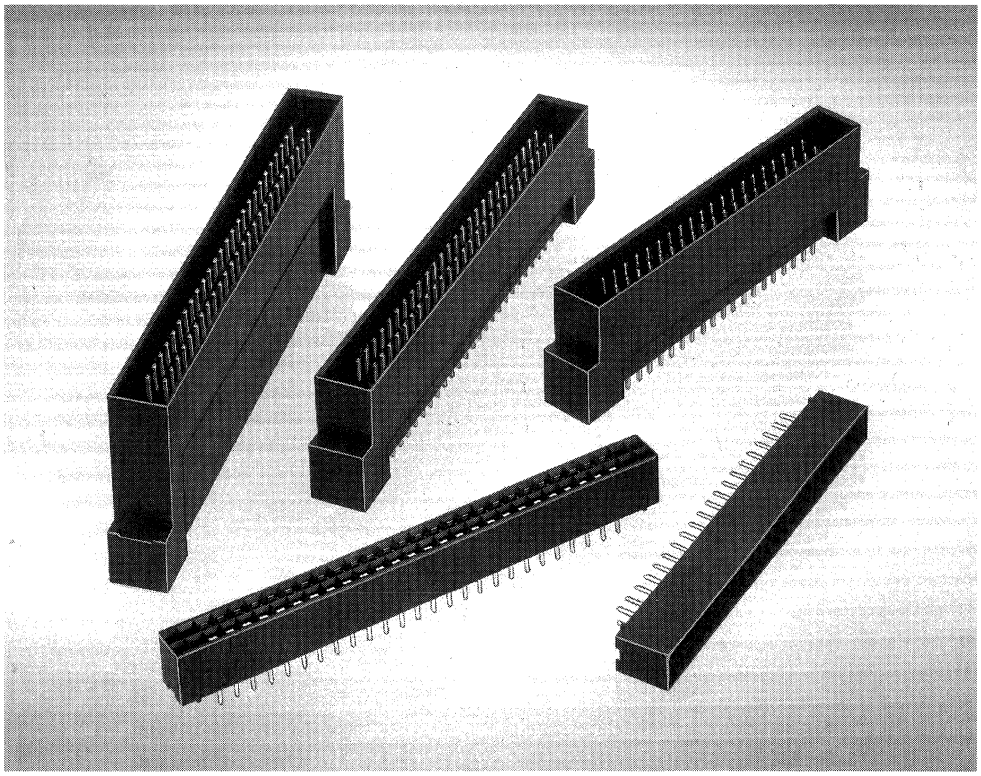
SOURCE: Catalog 65816

Specifications subject to change.

1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

AMPMODU Stacking Connectors .025 x .025 [0.64 x 0.64] Posts



Product Facts

- Parallel pc board stacking without use of motherboards
- Provides space between boards for interference-free routing of wire-to-board connections
- Two header heights available: .785 [19.94] and 1.200 [30.48]
- Vertical mount headers are fully shrouded
- Receptacle contacts have dual cantilever beams with built-in overstress protection
- .025 [0.64] sq. posts and receptacle contacts on double row, .100 x .100 [2.54 x 2.54] centers
- Header posts and receptacle contacts are phosphor bronze, duplex plated
- Housings are made of flame retardant, glass-filled thermoplastic

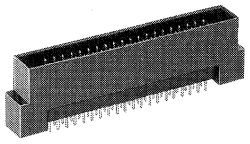
AMPMODU stacking connectors are a two-piece interconnection system designed for parallel stacking printed circuit boards, without the use of motherboards.

Vertical mount headers and receptacles feature duplex plated posts and receptacle contacts on a double-row, .100 x .100 [2.54 x 2.54] grid. The .025 [0.64] sq. header posts are fully protected, and the top-entry receptacle contacts utilize the proven AMPMODU receptacle contact design; dual cantilever beams with built-in overstress protection.

Headers are available in two heights: .785 [19.94] and 1.200 [30.48]. This allows the customer to use the height of the header to keep wire-to-board connections up and away from other board components, particularly if the components are densely packaged around the header.

Headers—Double Row .785 [19.94] Height

.025 x .025 [0.64 x 0.64] Straight Post (with Pin Protection)



Posts—Phosphor bronze, duplex plated .000015 [0.00038] gold on mating area, .000100-.000200 [0.00254-0.00508] tin-lead on solder area, with entire post underplated .000050 [0.00127] nickel

Note: 52 Pos. Housing Dim. (Typ.)— 3.320 [84.33] L x .348 [8.84] W x .785 [19.94] H

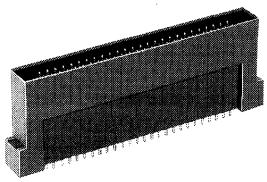
No. of Pos.	Header Part No.
40	102871-2
52	102871-1

Note: These headers mate with receptacles having the same number of active positions.

SOURCE: Catalog 65816

Headers—Double Row 1.200 [30.48] Height

.025 x .025 [0.64 x 0.64] Straight Post (with Pin Protection)



Posts—Phosphor bronze, duplex plated .000015 [0.00038] gold on mating area, .000100-.000200 [0.00254-0.00508] tin-lead on solder area, with entire post underplated .000050 [0.00127] nickel

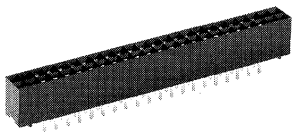
Note: 52 Pos. Housing Dim. (Typ.)—3.320 [84.33] L x .348 [8.84] W x 1.200 [30.48] H

No. of Pos.	Header Part No.
52	102826-1

Note: This header mates with receptacles having the same number of active positions.

Receptacles—Double Row Board Mounted

Vertical Mount, Top Entry, High Profile, Selectively Loaded (with Standoffs)



Contacts—Phosphor bronze, duplex plated .000015 [0.00038] gold on mating area, .000050-.000100 [0.00127-0.00254] bright tin-lead on solder area, with entire contact underplated .000050 [0.00127] nickel

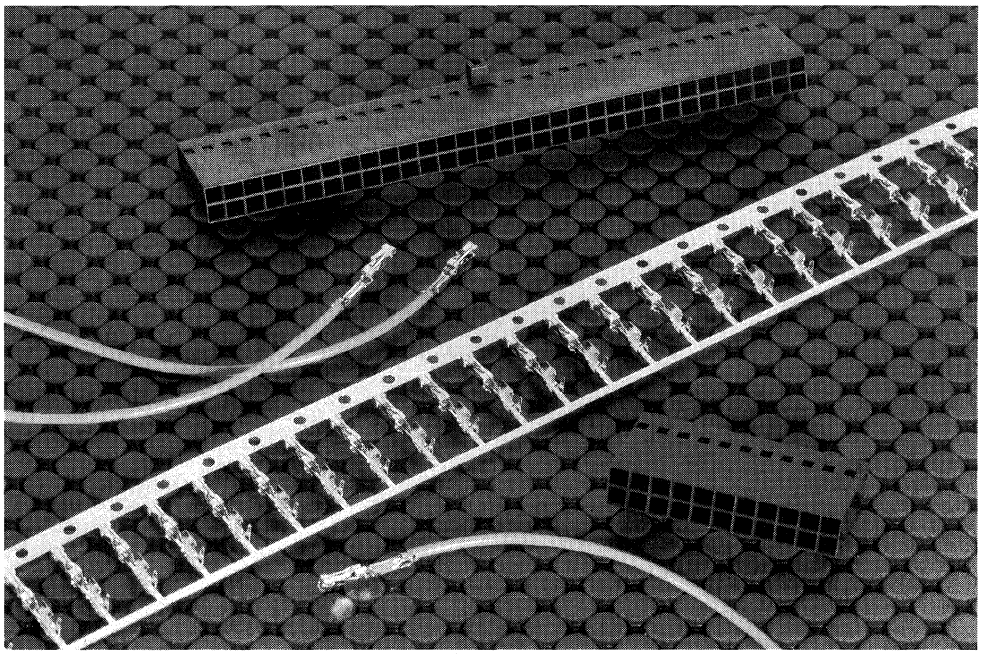
Note: 60 Pos. (52 Active) Housing Dim. (Typ.)—
3.000 [76.20] L x .238 [6.05] W x .340 [8.64] H

No. of Pos.	Receptacle Part No.
48* (40 Active)	102766-1
60* (52 Active)	102766-4

* In addition to the active positions, each receptacle has four cavities on each end that are not loaded with contacts. These empty cavities aid in aligning the receptacle with header posts during mating.

Notes: 1. AMP, part no. and date code stamped on housing where size permits.
2. These receptacles mate with headers of the same size as the active positions listed above. Refer to page 3030 and above.

AMPMODU Short Point, Crimp Snap-In Wire-Applied Contacts and Housings



Product Facts

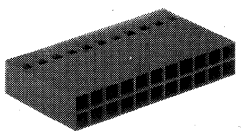
- Short point of contact mates to .122 [3.10] to .267 [6.78] long post
- Double row housings are end-to-end and side-to-side stackable
- Terminates 32-20 AWG [0.03-0.6 mm²] discrete wire
- Contacts have insulation support to accept a maximum insulation diameter of .060 [1.52]
- Available with .000015 [0.00038] or .000030 [0.00076] gold duplex, or bright tin-lead plating
- Mates with .025 [0.64] square posts
- Dual cantilever contact beams for reliable matings
- Locking retention latch provides 5 lb. [22.24 N] of retention force
- Unique locking latch design prevents latch from protruding through latch window
- Contacts also snap into AMPMODU MTE single row housings
- Double row housing configurations include .100 [2.54] centerline, plain and polarized
- Housing sizes range from 4 to 52 positions

- Recognized under the Component Program of Underwriters Laboratories Inc., File No. E28476
- Certified by Canadian Standards Association, File No. LR 7189
- Produced under a Quality Management System certified to ISO 9001

A copy of the certificate is available upon request.

Short Point, Wire-Applied Receptacle Housings, Double Row, Non-Polarized

.100 x.100 [2.54 x 2.54] Centers



Note: 20 Pos. Housing Dim. (Typ.)— .998 [25.35] L x .198 [5.03] W x .600 [15.24] H

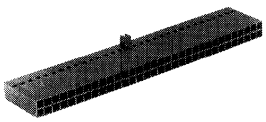
No. of Positions	Housing Part No.
4	104482-1
6	104482-2
8	104482-3
10	104482-4
12	104482-5
14	104482-6
16	104482-7
18	104482-8
20	104482-9
22	1-104482-0

No. of Positions	Housing Part No.
26	1-104482-1
28	1-104482-2
30	1-104482-3
32	1-104482-4
34	1-104482-5
36	1-104482-6
38	1-104482-7
40	1-104482-8
44	1-104482-9
52	2-104482-0

SOURCE: Catalog 65816

AMPMODU Short Point, Wire-Applied Receptacle Housings, Double Row, Polarized

.100 x .100 [2.54 x 2.54] Centers

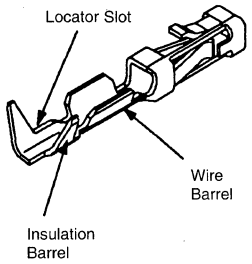


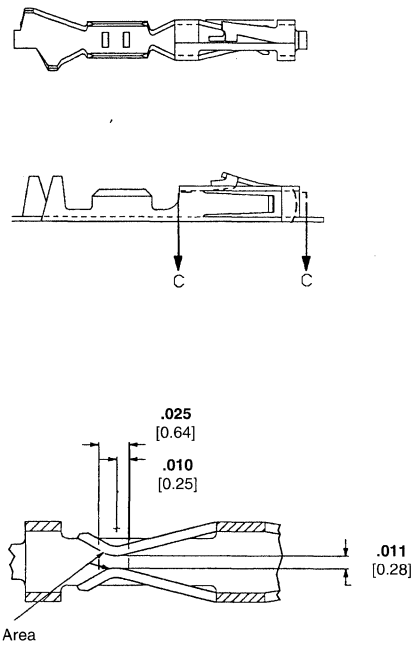
Note: 20 Pos. Housing Dim. (Typ.)—
.998 [25.35] L x .198 [5.03] W x .600 [15.24] H

No. of Positions	Housing Part No.
8	104483-1
14	104483-9
18	104483-2
20	104483-3
26	104483-4
30	104483-5
38	104483-6
54	104483-7
64	104483-8

Short Point, Crimp Snap-In Receptacle Contacts

Mates with—
.025 [0.64] sq. posts





Section C-C

Housings used in—
AMPMODU Short Point and
AMPMODU MTE
(Single Row)

Contact Finish

Plating A—Duplex plated .000030 [0.00076] gold

Plating B—Duplex plated .000015 [0.00038] gold

Plating C—.000100 [0.00254] min. bright tin-lead

Wire Size Range AWG	Wire Size Range mm²	Ins. Dia. Range	Contact Finish	Contact Part No. (Standard Pressure) Strip Form	Contact Part No. (Standard Pressure) Loose Piece	Hand Tool No.
32-28	0.03-0.08	.025-.060 0.64-1.52	Plating A	104481-4	104481-8	58438-1
			Plating B	104481-3	104481-7	
			Plating C	104481-2	104481-6	
26-22	0.13-0.3	.025-.060 0.64-1.52	Plating A	104480-4	104480-9	58438-1
			Plating B	104480-3	104480-8	
			Plating C	104480-2	104480-7	
24-20	0.2-0.5	.025-.060 0.64-1.52	Plating A	104479-4	104479-7	58437-1
			Plating B	104479-3	104479-6	
			Plating C	104479-2	104479-5	

SOURCE: Catalog 65816

Specifications subject to change.

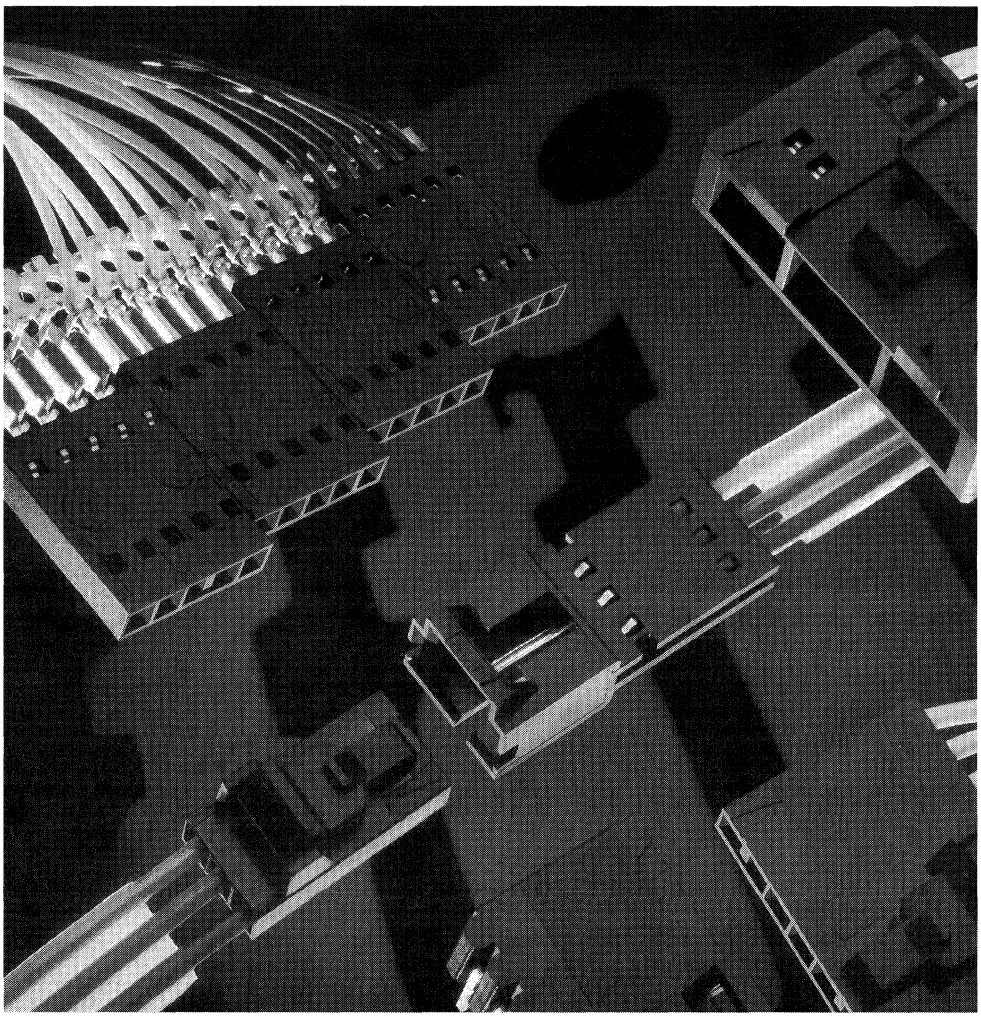
1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

MTE Interconnection System (AMPMODU)

Product Facts

- **Receptacle assemblies mate with .025 [0.64] sq. posts; mating post length is .200 [5.08] min., .250 [6.35] max.**
- **Proven AMPMODU receptacle contact design; dual cantilever beams, built-in anti-overstress, completely enclosed "box" design, standard or high-pressure**
- **Insulation displacement technology**
- **Two contact sizes for terminating 30-22 AWG [0.05-0.3 mm²] wire range; .054 [1.37] max. insulation diameter with an insulation wall thickness of .015 [0.38] max.**
- **Choice of gold duplex or tin plated contacts**
- **Interchangeable crimp snap-in pin and receptacle contacts available**
- **Housing sizes 2 through 25 positions, single row .100 [2.54] centers**
- **Plain housings are end-to-end and/or back-to-back stackable for open pin field applications**
- **Optional header "holddown" feature prevents movement prior to flow soldering**
- **Integral latch provides positive retention between header and receptacle housing**
- **Coupling shrouds permit ganging of smaller connectors with guide ribs to form larger single or double row latching connectors**
- **Mass terminating tooling provides lowest applied cost for all production needs**
- **SMT compatible, high-temperature headers available**
- **Recognized under the Component Program of Underwriters Laboratories Inc., File No. E28476**
- **Certified by Canadian Standards Association, File No. LR 7189**



The AMPMODU MTE Interconnection System offers both wire-to-board and wire-to-wire connectors using .025 [0.64] sq. post technology.

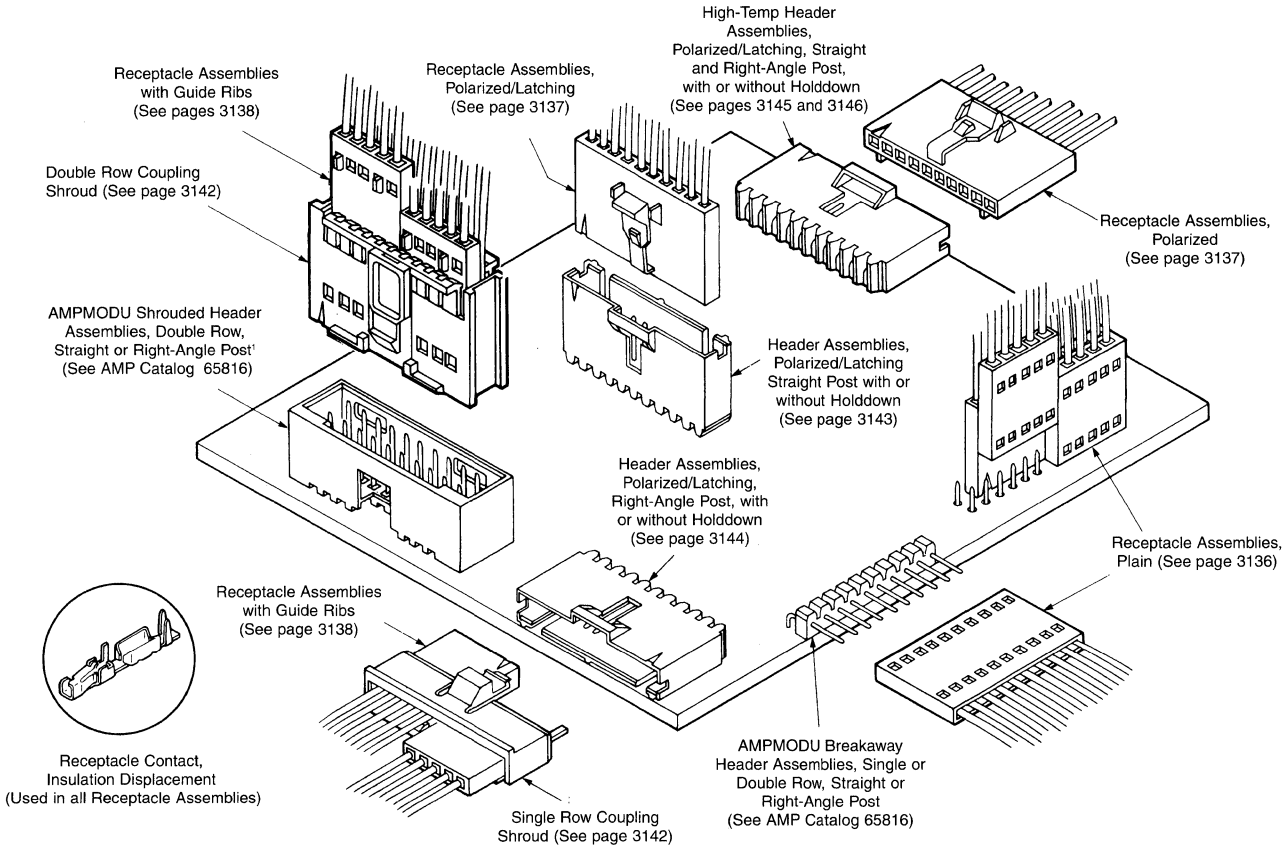
The AMPMODU MTE Interconnection System consists of single row housings with contacts preloaded on .100 [2.54] centers. Housings are furnished with contacts partially inserted, leaving the termination areas exposed. Final contact insertion is accomplished automatically by AMP application equipment, and manually when terminated with the AMP pistol grip hand tool.

The heart of the system is the insulation displacement contact design, featured in both pin and receptacle contacts. The receptacle contact, available in either standard or high-pressure, features dual canti-lever beams in an enclosed "box." The post stop prevents a mating post from disturbing the wire termination and also limits the mating depth of a long post to protect a wrap-type termination at the base of the post. The forward contact stop prevents contact overinsertion prior to termination. All contacts are furnished on carrier strips which are interlocked for stability and positive location during termination.

Single row housings are available in sizes 2 through 25 positions. Included are three styles of receptacle housings—plain, polarized/latching and ribbed and two styles of pin housings, shrouded with polarizing/latching feature and ribbed.

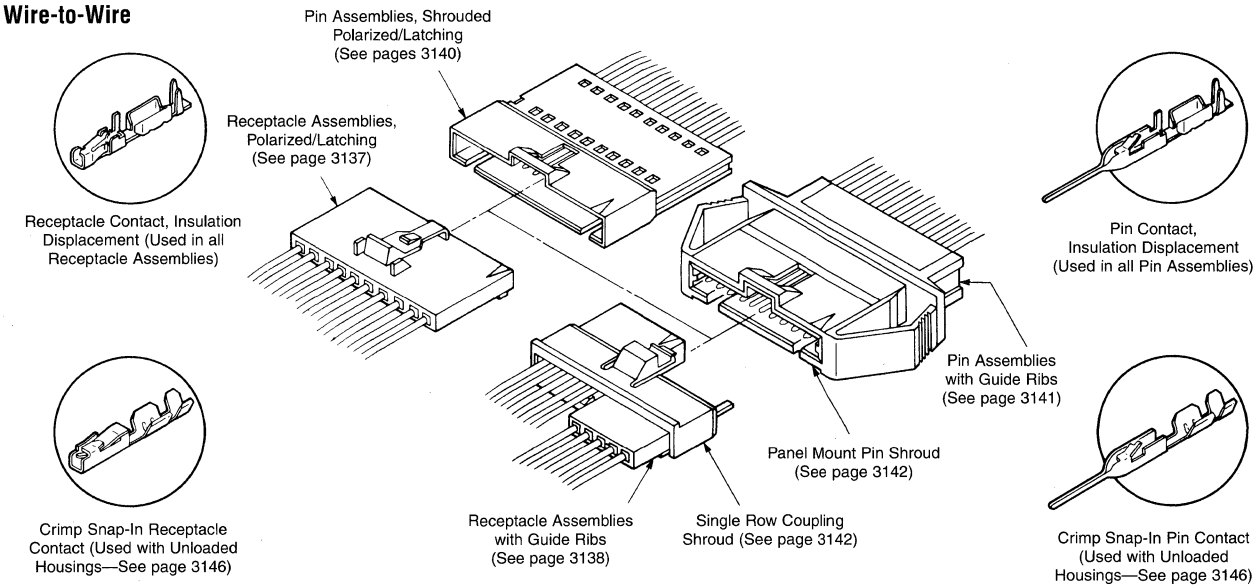
SOURCE: Catalog 65816

Wire-to-Board



[1]Mating AMPMODU Double Row Shrouded Header Assemblies must have .318 [8.08] mating post length and .150 [3.81] dimension from centerline of last post to inside of end shroud wall.

Wire-to-Wire

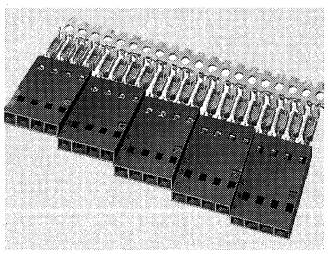


Note: For wire-to-wire applications shown above, all pin and receptacle assembly combinations are intermateable.

SOURCE: Catalog 65816

Specifications subject to change.
1-800-522-6752 Product Information Center/ AMP FAX Service
1-800-722-1111 Tooling/Technical Assistance Center

Receptacle Assemblies— Strip Form, Plain, Single Row .100 [2.54] Centers



Contacts—Copper alloy, plated as follows:

A—Duplex plated .000030 [0.00076] gold on contact area, .000050 [0.00127] min. tin-lead in crimp area, with entire contact underplated .000050 [0.00127] nickel

B— Duplex plated .000015 [0.00038] gold on contact area, .000050 [0.00127] min. tin-lead in crimp area, with entire contact underplated .000050 [0.00127] nickel

C—.000100 [0.00254] bright tin-lead over .000050 [0.00127] nickel on entire contact

Preassembled housings in strip form are available in positions 2 through 12. For ease of handling, positions 2 through 5 are recommended when using the AMP Manual Pistol Grip Tool.

These receptacle assemblies with plain housings can be stacked end-to-end and/or side-to-side for single or double row connections to an open pin field with a .100 [2.54] centerline grid.

Mates with—Breakaway Header Assemblies, Machine Applied Bandolier Posts, and Single or Double Row Shrouded Headers with .066 [1.676] End Dimension

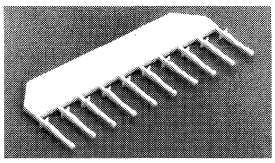
Note: Insulation displacement contacts accept an insulation diameter of .030 [0.76] min. to .054 [1.37] max. with an insulation wall thickness of .015 [0.38] max. Mating post length for preloaded housings is .200 [5.08] min., .250 [6.35] max.

Note: 5 Pos. Housing Dim. (Typ.)—.498 [12.65] L x .098 [2.49] W x .600 [15.24] H

No. of Pos.	Housing Quantities per Strip Segment	Strip Form Receptacle Assembly						Unloaded Housings
		30-26 AWG [0.05-0.15 mm²] Wire			26-22 AWG [0.12-0.3 mm²] Wire			
		Plating A	Plating B	Plating C	Plating A	Plating B	Plating C	
2	11	103979-1	103978-1	103977-1	103976-1	103975-1	103974-1	103688-1
3	8	103979-2	103978-2	103977-2	103976-2	103975-2	103974-2	103688-2
4	5	103979-3	103978-3	103977-3	103976-3	103975-3	103974-3	103688-3
5	4	103979-4	103978-4	103977-4	103976-4	103975-4	103974-4	103688-4
6	4	103979-5	103978-5	103977-5	103976-5	103975-5	103974-5	103688-5
7	2	103979-6	103978-6	103977-6	103976-6	103975-6	103974-6	—
8	2	103979-7	103978-7	103977-7	103976-7	103975-7	103974-7	103688-7
9	2	103979-8	103978-8	103977-8	103976-8	103975-8	103974-8	103688-8
10	2	103979-9	103978-9	103977-9	103976-9	103975-1	103974-9	103688-9
11	2	1-103979-0	1-103978-0	1-103977-0	1-103976-0	1-103975-0	1-103974-0	1-103688-0
12	2	1-103979-1	1-103978-1	1-103977-1	1-103976-1	1-103975-1	1-103974-1	1-103688-1

Notes: 1. Receptacle assemblies are furnished with strip contacts partially inserted into housing—contacts latched into "preload" windows. Contacts are fully inserted into housings automatically when terminated with AMP application machines, or manually when terminated with AMP pistol grip hand tool.
2. Unloaded housings are available in sizes 13 through 25 positions; order **Part Numbers 1-103668-2** through **2-103668-4**, respectively.
3. Individual receptacle assemblies are available in selected sizes from 13 through 25 positions, consult AMP.
4. Use Extraction/Lance Reset Tool **Part No. 843477-1** to remove receptacle contacts.
5. Manual Pistol Grip Tool—Handle Assembly **Part No. 58074-1** with Modular Head **Part No. 58336-1**.

Keying Plug Part No. 104072-1

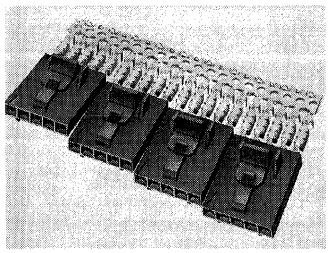


Ten keying plugs are supplied per strip. Order quantity reflects the number of strips required.

SOURCE: Catalog 65816

Specifications subject to change.
1-800-522-6752 Product Information Center/ AMP FAX Service
1-800-722-1111 Tooling/Technical Assistance Center

Receptacle Assemblies— Strip Form, Polarized/Latching, Single Row .100 [2.54] Centers



Mates with—Pin Assemblies (Polarized/Latching), Pin Assemblies with Guide Ribs (Installed in Panel Mount Pin Shroud), and Header Assemblies (Polarized/Latching)

Preassembled housings in strip form are available in positions 2 through 12. For ease of handling, positions 2 through 5 are recommended when using the AMP Manual Pistol Grip Tool.

Note: Insulation displacement contacts accept an insulation diameter of .030 [0.76] min. to .054 [1.37] max. with an insulation wall thickness of .015 [0.38] max. Mating post length for preloaded housings is .200 [5.08] min., .250 [6.35] max.

Contacts—Copper alloy, plated as follows:

A—Duplex plated .000030 [0.00076] gold on contact area, .000050 [0.00127] min. tin-lead in crimp area, with entire contact underplated .000050 [0.00127] nickel

B— Duplex plated .000015 [0.00038] gold on contact area, .000050 [0.00127] min. tin-lead in crimp area, with entire contact underplated .000050 [0.00127] nickel

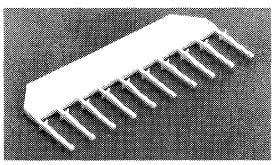
C—.000100 [0.00254] bright tin-lead over .000050 [0.00127] nickel on entire contact

Note: 5 Pos. Housing Dim. (Typ.) —.498 [12.65] L x .098 [2.49] W x .600 [15.24] H

No. of Pos.	Housing Quantities per Strip Segment	Strip Form Receptacle Assembly						Unloaded Housings
		30-26 AWG [0.05-0.15 mm²] Wire			26-22 AWG [0.12-0.3 mm²] Wire			
		Plating A	Plating B	Plating C	Plating A	Plating B	Plating C	
2	11	103961-1	103960-1	103959-1	103958-1	103957-1	103956-1	104257-1
3	8	103961-2	103960-2	103959-2	103958-2	103957-2	103956-2	104257-2
4	5	103961-3	103960-3	103959-3	103958-3	103957-3	103956-3	104257-3
5	4	103961-4	103960-4	103959-4	103958-4	103957-4	103956-4	104257-4
6	4	103961-5	103960-5	103959-5	103958-5	103957-5	103956-5	104257-5
7	2	103961-6	103960-6	103959-6	103958-6	103957-6	103956-6	104257-6
8	2	103961-7	103960-7	103959-7	103958-7	103957-7	103956-7	104257-7
9	2	103961-8	103960-8	103959-8	103958-8	103957-8	103956-8	104257-8
10	2	103961-9	103960-9	103959-9	103958-9	103957-9	103956-9	104257-9
11	2	1-103961-0	1-103960-0	1-103959-0	1-103958-0	1-103957-0	1-103956-0	1-104257-0
12	2	1-103961-1	1-103960-1	1-103959-1	1-103958-1	1-103957-1	1-103956-1	1-104257-1

Notes: 1. Receptacle assemblies are furnished with strip contacts partially inserted into housing—contacts latched into "preload" windows. Contacts are fully inserted into housings automatically when terminated with AMP application machines, or manually when terminated with AMP pistol grip hand tool.
2. Unloaded housings are available in sizes 13 through 25 positions; order **Part Numbers 1-104257-2** through **2-104257-4**, respectively.
3. Individual receptacle assemblies are available in selected sizes from 13 through 25 positions, consult AMP.
4. Use Extraction /Lance Reset Tool **Part No. 843477-1** to remove receptacle contacts.
5. Manual Pistol Grip Tool—Handle Assembly **Part No. 58074-1** with Modular Head **Part No. 58336-1**.

Keying Plug Part No. 104072-1

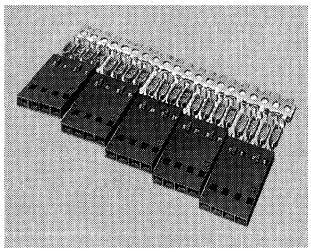


Ten keying plugs are supplied per strip. Order quantity reflects the number of strips required.

SOURCE: Catalog 65816

Specifications subject to change.
1-800-522-6752 Product Information Center/ AMP FAX Service
1-800-722-1111 Tooling/Technical Assistance Center

Receptacle Assemblies—Strip Form, with Guide Ribs, Single Row .100 [2.54] Centers



Contacts—Copper alloy, plated as follows:

A—Duplex plated .000030 [0.00076] gold on contact area, .000050 [0.00127] min. tin-lead in crimp area, with entire contact underplated .000050 [0.00127] nickel

B— Duplex plated .000015 [0.00038] gold on contact area, .000050 [0.00127] min. tin-lead in crimp area, with entire contact underplated .000050 [0.00127] nickel

C—.000100 [0.00254] bright tin-lead over .000050 [0.00127] nickel on entire contact

Preassembled housings in strip form are available in positions 2 through 12. For ease of handling, positions 2 through 5 are recommended when using the AMP Manual Pistol Grip Tool.

Mates with—1. (with Receptacle Assemblies Installed in Single Row Coupling Shrouds): Pin Assemblies (Polarized/Latching), Pin Assemblies with Guide Ribs (Installed in Panel Mount Pin Shroud), Header Assemblies (Polarized/Latching) 2. (with Receptacle Assemblies Installed in Double Row Coupling Shrouds): Header Assemblies, Shrouded, Double Row (.318 [8.08] Mating Post Length, .150 [3.81] End Dimension

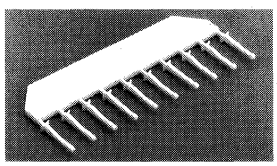
Note: Insulation displacement contacts accept an insulation diameter of .030 [0.76] min. to .054 [1.37] max. with an insulation wall thickness of .015 [0.38] max. Mating post length for preloaded housings is .200 [5.08] min., .250 [6.35] max.

Note: 5 Pos. Housing Dim. (Typ.)— .498 [12.65] L x .098 [2.49] W x .600 [15.24] H

No. of Pos.	Housing Quantities per Strip Segment	Strip Form Receptacle Assembly						Unloaded Housings
		30-26 AWG [0.05-0.15 mm²] Wire			26-22 AWG [0.12-0.3 mm²] Wire			
		Plating A	Plating B	Plating C	Plating A	Plating B	Plating C	
2	11	103973-1	103972-1	103971-1	103970-1	103969-1	103968-1	103648-1
3	8	103973-2	103972-2	103971-2	103970-2	103969-2	103968-2	103648-2
4	5	103973-3	103972-3	103971-3	103970-3	103969-3	103968-3	103648-3
5	4	103973-4	103972-4	103971-4	103970-4	103969-4	103968-4	103648-4
6	4	103973-5	103972-5	103971-5	103970-5	103969-5	103968-5	103648-5
7	2	103973-6	103972-6	103971-6	103970-6	103969-6	103968-6	103648-6
8	2	103973-7	103972-7	103971-7	103970-7	103969-7	103968-7	103648-7
9	2	103973-8	103972-8	103971-8	103970-8	103969-8	103968-8	103648-8
10	2	103973-9	103972-9	103971-9	103970-9	103969-9	103968-9	103648-9
11	2	1-103973-0	1-103972-0	1-103971-0	1-103970-0	1-103969-0	1-103968-0	—
12	2	1-103973-1	1-103972-1	1-103971-1	1-103970-1	1-103969-1	1-103968-1	1-103648-1

Notes: 1. Receptacle assemblies are furnished with strip contacts partially inserted into housing—contacts latched into "preload" windows. Contacts are fully inserted into housings automatically when terminated with AMP application machines, or manually when terminated with AMP pistol grip hand tool.
2. Unloaded housings are available in sizes 13 through 25 positions; order **Part Numbers 1-103648-2** through **2-103648-4**, respectively.
3. Individual receptacle assemblies are available in selected sizes from 13 through 25 positions, consult AMP.
4. Use Extraction/Lance Reset Tool **Part No. 843477-1** to remove receptacle contacts.
5. Manual Pistol Grip Tool—Handle Assembly **Part No. 58074-1** with Modular Head **Part No. 58336-1**.

Keying Plug Part No. 104072-1

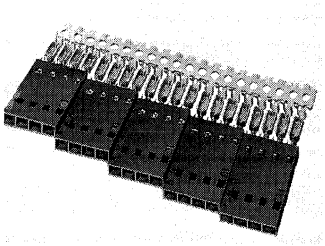


Ten keying plugs are supplied per strip. Order quantity reflects the number of strips required.

SOURCE: Catalog 65816

Specifications subject to change.
1-800-522-6752 Product Information Center/ AMP FAX Service
1-800-722-1111 Tooling/Technical Assistance Center

High Pressure Receptacle Assemblies— Strip Form, Plain, Single Row .100 [2.54] Centers



Preassembled housings in strip form are available in positions 2 through 10. For ease of handling, positions 2 through 5 are recommended when using the AMP Manual Pistol Grip Tool.

Mates with—Breakaway Header Assemblies, Machine Applied Bandolier Posts, and Single or Double Row Shrouded Headers with .066 [1.676] End Dimension

Contacts—Copper alloy, duplex plated .000030 [0.00076] gold on contact area, .000050 [0.00127] min. tin-lead in crimp area, with entire contact underplated .000050 [0.00127] nickel

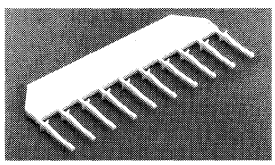
Note: Insulation displacement contacts accept an insulation diameter of .030 [0.76] min. to .054 [1.37] max. with an insulation wall thickness of .015 [0.38] max. Mating post length for preloaded housings is .200 [5.08] min., .250 [6.35] max.

Note: 5 Pos. Housing Dim. (Typ.)— .498 [12.65] L x .098 [2.49] W x .600 (15.24] H

No. of Pos.	Housing Quantities per Strip Segment	Strip Form Receptacle Assembly	
		30-26 AWG [0.05-0.15 mm²] Wire	26-22 AWG [0.12-0.3 mm²] Wire
2	10	104438-1	104439-1
3	5	104438-2	104439-2
4	5	104438-3	104439-3
5	4	104438-4	104439-4
6	4	104438-5	104439-5
7	2	—	104439-6
8	2	104438-7	104439-7
9	2	—	104439-8
10	2	—	104439-9

Notes: 1. Receptacle assemblies are furnished with strip contacts partially inserted into housing—contacts latched into "preload" windows. Contacts are fully inserted into housings automatically when terminated with AMP application machines, or manually when terminated with AMP pistol grip hand tool.
2. High pressure receptacle contacts can be made in other housing styles and position sizes. Contact your AMP sales representative.
3. Manual Pistol Grip Tool—Handle Assembly **Part No. 58074-1** with Modular Head **Part No. 58336-1.**

Keying Plug Part No. 104072-1



Ten keying plugs are supplied per strip. Order quantity reflects the number of strips required.

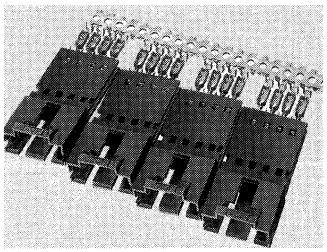
SOURCE: Catalog 65816

Specifications subject to change.

1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

Pin Assemblies, Shrouded—Strip Form, Polarized/Latching, Single Row .100 [2.54] Centers



Preassembled housings in strip form are available in positions 2 through 11. For ease of handling, positions 2 through 5 are recommended when using the AMP Manual Pistol Grip Tool.

Mates with—Receptacle Assemblies (Polarized/ Latching) and Receptacle Assemblies with Guide Ribs (Installed in Single Row Coupling Shroud)

Note: Insulation displacement contacts accept an insulation diameter of .030 [0.76] min. to .054 [1.37] max. with an insulation wall thickness of .015 [0.38] max.

Contacts—Copper alloy, plated as follows:

A—Duplex plated .000030 [0.00076] gold on contact area, .000050 [0.00127] min. tin-lead in crimp area, with entire contact underplated .000050 [0.00127] nickel

B— Duplex plated .000015 [0.00038] gold on contact area, .000050 [0.00127] min. tin-lead in crimp area, with entire contact underplated .000050 [0.00127] nickel

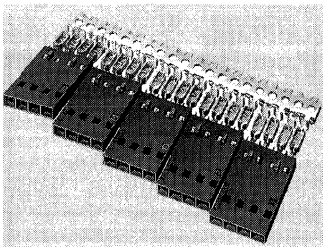
C—.000100 [0.00254] bright tin-lead over .000050 [0.00127] nickel on entire contact

Note: 5 Pos. Housing Dim. (Typ.)— .600 [15.24] L x .260 [6.60] W x .950 [24.13] H

No. of Pos.	Housing Quantities per Strip Segment	Strip Form Pin Assembly						Unloaded Housings
		30-26 AWG [0.05-0.15 mm²] Wire			26-22 AWG [0.12-0.3 mm²] Wire			
		Plating A	Plating B	Plating C	Plating A	Plating B	Plating C	
2	8	103949-1	103948-1	103947-1	103946-1	103945-1	103944-1	103653-1
3	5	103949-2	103948-2	103947-2	103946-2	103945-2	103944-2	103653-2
4	4	103949-3	103948-3	103947-3	103946-3	103945-3	103944-3	103653-3
5	4	103949-4	103948-4	103947-4	103946-4	103945-4	103944-4	103653-4
6	2	103949-5	103948-5	103947-5	103946-5	103945-5	103944-5	103653-5
7	3	103949-6	103948-6	103947-6	103946-6	103945-6	103944-6	103653-6
8	2	103949-7	103948-7	103947-7	103946-7	103945-7	103944-7	103653-7
9	2	103949-8	103948-8	103947-8	103946-8	103945-8	103944-8	103653-8
10	2	103949-9	103948-9	103947-9	103946-9	103945-9	103944-9	103653-9
11	2	1-103949-0	1-103948-0	1-103947-0	1-103946-0	1-103945-0	1-103944-0	1-103653-0

Notes: 1. Pin assemblies are furnished with strip contacts partially inserted into housing—contacts latched into "preload" windows. Contacts are fully inserted into housings automatically when terminated with AMP application machines, or manually when terminated with AMP pistol grip hand tool.
2. Unloaded housings are available in sizes 12 through 25 positions; order **Part Numbers 1-103653-1** through **2-103653-4**, respectively.
3. Individual pin assemblies are available in selected sizes from 13 through 25 positions, consult AMP.
4. Use Extraction/Lance Reset Tool **Part No. 843477-1** to remove pin contacts.
5. Manual Pistol Grip Tool—Handle Assembly **Part No. 58074-1** with Modular Head **Part No. 58336-1**.

Pin Assemblies—Strip Form with Guide Ribs, Single Row .100 [2.54] Centers



Preassembled housings in strip form are available in positions 2 through 12. For ease of handling, positions 2 through 5 are recommended when using the AMP Manual Pistol Grip Tool.

These pin assemblies with ribbed housings can be stacked end-to-end inside a Panel Mount Pin Shroud to form a large single row connector for panel mounting.

Mates with—(with Pin Assembly Installed in Panel Mount Pin Shroud): Receptacle Assemblies (Polarized/ Latching) and Receptacle Assemblies with Guide Ribs (Installed in Single Coupling Shroud)

Contacts—Copper alloy, plated as follows:

A—Duplex plated .000030 [0.00076] gold on contact area, .000050 [0.00127] min. tin-lead in crimp area, with entire contact underplated .000050 [0.00127] nickel

B—Duplex plated .000015 [0.00038] gold on contact area, .000050 [0.00127] min. tin-lead in crimp area, with entire contact underplated .000050 [0.00127] nickel

C—.000100 [0.00254] bright tin-lead over .000050 [0.00127] nickel on entire contact

Note: Insulation displacement contacts accept an insulation diameter of .030 [0.76] min. to .054 [1.37] max. with an insulation wall thickness of .015 [0.38] max.

Note: 5 Pos. Housing Dim. (Typ.)— .498 [12.65] L x .600 [15.24] W x .098 [2.49] H

No. of Pos.	Housing Quantities per Strip Segment	Strip Form Pin Assembly						Unloaded Housings
		30-26 AWG [0.05-0.15 mm²] Wire			26-22 AWG [0.12-0.3 mm²] Wire			
		Plating A	Plating B	Plating C	Plating A	Plating B	Plating C	
2	10	103955-1	103954-1	103953-1	103952-1	103951-1	103950-1	103648-1
3	5	103955-2	103954-2	103953-2	103952-2	103951-2	103950-2	103648-2
4	5	103955-3	103954-3	103953-3	103952-3	103951-3	103950-3	103648-3
5	4	103955-4	103954-4	103953-4	103952-4	103951-4	103950-4	103648-4
6	4	103955-5	103954-5	103953-5	103952-5	103951-5	103950-5	103648-5
7	2	103955-6	103954-6	103953-6	103952-6	103951-6	103950-6	103648-6
8	2	103955-7	103954-7	103953-7	103952-7	103951-7	103950-7	103648-7
9	2	103955-8	103954-8	103953-8	103952-8	103951-8	103950-8	103648-8
10	2	103955-9	103954-9	103953-9	103952-9	103951-9	103950-9	103648-9
11	2	1-103955-0	1-103954-0	1-103953-0	1-103952-0	1-103951-0	1-103950-1	1-103648-0
12	2	1-103955-1	1-103954-1	1-103953-1	1-103952-1	1-103951-1	1-103950-1	1-103648-1

Notes: 1. Pin assemblies are furnished with strip contacts partially inserted into housing—contacts latched into "preload" windows. Contacts are fully inserted into housings automatically when terminated with AMP application machines, or manually when terminated with AMP pistol grip hand tool.
2. Unloaded housings are available in sizes 13 through 25 positions; order **Part Numbers 1-103648-2** through **2-103648-4**, respectively.
3. Individual pin assemblies are available in selected sizes from 13 through 25 positions, consult AMP.
4. Use Extraction/Lance Reset Tool **Part No. 843477-1** to remove pin contacts.
5. Manual Pistol Grip Tool—Handle Assembly **Part No. 58074-1** with Modular Head **Part No. 58336-1.**

SOURCE: Catalog 65816

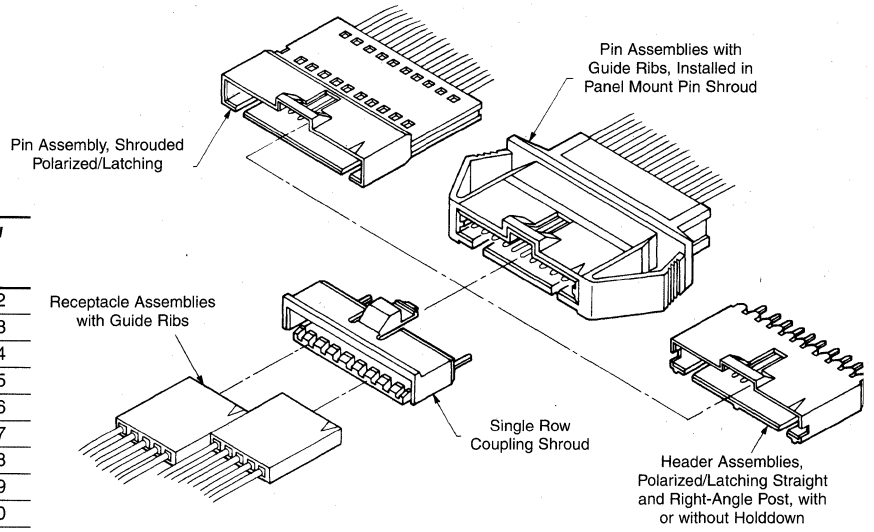
Specifications subject to change.
1-800-522-6752 Product Information Center/ AMP FAX Service
1-800-722-1111 Tooling/Technical Assistance Center

Coupling Shrouds for Receptacle Assemblies with Guide Ribs

Single Row

Note: 15 Pos. Shroud Dim. (Typ.)—
1.585 [40.26] L x .307 [7.8] W x .582 [14.78] H

No. of Pos.	Single Row Coupling Shroud	No. of Pos.	Single Row Coupling Shroud
4	103680-1	15	1-103680-2
5	103680-2	16	1-103680-3
6	103680-3	17	1-103680-4
7	103680-4	18	1-103680-5
8	103680-5	19	1-103680-6
9	103680-6	20	1-103680-7
10	103680-7	21	1-103680-8
11	103680-8	22	1-103680-9
12	103680-9	23	2-103680-0
13	1-103680-0	24	2-103680-1
14	1-103680-1	25	2-103680-2

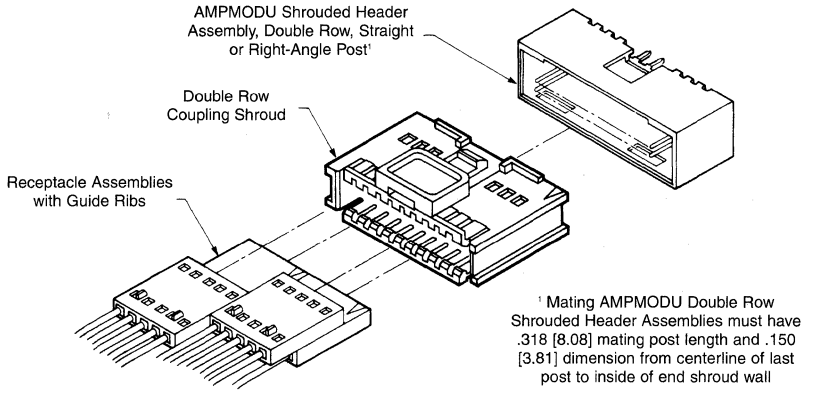


Typical Application of Single Row Coupling Shroud and Mating AMPMODU MTE Products

Double Row

Note: 22 Pos. Shroud Dim. (Typ.)—
1.285 [32.64] L x .735 [18.67] W x .460 [11.68] H

No. of Pos.	Double Row Coupling Shroud	No. of Pos.	Double Row Coupling Shroud
8	103681-1	24	104500-4
10	103681-2	26	104500-5
12	103681-3	28	104500-6
14	103681-4	30	104500-7
16	103681-5	32	104500-8
18	104500-1	34	104500-9
20	104500-2	40	1-104500-0
22	104500-3	50	1-104500-1

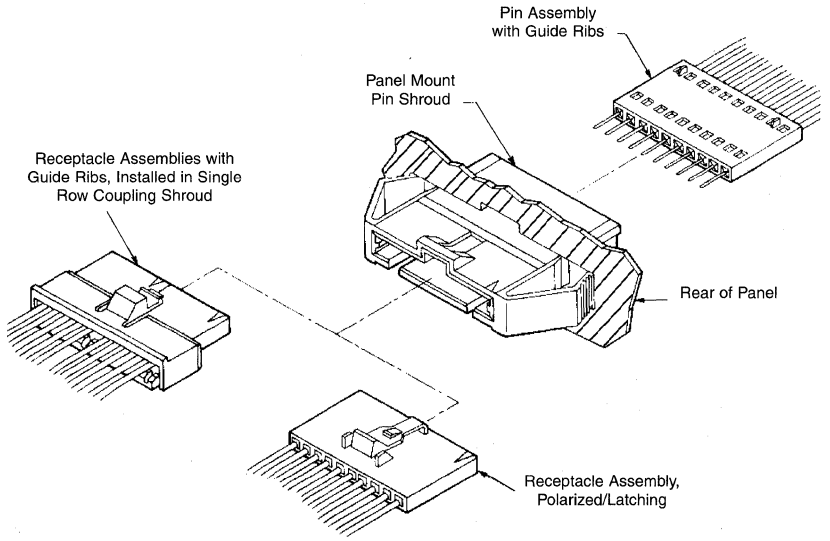


Typical Application of Double Row Coupling Shroud and Mating AMPMODU Products

Panel Mount Pin Shrouds for Pin Assemblies with Guide Ribs, Single Row

Note: 15 Pos. Shroud Dim. (Typ.)—
2.035 [51.69] L x .990 [25.15] W x .310 [7.87] H

No. of Pos.	Panel Mount Pin Shroud	No. of Pos.	Panel Mount Pin Shroud
2	103682-1	14	1-103682-3
3	103682-2	15	1-103682-4
4	103682-3	16	1-103682-5
5	103682-4	17	1-103682-6
6	103682-5	18	1-103682-7
7	103682-6	19	1-103682-8
8	103682-7	20	1-103682-9
9	103682-8	21	2-103682-0
10	103682-9	22	2-103682-1
11	1-103682-0	23	2-103682-2
12	1-103682-1	24	2-103682-3
13	1-103682-2	25	2-103682-4

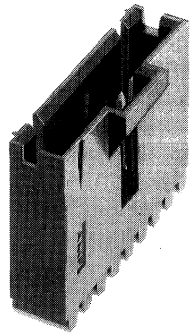


Typical Application of Panel Mount Pin Shroud and Mating AMPMODU Products

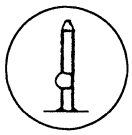
SOURCE: Catalog 65816

Headers, Shrouded Polarized/Latching, Single Row .100 [2.54] Centers

.025 [0.64] Square Straight Post (With or Without Holddown)



Mates with—Receptacle Assemblies (Polarized/Latching) and Receptacle Assemblies with Guide Ribs (Installed in Single Row Coupling Shroud)



Swaged Retention Tail

Note: Swaged retention tails in "Holddown" versions only. Retention tails are provided in a minimum of two locations per header assembly.

Posts—Copper alloy, plated as follows:

A—Duplex plated .000030 [0.00076] gold on contact area, .000050 [0.00127] min. tin-lead on solder area, with entire post underplated .000050 [0.00127] nickel

B—Duplex plated .000015 [0.00038] gold on contact area, .000050 [0.00127] min. tin-lead on solder area, with entire post underplated .000050 [0.00127] nickel

C—.000100 [0.00254] tin-lead over .000050 [0.00127] nickel on entire post

Note: 10 Pos. Housing Dim. (Typ.)— 1.100 [27.94] L x .200 [5.08] W x .535 [13.59] H

No. of Pos.	Header with Holddown			Header without Holddown		
	Plating A	Plating B	Plating C	Plating A	Plating B	Plating C
2	103908-1	103670-1	103669-1	103735-1	103638-1	103639-1
3	103908-2	103670-2	103669-2	103735-2	103638-2	103639-2
4	103908-3	103670-3	103669-3	103735-3	103638-3	103639-3
5	103908-4	103670-4	103669-4	103735-4	103638-4	103639-4
6	103908-5	103670-5	103669-5	103735-5	103638-5	103639-5
7	103908-6	103670-6	103669-6	103735-6	103638-6	103639-6
8	103908-7	103670-7	103669-7	103735-7	103638-7	103639-7
9	103908-8	103670-8	103669-8	103735-8	103638-8	103639-8
10	103908-9	103670-9	103669-9	103735-9	103638-9	103639-9
11	1-103908-0	1-103670-0	1-103669-0	1-103735-0	1-103638-0	1-103639-0
12	1-103908-1	1-103670-1	1-103669-1	1-103735-1	1-103638-1	1-103639-1
13	—	1-103670-2	1-103669-2	—	1-103638-2	1-103639-2
14	1-103908-3	1-103670-3	1-103669-3	1-103735-3	1-103638-3	1-103639-3
15	1-103908-4	1-103670-4	1-103669-4	—	1-103638-4	1-103639-4
16	—	1-103670-5	1-103669-5	—	1-103638-5	1-103639-5
17	1-103908-6	1-103670-6	1-103669-6	1-103735-6	—	1-103639-6
18	—	1-103670-7	—	—	1-103638-7	—
20	1-103908-9	1-103670-9	—	1-103735-9	1-103638-9	—
22	—	2-103670-1	—	—	2-103638-1	—
24	—	2-103670-3	—	—	2-103638-3	—
25	—	2-103670-4	—	—	2-103638-4	—

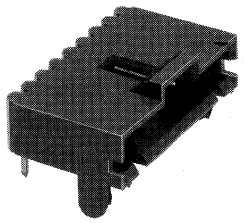
Note: Use Keying Tool **Part No. 91417-1** to remove post for keying.

SOURCE: Catalog 65816

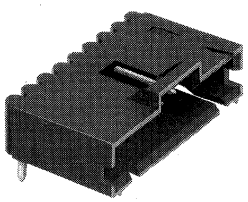
Specifications subject to change.
1-800-522-6752 Product Information Center/ AMP FAX Service
1-800-722-1111 Tooling/Technical Assistance Center

Headers, Shrouded Latching, Single Row .100 [2.54] Centers

.025 [0.64] Square Right-Angle Post



With Holddown



Without Holddown

Mates with—Receptacle Assemblies (Polarized/ Latching) and Receptacle Assemblies with Guide Ribs (Installed in Single Row Coupling Shroud)

Post—Copper alloy, plated as follows:

A—Duplex plated .000030 [0.00076] gold on contact area, .000050 [0.00127] min. tin-lead on solder area, with entire post underplated .000050 [0.00127] nickel

B—Duplex plated .000015 [0.00038] gold on contact area, .000050 [0.00127] min. tin-lead on solder area, with entire post underplated .000050 [0.00127] nickel

C—.000100 [0.00254] tin-lead over .000050 [0.00127] nickel on entire post

Note: 10 Pos. Housing Dim. (Typ.)— 1.100 [27.94] L x .535 [13.59] W x .200 [5.08] H

No. of Pos.	Header with Holddown			Header without Holddown		
	Plating A	Plating B	Plating C	Plating A	Plating B	Plating C
2	103904-1	103673-1	103672-1	103906-1	103635-1	103634-1
3	103904-2	103673-2	103672-2	103906-2	103635-2	103634-2
4	103904-3	103673-3	103672-3	103906-3	103635-3	103634-3
5	103904-4	103673-4	103672-4	103906-4	103635-4	103634-4
6	103904-5	103673-5	103672-5	103906-5	103635-5	103634-5
7	103904-6	103673-6	103672-6	103906-6	103635-6	103634-6
8	103904-7	103673-7	103672-7	103906-7	103635-7	103634-7
9	—	103673-8	—	—	103635-8	103634-8
10	103904-9	103673-9	103672-9	103906-9	103635-9	103634-9
11	—	1-103673-0	1-103672-0	1-103906-0	1-103635-0	1-103634-0
12	1-103904-1	1-103673-1	1-103672-1	1-103906-1	1-103635-1	1-103634-1
13	—	1-103673-2	—	—	1-103635-2	1-103634-2
14	1-103904-3	1-103673-3	—	1-103906-3	1-103635-3	1-103634-3
15	—	1-103673-4	—	—	1-103635-4	1-103634-4
16	—	1-103673-5	1-103672-5	—	1-103635-5	1-103634-5
17	—	1-103673-6	1-103672-6	1-103906-6	—	—
18	—	1-103673-7	1-103672-7	—	1-103635-7	—
20	1-103904-9	1-103673-9	—	1-103906-9	1-103635-9	—
21	—	2-103673-0	—	—	—	—
22	—	2-103673-1	—	—	—	—
23	—	2-103673-2	—	—	—	—
24	—	2-103673-3	—	—	2-103635-3	—
25	—	2-103673-4	—	—	2-103635-4	—

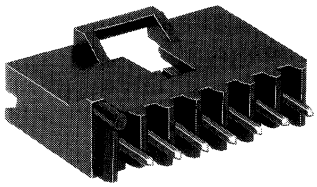
Note: Use Keying Tool **Part No. 91417-1** to remove post for keying.

Specifications subject to change.
1-800-522-6752 Product Information Center/ AMP FAX Service
1-800-722-1111 Tooling/Technical Assistance Center

Headers, Shrouded Latching, Single Row .100 [2.54] Centers

.025 [0.64] Square Straight Post (With Holddown and Pc Board Orientation)

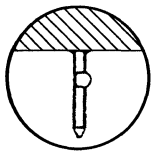
Posts—Copper alloy, plated .000100-.000200 [0.00254-0.00508] tin-lead over .000050 [0.00127] nickel on entire post



Mates with—Receptacle Assemblies (Polarized/Latching) and Receptacle Assemblies with Guide Ribs (Installed in Single Row Coupling Shroud)

Note: 5 Pos. Housing Dim. (Typ.)— .600 [15.24] L x .260 [6.60] W x .535 [13.59] H

No. of Pos.	Latching Header
2	104450-1
3	104450-2
4	104450-3
5	104450-4
6	104450-5
7	104450-6
8	104450-7
9	104450-8
10	104450-9



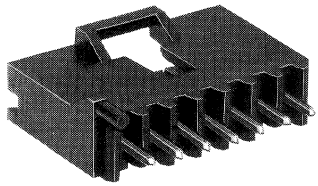
Swaged Retention Tail

Note: Swaged retention tails are provided in a minimum of two locations per header.

Headers, Shrouded High-Temp, Polarized/Latching, Single Row .100 [2.54] Centers

.025 [0.64] Square Straight Post (With Holddown and Pc Board Orientation)

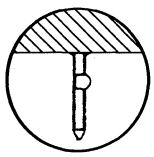
Posts—Copper alloy, plated .000100-.000200 [0.00254-0.00508] tin-lead over .000050 [0.00127] nickel on entire post



Mates with—Receptacle Assemblies (Polarized/Latching) and Receptacle Assemblies with Guide Ribs (Installed in Single Row Coupling Shroud)

Note: 5 Pos. Housing Dim. (Typ.)— .600 [15.24] L x .200 [5.08] W x .535 [13.59] H

No. of Pos.	Polarized/Latching Header, High Temp.
2	104809-1
3	104809-2
4	104809-3
5	104809-4
6	104809-5
7	104809-6
8	104809-7
9	104809-8
10	104809-9
11	1-104809-0
12	1-104809-1



Swaged Retention Tail

Note: Swaged retention tails are provided in a minimum of two locations per header.

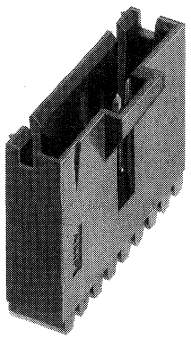
SOURCE: Catalog 65816

Specifications subject to change.
1-800-522-6752 Product Information Center/ AMP FAX Service
1-800-722-1111 Tooling/Technical Assistance Center

Headers, Shrouded High-Temp, Polarized/Latching (Thru-Hole, SMT Compatible) Single Row .100 [2.54] Centers

.025 [0.64] Square Straight Post (With or Without Holddown)

Note: 10 Pos. Housing Dim. (Typ.)—1.100 [27.94] L x .200 [5.08] W x .535 [13.59] H

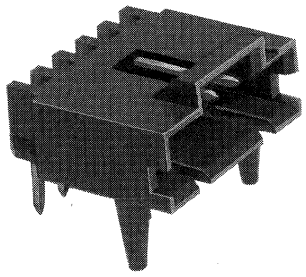


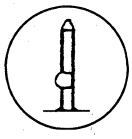
Mates with— Receptacle Assemblies (Polarized/Latching) and Receptacle Assemblies with Guide Ribs (Installed in Single Row Coupling Shroud)

Posts—Copper alloy, duplex plated .000015 [0.00038] gold on contact area, .000100-.000200 [0.00254-0.00508] matte tin-lead on solder tail, with entire post underplated .000050 [0.00127] nickel

.025 [0.64] Square Right-Angle Post (With Holddown)

Note: 10 Pos. Housing Dim. (Typ.)—1.100 [27.94] L x .535 [13.59] W x .260 [6.67] H





Swaged Retention Tail

Note: Swaged retention tails in "Holddown" versions only. Retention tails are provided in a minimum of two locations per header.

No. of Pos.	Straight Header with Holddown	Straight Header without Holddown	Right-Angle Header with Holddown
2	104362-1	104363-1	104361-1
3	104362-2	104363-2	104361-2
4	104362-3	104363-3	104361-3
5	104362-4	104363-4	104361-4
6	104362-5	104363-5	104361-5
7	104362-6	104363-6	104361-6
8	104362-7	104363-7	104361-7
9	—	104363-8	104361-8
10	104362-9	104363-9	104361-9
12	1-104362-1	1-104363-1	1-104361-1
13	1-104362-2	—	—
15	1-104362-4	—	—
17	—	—	1-104361-6
18	1-104362-7	—	—
24	2-104362-3	2-104363-3	2-104361-3

Note: Use Keying Tool **Part No. 91417-1** to remove post for keying.

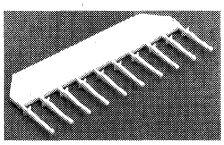
Interchangeable Contacts Wire Crimp (Snap-In) Receptacles

C—Duplex plated .000030 [0.00076] gold inlay on contact area, tin-lead in crimp area, with entire contact underplated .000050 [0.00127] nickel

D—Duplex plated .000015 [0.00038] gold inlay on contact area, tin-lead in crimp area, with entire contact underplated .000050 [0.00127] nickel

F—.000100 [0.00254] min. bright tin-lead over .000030 [0.00076] nickel on entire contact

Keying Plug Part No. 104072-1



Ten keying plugs are supplied per strip. Order quantity reflects the number of strips required.

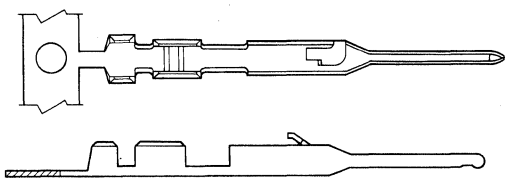
Wire Size Range AWG	Wire Size Range [mm²]	Ins. Dia. Range	Finish	Contact Part No. (Standard Pressure) Strip Form	Contact Part No. (Standard Pressure) Loose Piece	Quick-Change Applicator No. for AMP-O-LECTRIC Machine	Applicator No. for AMP-O-MATIC Stripper/Crimper Machine	Hand Tool
32-28	0.03-0.08	**0.25-.054** 0.64-1.37	Plating C	103358-5	103358-6	466723-1	466952-1	58342-2
			Plating D	103358-3	–	466723-1	466952-1	58342-2
26-22	0.14-0.32	**.036-.054** 0.91-1.37	Plating C	530151-7	530151-8	466819-2	466943-1	58342-1
			Plating D	530151-5	530151-6	466819-2	466943-1	58342-1
			Plating F	530151-9	1-530151-0	466819-2	466943-1	58342-1

Pins .025 [.064] Dia.

A—Duplex plated .000030 [0.00076] gold on contact area, .000050 [0.00127] min. tin-lead in crimp area, with entire contact underplated .000050 [0.00127] nickel

B—Duplex plated .000015 [0.00038] gold on contact area, .000050 [0.00127] min. tin-lead in crimp area, with entire contact underplated .000050 [0.00127] nickel

E—.000100 [0.00254] min. bright tin-lead over .000050 [0.00127] nickel on entire contact



Wire Size Range AWG	Wire Size Range mm²	Ins. Dia. Range	Finish	Contact Part No. (Standard Pressure) Strip Form	Contact Part No. (Standard Pressure) Loose Piece	Quick-Change Applicator No. for AMP-O-LECTRIC Machine	Hand Tool
32-28	0.03-0.08	**.025-.054** 0.64-1.37	Plating A	104506-6	104506-7	567240-1	58342-2
			Plating B	104506-4	104506-5	567240-1	58342-2
			Plating E	104506-2	104506-3	567240-1	58342-2
26-22	0.14-0.32	**.036-.054** 0.91-1.37	Plating A	104505-6	104505-7	567239-2	58342-1
			Plating B	104505-4	104505-5	567239-2	58342-1
			Plating E	104505-2	104505-3	567239-2	58342-1

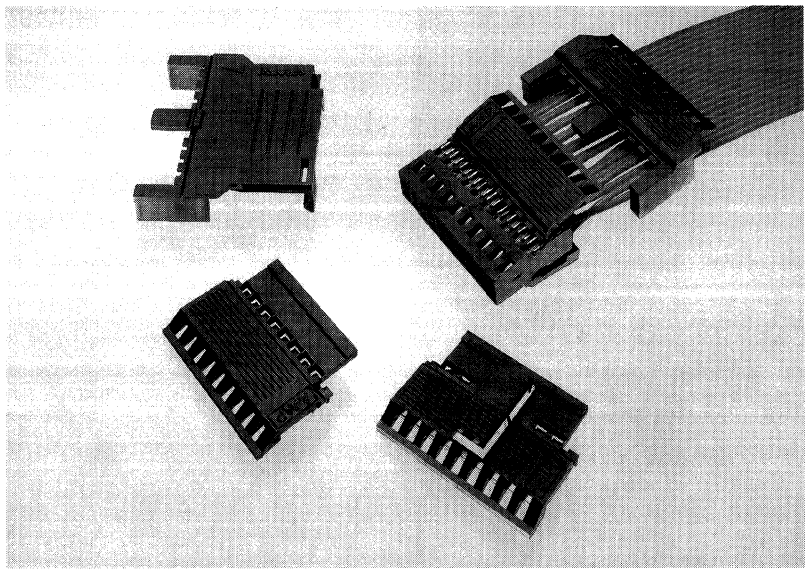
SOURCE: Catalog 65816

MT and Shielded MT Interconnection System (AMPMODU)

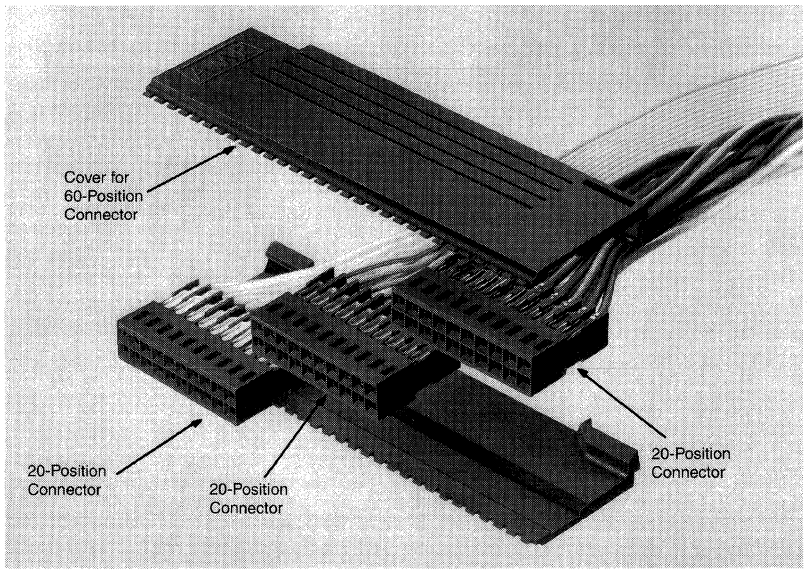
.100 x .100 [2.54 x 2.54] Centers

Product Facts

- Full line of mass termination tooling offers lowest installed cost for all production needs
- Dual cantilever beams with anti-overstress features provide redundant contact of mating post and limit beam deflection, preventing permanent deformation
- Redundant insulation displacement slots assure maximum reliability
- Integral wire strain relief on contact prevents wire motion from being transmitted to wire termination areas
- Built-in contact post stop protects terminated wire from being disturbed by over-insertion of mating post, prevents wire from entering contact area and positively limits mating connector depth...thus eliminating the possibility of a connector disturbing a wire-wrapped post
- Complete serviceability with replacement contacts
- Cover styles include low profile (polarized, non-polarized, latching and ejection) and standard profile (hermaphroditic and ejection)
- Connector housings may be stacked end-to-end within one pair of covers. All varieties of covers in this catalog are suitable for multiple housing stacking applications similar to the example illustrated in the photograph to the right
- Add-on shielding kits (straight and right-angle exit) for receptacle connectors
- Recognized under the Component Program of Underwriters Laboratories Inc., File No. E28476
- Certified by Canadian Standards Association, File No. LR 7189



Low Profile/Standard Profile Cover Styles



Typical Application of End-to-End Stacking

The AMPMODU MT and Shielded MT Interconnection System features double row connector housings preloaded with insulation displacement contacts on .100 x .100 [2.54 x 2.54] centers. They are available in a selected range of popular sizes—6 through 64 positions. Connectors offer termination capabilities for discrete wire in sizes 30-26 AWG [0.05-0.15 mm^2], 26-22 AWG [0.3-0.6 mm^2] and 22-20 AWG [0.3-0.6 mm^2], and for jacketed cable as well as bonded ribbon cable with conductors separated. Connector housings are designed for end-to-end stacking within one cover (see photo above).

The insulation displacement contact has two identical slot systems; each displaces the insulation, makes contact with the conductor and provides the residual force required for a reliable connection. A wire strain relief (insulation crimp) prevents wires from being pulled up and out of the termination area, and a post stop is incorporated to prevent the wires from entering the box area as well as protecting the terminated wires from accidental movement caused by post insertion.

To reduce EMI/ESD (electromagnetic interference/electrostatic discharge) at the I/O interface, add-on metal shields are available.

SOURCE: Catalog 65816

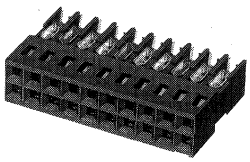
Specifications subject to change.

1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

Double Row MT Receptacle Assemblies (.100 x .100 [2.54 x 2.54] Centers)

Housings Preloaded with Standard Pressure Contacts

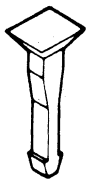


Mates with—Pin Headers (Mating Post Length–.222-.273 [5.64-6.94] max.)

Note: 30 Pos. Housing Dim. (Typ.)— 1.500 [38.10] L x .600 [15.24] W x .240 [6.10] H

No. of Pos.	Part Numbers (Stamped) Wire Size 30-26 AWG [0.05-0.15 mm²]	26-22 AWG [0.12-0.3 mm²]	22-20 AWG [0.3-0.6 mm²]	Unloaded Housings
6	102393-1	102398-1	—	102394-1
8	102393-2	102398-2	102448-2	102394-2
10	102393-3	102398-3	102448-3	102394-3
12	102393-4	102398-4	102448-4	102394-4
14	102393-5	102398-5	102448-5	102394-5
16	102393-6	102398-6	102448-6	102394-6
18	102393-7	102398-7	102448-7	102394-7
20	102393-8	102398-8	102448-8	102394-8
22	—	102398-9	—	102394-9
24	1-102393-0	1-102398-0	1-102448-0	1-102394-0
26	1-102393-1	1-102398-1	1-102448-1	1-102394-1
28	1-102393-2	1-102398-2	—	1-102394-2
30	1-102393-3	1-102398-3	1-102448-3	1-102394-3
32	1-102393-4	—	—	1-102394-4
34	1-102393-5	1-102398-5	1-102448-5	1-102394-5
40	1-102393-8	1-102398-8	1-102448-8	1-102394-8
50	2-102393-3	2-102398-3	2-102448-3	2-102394-3
60	2-102393-8	2-102398-8	—	2-102394-8
64	—	3-102398-0	—	3-102394-0

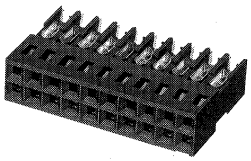
Note: Contact Extraction/Lance Reset Tool—**Part No. 843477-3.**



Part No. 86286-1
(Plugs into receptacle contact)

Part No. 87077-2
(Plugs directly into housing)

Housings Preloaded with High Pressure Contacts

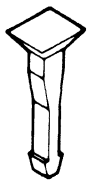


Mates with—Pin Headers (Mating Post Length—.200-.273 [5.08-6.94] max.)

Note: 10 Pos. Housing Dim. (Typ.)— .500 [12.70] L x .600 [15.24] W x .240 [6.10] H

No. of Pos.	Part Numbers (Stamped) Wire Size 30-26 AWG [0.05-0.15 mm²]	26-22 AWG [0.12-0.3 mm²]	22-20 AWG [0.3-0.6 mm²]
6	102693-1	102694-1	102695-1
8	102693-2	102694-2	102695-2
10	102693-3	102694-3	—
12	—	102694-4	—
14	—	102694-5	—
16	—	102694-6	—
20	—	102694-8	—

Note: Contact Extraction/Lance Reset Tool—**Part No. 843477-3.**



Part No. 86286-1
(Plugs into receptacle contact)

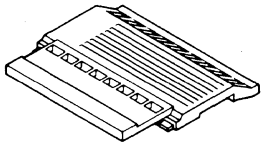
Part No. 87077-2
(Plugs directly into housing)

SOURCE: Catalog 65816

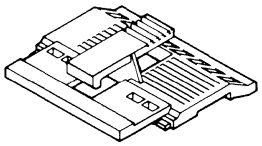
Low Profile Covers for Double Row MT Receptacle Assemblies

Front Covers

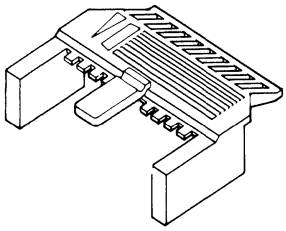
A - Polarizing Cover
(Mates with AMPMODU 4-sided shrouded headers. See AMP Catalog 65816.)



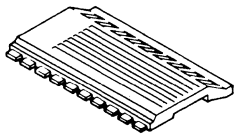
B - Latching Cover
(Mates with AMPMODU 4-sided shrouded headers with extraction slot. See AMP Catalog 65816.)



C - Ejection Cover
(Mates with AMP-LATCH universal ejection style pin headers equipped with latching ears, Part No. 102185-2 (with push tabs) or Part No. 102312-2 (without push tabs), see AMP Catalog 82012; or AMPMODU low profile shrouded headers, see AMP Catalog 65816.)

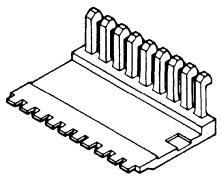


D - Non-Polarizing Cover
(Designed for use with shielded connectors, page 3150; or for non-polarizing applications.)

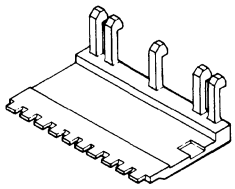


Back Covers

E - For Shielding and Non-Shielding Applications
(For use with any low profile cover)

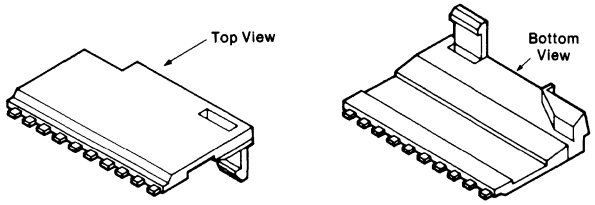


F - For Shielding Applications
(For use with Non-Polarizing Cover only)

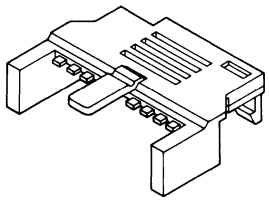


Standard Profile Covers for Double Row MT Receptacle Assemblies

G - Hermaphroditic Cover
(Two hermaphroditic covers can be used or one hermaphroditic cover can be used with an H Ejection Cover.)



H - Ejection Cover
(Mates with AMP-LATCH universal ejection style pin headers equipped with latching ears, Part No. 102185-2 (with push tabs) or Part No. 102312-2 (without push tabs), see AMP Catalog 82012; or AMPMODU low profile shrouded headers, see AMP Catalog 65816. This cover is used with one Hermaphroditic Cover G.)



No. of Pos.	Low Profile Covers						Standard Profile Covers	
	Front Covers				Back Covers			
	A Polarizing	B Latching	C Ejection	D Non-Polarizing Applications	E Shielding and Non-Shielding	F Shielding Applications	G Hermaphroditic	H Ejection
6	102540-1	—	—	102541-1	102536-1	—	102396-1	—
8	102540-2	—	—	102541-2	102536-2	—	102396-2	—
10	102540-3	—	102537-3	102541-3	102536-3	—	102396-3	—
12	102540-4	102681-1	—	102541-4	102536-4	—	102396-4	—
14	—	102681-2	102537-5	102541-5	102536-5	—	102396-5	—
16	102540-6	102681-3	102537-6	102541-6	102536-6	—	102396-6	—
18	—	102681-4	—	102541-7	102536-7	102823-1	102396-7	—
20	102540-8	102681-5	102537-8	102541-8	102536-8	102823-4	102396-8	103268-6
22	—	—	—	102541-9	102536-9	—	—	—
24	1-102540-0	102681-7	1-102537-0	1-102541-0	1-102536-0	—	1-102396-0	—
26	—	102681-8	1-102537-1	1-102541-1	1-102536-1	1-102823-0	1-102396-1	—
28	—	—	—	1-102541-2	1-102536-2	—	1-102396-2	—
30	1-102540-3	1-102681-0	1-102537-3	1-102541-3	1-102536-3	1-102823-2	1-102396-3	—
32	—	—	—	—	—	1-102823-3	1-102396-4	—
34	—	1-102681-2	1-102537-5	1-102541-5	1-102536-5	1-102823-4	1-102396-5	1-103268-0
40	—	1-102681-5	1-102537-8	1-102541-8	1-102536-8	102823-2	1-102396-8	—
50	—	2-102681-0	2-102537-3	2-102541-3	2-102536-3	102823-3	2-102396-3	1-103268-3
60	—	—	2-102537-8	2-102541-8	2-102536-8	2-102823-5	—	—
64	—	—	3-102537-0	3-102541-0	3-102536-0	—	3-102396-0	—

SOURCE: Catalog 65816

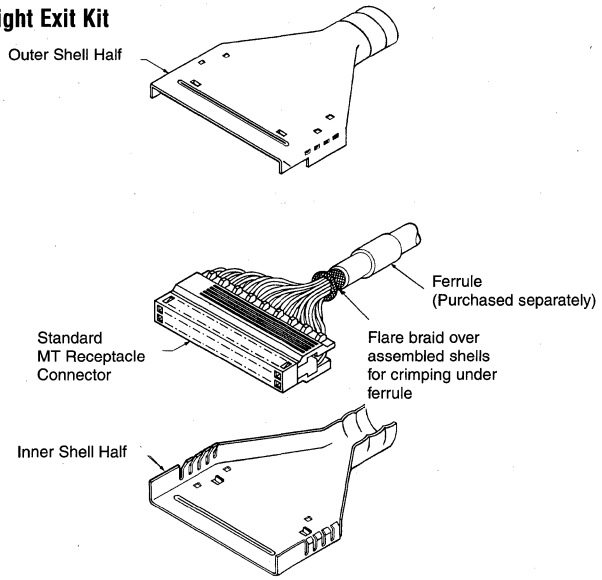
Specifications subject to change.

1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

Two-Piece Shielding Kits for Double Row MT Receptacle Assemblies

Straight Exit Kit

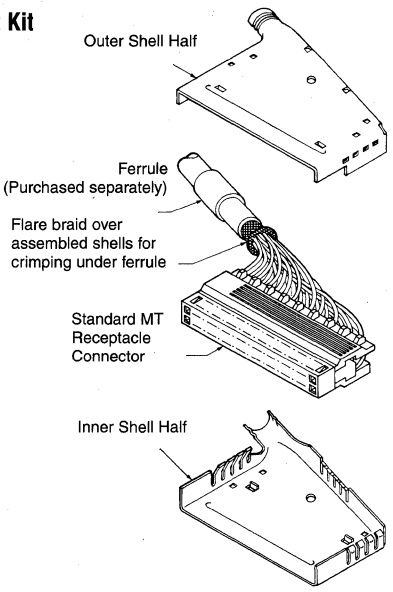


Note: 26 Pos. Shell Dim. (Typ.)— 1.410 [35.81] L x 1.925 [48.90] W x .326 [8.28] H

No. of Pos.	Kit Part Numbers	
	Use without Latching Accessories	Use with Latching Accessories
6	103125-8	—
10	103125-2	—
26	103125-9	—
50	103125-3	103844-4

Note: Match shield size to number of connector positions.

Right-Angle Exit Kit



Note: 18 Pos. Shell Dim. (Typ.)— 1.010 [25.65] L x 1.120 [28.45] W x .326 [8.28] H

No. of Pos.	Kit Part Numbers	
	Use without Latching Accessories	Use with Latching Accessories
18	103126-1	—
50	103126-4	103845-4
60	103126-7	—

Notes: 1. Match shield size to number of connector positions.
2. Hole is provided in 50- and 60-position cable shields for application of optional cable tie pull ring after assembly.

Ferrules for Shielding Kits

No. of Pos.	Shield Kit No. (Ref.)		Cable Dia. Range	Ferrule Part No.	Applicator Die Assembly Kit No.	Hand Tool Die Sets		
	Straight	Right-Angle				Insulation	Braid	Spacer
6	103125-8	—	**.170-.195** [4.32-4.95]	1-102903-8	—	1-527116-9	527116-4	527116-9
			.200-.250 [5.08-6.35]	102985-3	812665-1	1-527116-8	527116-4	527116-9
10	103125-2	—	**.190-.240** [4.83-6.1]	1-102903-5	—	1-527116-7	527116-3	—
			.250-.300 [6.35-7.62]	102903-9	812665-5	1-527116-6	527116-3	—
18	—	103126-1	**.310-.360** [7.87-9.14]	102903-3	812665-4	1-527116-5	527116-3	—
			.370-.420 [9.40-10.67]	102789-3	—	1-527116-4	527116-3	—
26	103125-9	103126-6	**.320-.370** [8.13-9.40]	2-102903-4	812665-9	1-527116-3	527116-2	—
			.380-.420 [9.65-10.67]	2-102903-1	—	1-527116-2	527116-2	—
			.430-.460 [10.92-11.68]	102789-6	—	1-527116-1	527116-2	—
50	103125-3	103126-4	**.380-.420** [9.65-10.67]	3-102903-0	1-812665-5	1-527116-2	527116-1	—
			.430-.460 [10.92-11.68]	2-102903-7	—	1-527116-1	527116-1	—
	103844-4	103845-4	**.470-.520** [11.94-13.21]	102789-9	1-812665-3	1-527116-0	527116-1	—
60	—	103126-7	**.470-.520** [11.94-13.21]	3-102903-6	1-812665-8	—	—	—
			.500-.545 [12.7-13.64]	3-102903-3	1-812665-7	—	—	—
			.550-.600 [13.97-15.24]	1-102789-2	1-812665-6	—	—	—

Notes: 1. Ferrules are used with shielding kits shown above, and are purchased separately.
2. Individual anvils and crimpers also may be purchased separately.

Hand Tool Part No. 91410-1

SOURCE: Catalog 65816

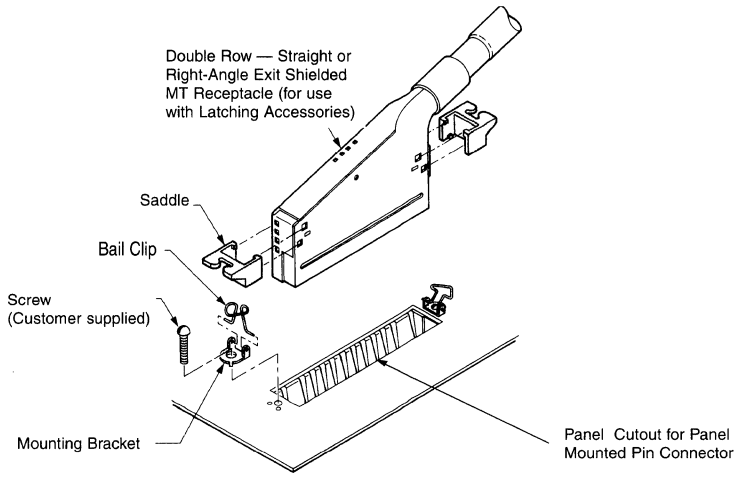
Bail Clip Latching Accessories for Double Row MT Shielded Receptacle Assemblies

Bail Clip
Part No. 552559-1*

Mounting Bracket
Part No. 552101-1*

Saddle
Part No. 103495-1*

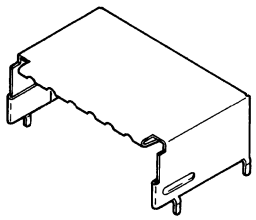
* 2 of each part required.

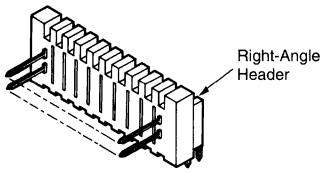


Shielded Headers for use with Shielded Receptacle Assemblies

AMPMODU Right-Angle Headers, PC Board Mounted

Mates with—Double Row MT Receptacle Assemblies with Shielding Hardware

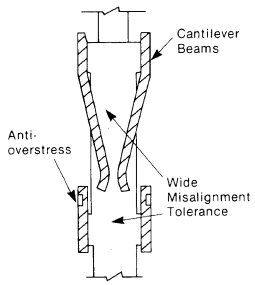




No. of Pos.	Header Part Nos.	Shield Part Nos.	Header Kit Part Nos.
6	102792-6	102991-1	102989-1
8	102792-8	102991-2	102989-2
10	102792-1	102791-2	102893-5
16	102792-7	102791-3	102893-6
20	102792-5	1-102791-0	102893-2
26	102792-9	102791-1	102893-7
50	102792-2	102791-8	102893-4

Note: Each kit contains one right-angle header and one shield of appropriate size.

AMPMODU MT Replacement Receptacle Contacts

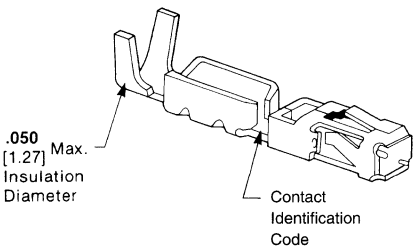


The AMPMODU receptacle cross-section is primarily rectangular, with rounded corners. Two integral cantilever beams contact the mating square male posts. Deflection of these spring members is limited by anti-overstress and excessive perm-anent deformation is prevented. This feature allows a wide range for tolerance of misalignment of mating contacts.

Insulation Displacement Contacts

Material and Finish

Copper alloy, duplex plated .000030 [0.00076] gold on contact area, .000100-.000200 [0.00254-0.00508] tin-lead in crimp area, with entire contact underplated .000050 [0.000127] nickel.



Wire Range		Standard Pressure Receptacle		High Pressure Receptacle	
AWG	mm²	Contact Ident. Code	Part Number	Contact Ident. Code	Part Number
30-26	0.05-0.15	1	102395-3	4	102641-3
26-22	0.12-0.3	2	102399-3	5	102642-3
22-20	0.3-0.6	3	102449-3	—	—

Note: Contact Extraction/Lance Reset Tool—**Part No. 843477-3**.

The configuration of the receptacle completely encloses the spring members preventing damage during handling and assembly, and makes the system compatible with automatic application techniques.

SOURCE: Catalog 65816

Specifications subject to change.

1-800-522-6752
Product Information Center/ AMP FAX Service

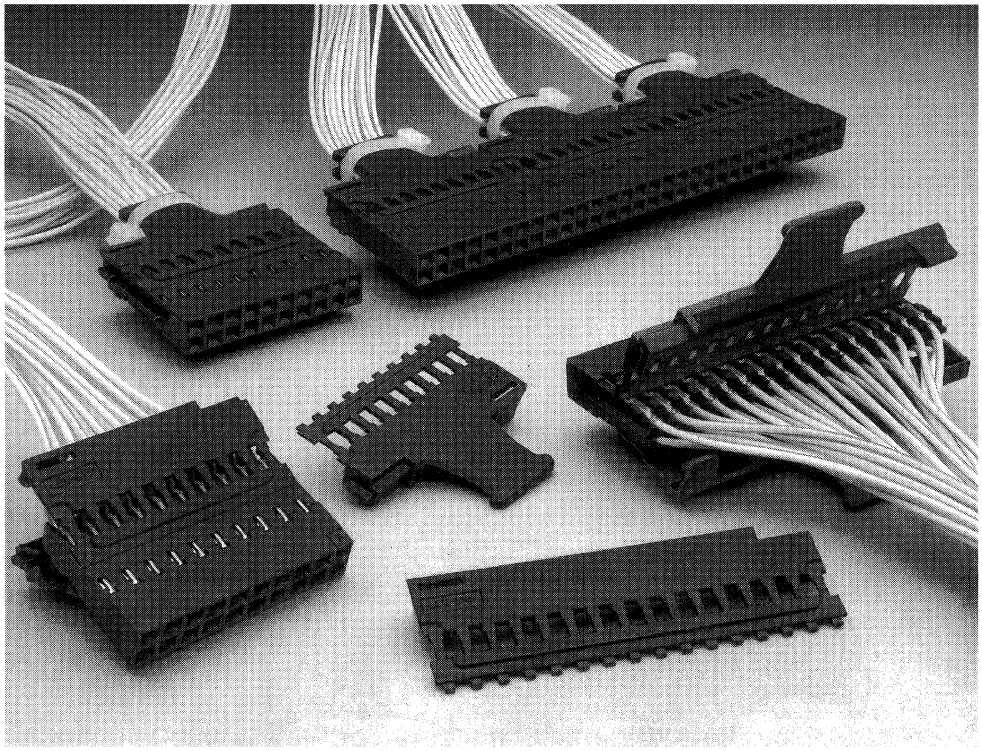
1-800-722-1111
Tooling/Technical Assistance Center

AMPMODU Level V IDC Connectors,

.125 x .125 [3.18 x 3.18] Centers

Product Facts

- **Termination of discrete wire sizes 26-22 AWG [0.12-0.3 mm²], as well as jacketed cable and bonded ribbon cable (conductors separated)**
- **Connectors stackable end-to-end and side-to-side on .125 [3.18] centers**
- **Connectors preloaded with insulation displacement receptacle contacts**
- **Contact design employs dual cantilever beams, redundant insulation displacement slots, built-in post stop and wire support crimp**
- **Copper alloy contacts are duplex plated**
- **Snap-on covers with or without cable tie paddles**
- **Full line of mass termination tooling offers lower installed costs for all production needs**
- **Recognized under the Component Program of Underwriters Laboratories Inc., File No. E28476**

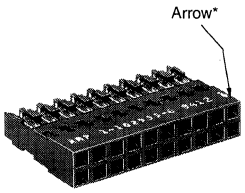


AMPMODU Level V IDC connectors provide cost effective discrete wire conections that are compatible with today's telecommunications packaging techniques. These AMP connectors are designed to mate with .025 [0.64] sq. posts on .125 x .125 [3.18 x 3.18] centers and are comprised of double-row housings preloaded with insulation displacement receptacle contacts, snap-on hermaphroditic covers, and a full line of mass termination tooling to meet virtually every production need. For modular flexibility, connectors can be stacked end-to-end or side-to-side, maintaining a .125 x .125 [3.18 x 3.18] centerline spacing. Covers also can be furnished with and without a cable tie paddle. The covers are simply snapped onto a housing after the connector has been terminated.

The receptacle contacts feature AMP's insulation displacement crimp technique for achieving top quality, low cost terminations. These contacts employ dual cantilever beams for redundant interface with a mating post, an integral post stop to limit post mating depth and protect the crimp termination, and a wire support (strain relief) crimp to prevent accidental wire pullout. The contacts are made of high conductivity copper alloy and are duplex plated.

Receptacle Assemblies, Double Row .125 x .125 [3.18 x 3.18] Centers

Housings Preloaded with Insulation Displacement Crimp Receptacle Contacts



Mates with—.025 [0.64] square posts

Receptacle Assemblies can be stacked end-to-end and side-to-side on .125 x .125 [3.18 x 3.18] centers.

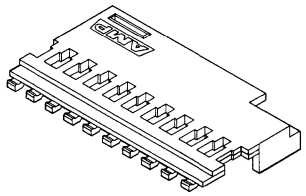
Note: 20 Pos. Housing Dim. (Typ.)—1.243 [31.57] L x .800 [20.32] W x .243 [6.17] H

Wire Size AWG/mm²	Ins. Dia. Max.	No. of Pos.	Part No. (Stamped¹)
26-22 [0.12-0.3]	.050 [1.27]	8	102935-4
		10	102935-6
		12	102935-8
		16	1-102935-2
		20	1-102935-6
		24	1-102935-9
		32	2-102935-8
		40	3-102935-6

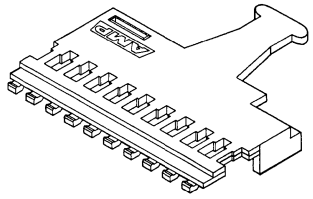
* Arrow ink stamped on housing to show polarization.
¹ White ink stamped, one side—8-position with arrow; 10-position with AMP part no. and arrow; 12- thru 40-position with AMP part no., date code and arrow.
Note: Other sizes can be made available upon request.

Hermaphroditic Covers for Level V IDC Receptacle Assemblies, Double Row .125 x .125 [3.18 x 3.18] Centers

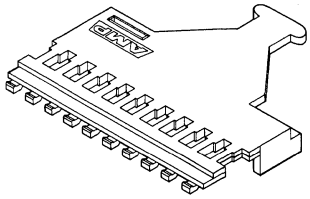
All covers illustrated can be used on the Double Row Level V IDC Housing Assemblies



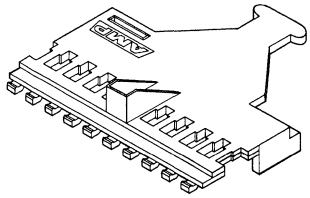
Cover 103056 without Cable Tie Paddle



Cover 103058 with Cable Tie Paddle



Cover 103349 with Wide Cable Tie Paddle



Cover 103350 Polarized, with Wide Cable Tie Paddle

No. of Pos. (Housing Size)	Cover Part No. without Cable Tie Paddle	with Cable Tie Paddle	with Wide Cable Tie Paddle	Polarized, with Wide Cable Tie Paddle
6	103056-1	103058-1	—	—
8	103056-2	—	103349-4	103350-4
10	—	103058-3	—	—
12	103056-4	103058-4	—	—
16	—	—	103349-1	103350-1
20	—	—	103349-5	103350-5
24	1-103056-0	—	—	—
32	—	—	103349-2	103350-2
64	See Page 3154 for Double Cable Tie Paddle Versions.			

Note: Two hermaphroditic covers of any style can be installed on a double row housing.

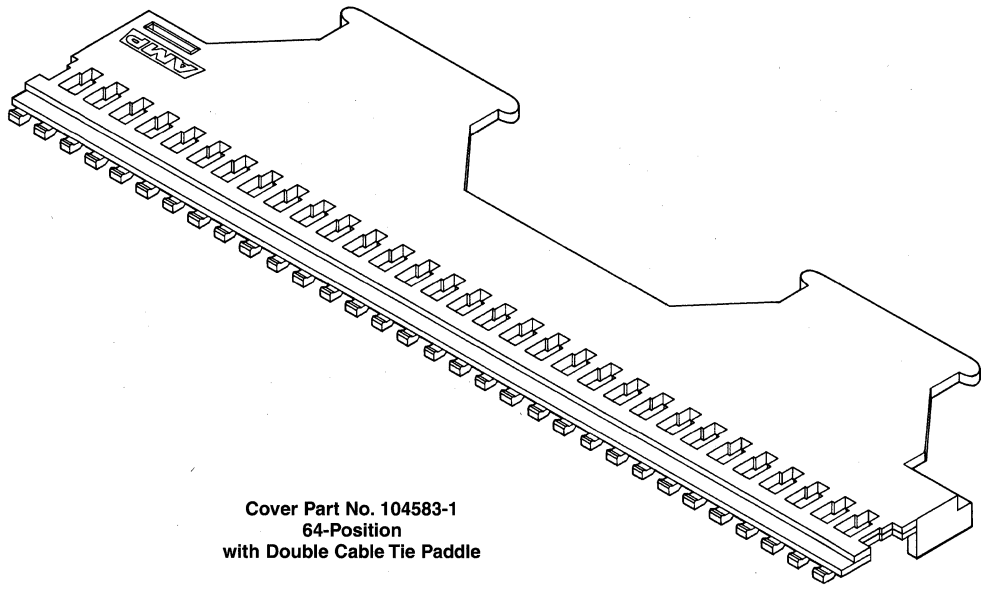
SOURCE: Catalog 65816

Specifications subject to change.

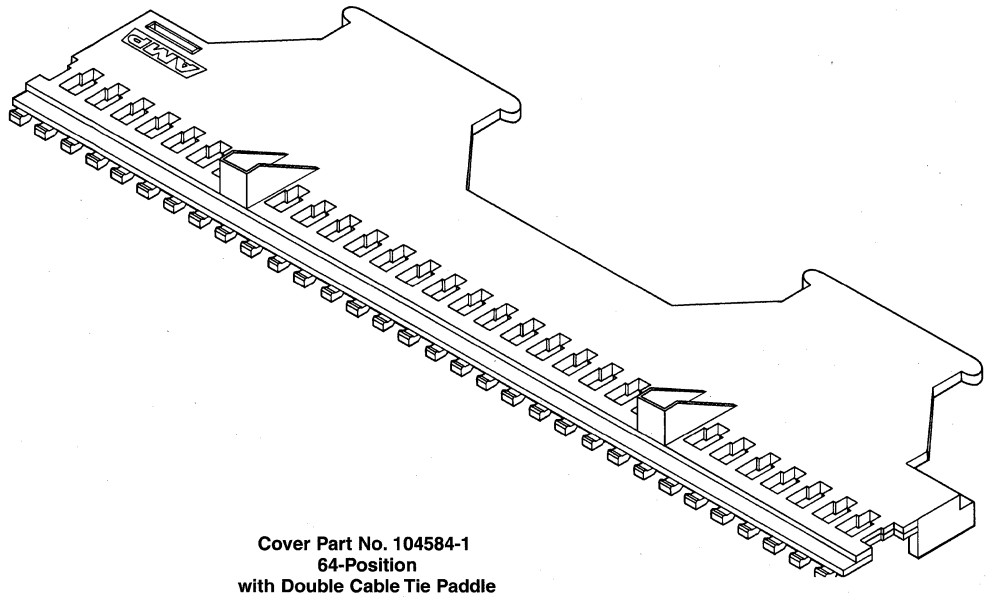
1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

Hermaphroditic Covers for Level V IDC Receptacle Assemblies, Double Row .125 x .125 [3.18 x 3.18] Centers
(Continued)



Cover Part No. 104583-1
64-Position
with Double Cable Tie Paddle

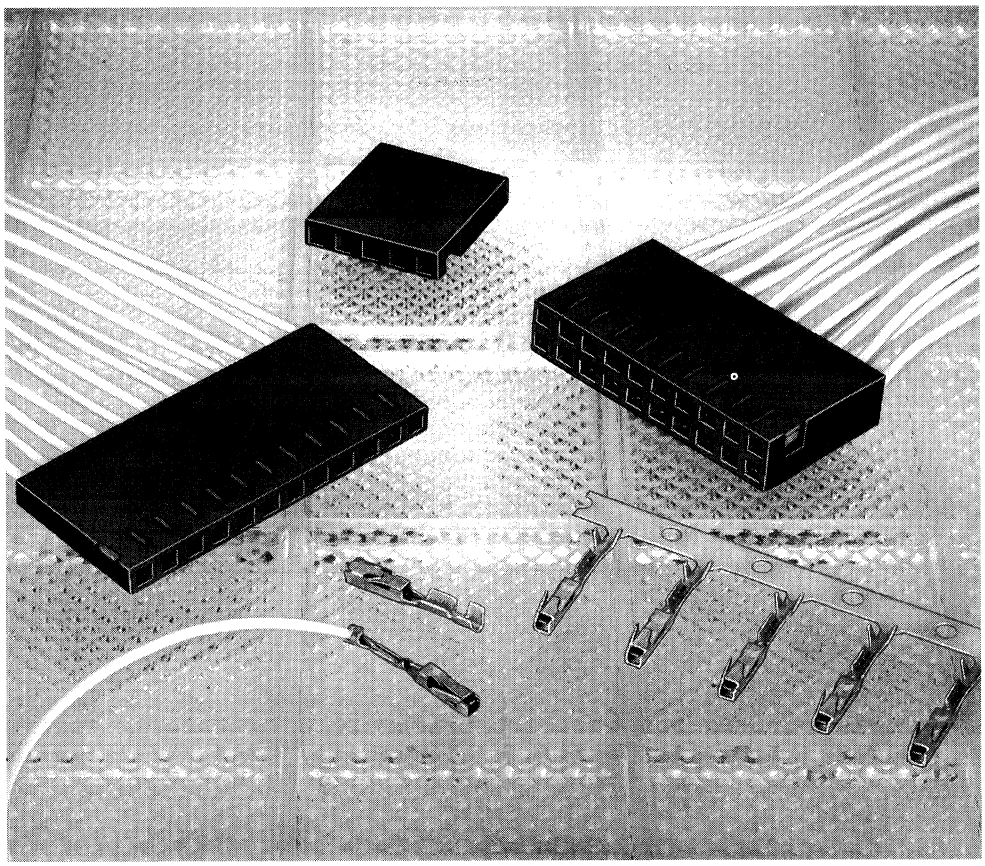


Cover Part No. 104584-1
64-Position
with Double Cable Tie Paddle
and Polarization

AMP Standard Tandem Spring and Mini-Tandem Spring Receptacle Contacts

Product Facts

- **Individual contacts mate with .025 [0.64] sq. posts, .125 [3.18] long**
- **Crimp snap-in contacts accept 32-22 AWG [0.03-0.32 mm²] wire**
- **Retention latch provides for positive installation**
- **No insertion tool required**
- **High durability design provides long life**
- **Available with .000015 [0.00038] or .000030 [0.00076] thick gold inlay in contact areas, or bright tin plated**
- **Closed-entry housings**
- **Standard contact box size: .060 x .068 [1.52 x 1.73]**
- **Mini-contact box size: .060 [1.52] sq.**
- **Mini-Tandem Spring Housings can be stacked on .100 [2.54] centers in either direction**
- **Mini-Tandem Spring Housings are Recognized under the Component Program of Underwriters Laboratories Inc., File No. E28476**



AMP Tandem Spring Receptacle Contacts are designed to mate with .025 [0.64] square posts. When used individually, they will mate with posts as short as .125 [3.18] and when used in a housing, they will mate with .140 [3.55] long posts. These versatile contacts may be used for interconnecting posted pc panels, I/O wiring and cross-connecting pin arrays.

The receptacle contact's box configuration provides long contact life with controlled contact mating forces which minimize wear. An external retention spring facilitates quick assembly and assures firm seating in a contact housing.

Standard Tandem Spring Receptacle Contacts may be used for ganged connections in AMPMODU Mod. IV closed-entry housings having single- or double-row configurations and a centerline spacing as close as .100 [2.54]. Contacts also can be used in single-row AMPMODU MTE housings, or can be used as replacement contacts.

Mini-Tandem Spring Receptacle Contacts are used in single- or double-row housings with .100 [2.54] centerline spacing. Single-row housings can be converted into double-row connectors on .100 x .200 [2.54 x 5.08] centers with the use of stacking clips.

Mini-Tandem Spring Housings can be stacked side-by-side or end-to-end on .100 [2.54] centers.

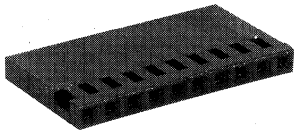
SOURCE: Catalog 65816

Specifications subject to change.

1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

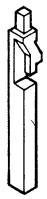
Mini-Tandem Spring Housings, Single Row
.100 [2.54] Centers



Note: 12 Pos. Housing Dim. (Typ.)—1.200 [30.48] L x .550 [13.97] W x .100 [2.54] H

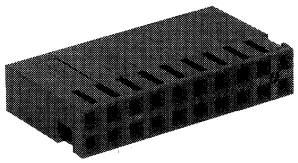
No. of Positions	Housing Part No.
2	530554-1
3	530554-2
4	530554-3
5	530554-4
7	530554-6
8	530554-7
9	530554-8
10	530554-9
12	1-530554-1
16	1-530554-5
18	1-530554-7
20	1-530554-9
22	2-530554-1

Notes: 1. Minimum mating post length is .140 [3.55].
2. Use Extraction Tool **Part No. 843477-5** to remove receptacle contacts.



Keying Plug
(Plugs directly into housing)
Part No. 531226-1

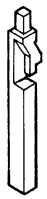
Mini-Tandem Spring Housings, Double Row
.100 x .100 [2.54 x 2.54] Centers



Note: 12 Pos. Housing Dim. (Typ.)—.600 [15.24] L x .550 [13.97] W x .200 [5.08] H

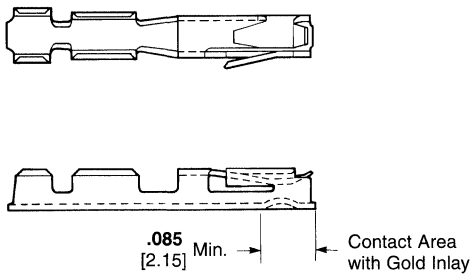
No. of Positions	Housing Part No.
4	530902-5
6	530902-1
8	530902-6
10	530902-2
12	2-530902-0
16	3-530902-0
20	530902-8

Notes: 1. Minimum mating post length is .140 [3.55].
2. Use Extraction Tool **Part No. 843477-5** to remove receptacle contacts.



Keying Plug
(Plugs directly into housing)
Part No. 531226-1

Mini-Tandem Spring Receptacle Contacts



Material and Finish

Phosphor bronze, plated as follows:

Plating A—Duplex plated .000030 [0.00076] gold inlay on contact area, tin in crimp area, with entire contact underplated .000050 [0.00127] nickel

Plating B—Duplex plated .000015 [0.00038] gold inlay on contact area, tin in crimp area, with entire contact underplated .000050 [0.00127] nickel

Plating C—.000100 [0.00254] min. bright tin over .000030 [0.00076] nickel on entire contact

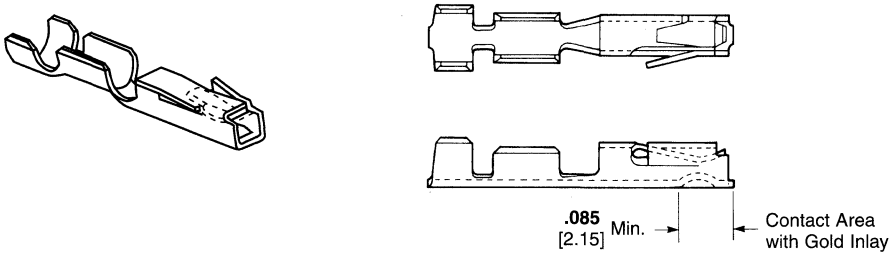
Mates with—.025 [0.64] sq. posts, .125 [3.18] long

Wire Range AWG	Wire Range mm²	Ins. Dia. Range	Finish	Contact Part Nos. Standard Pressure Strip Form	Contact Part Nos. Standard Pressure Loose Piece	Contact Part Nos. High Pressure Strip Form	Contact Part Nos. High Pressure Loose Piece	Miniature Applicator No. for AMP-O-LECTRIC Machine	Applicator No. for AMP-O-MATIC Stripper/Crimper Machine
32-28	0.03-0.08	**.025-.054** 0.64-1.37	Plating A	530901-2	530901-3	531225-6	—	466723-1	466952-1
			Plating B	530901-6	—	—	—		
			Plating C	530901-4	—	—	—		
26-22	0.14-0.32	**.036-.054** 0.91-1.37	Plating A	530553-4	530553-5	531224-6	531224-7	466819-2*	466943-1
			Plating B	530553-6	530553-7	—	—		
			Plating C	530553-2	530553-3	531224-2	—		

*For terminating strip-form contacts in AMPOMATOR Model K Machine, use Miniature Applicator **Part No. 466819-1**.
Note: Hand Tool **Part No. 90301-2** (for crimping loose piece)

Mini-Tandem Spring Contacts are for use in Mini-Tandem Spring Housings only. **Not for use in AMPMODU Mod. IV Housings.**

Standard Tandem Spring Receptacle Contacts



Material and Finish

Phosphor bronze, plated as follows:

Plating A—Duplex plated .000030 [0.00076] gold inlay on contact area, tin in crimp area, with entire contact underplated .000050 [0.00127] nickel

Plating B—Duplex plated .000015 [0.00038] gold inlay on contact area, tin in crimp area, with entire contact underplated .000050 [0.00127] nickel

Plating C—.000100 [0.00254] min. bright tin over .000030 [0.00076] nickel on entire contact

Mates with—.025 [0.64] sq. posts, .125 [3.18] long

Standard contacts may also be used in AMPMODU Mod. IV Housings (single- or double-row) and AMPMODU MTE Housings (single-row). **Not for use in Mini-Tandem Spring Housings.**

Wire Range AWG	Wire Range mm²	Ins. Dia. Range	Finish	Contact Part Nos. (Standard Pressure) Strip Form	Contact Part Nos. (Standard Pressure) Loose Piece	Miniature Applicator No. for AMP-O-LECTRIC Machine	Applicator No. for AMP-O-MATIC Stripper/Crimper Machine
32-28	0.03-0.08	**.025-.054** 0.64-1.37	Plating A	103358-5	103358-6	466723-1	466952-1
			Plating B	103358-3	103358-4		
26-22	0.14-0.32	**.036-.054** 0.91-1.37	Plating A	530151-7	530151-8	466819-2*	466943-1
			Plating B	530151-5	530151-6		
			Plating C	530151-9	1-530151-0		

*For terminating strip-form contacts in AMPOMATOR Model K Machine, use Miniature Applicator **Part No. 466819-1**.
Note: Hand Tool **Part No. 90301-2** (for crimping loose piece).

SOURCE: Catalog 65816

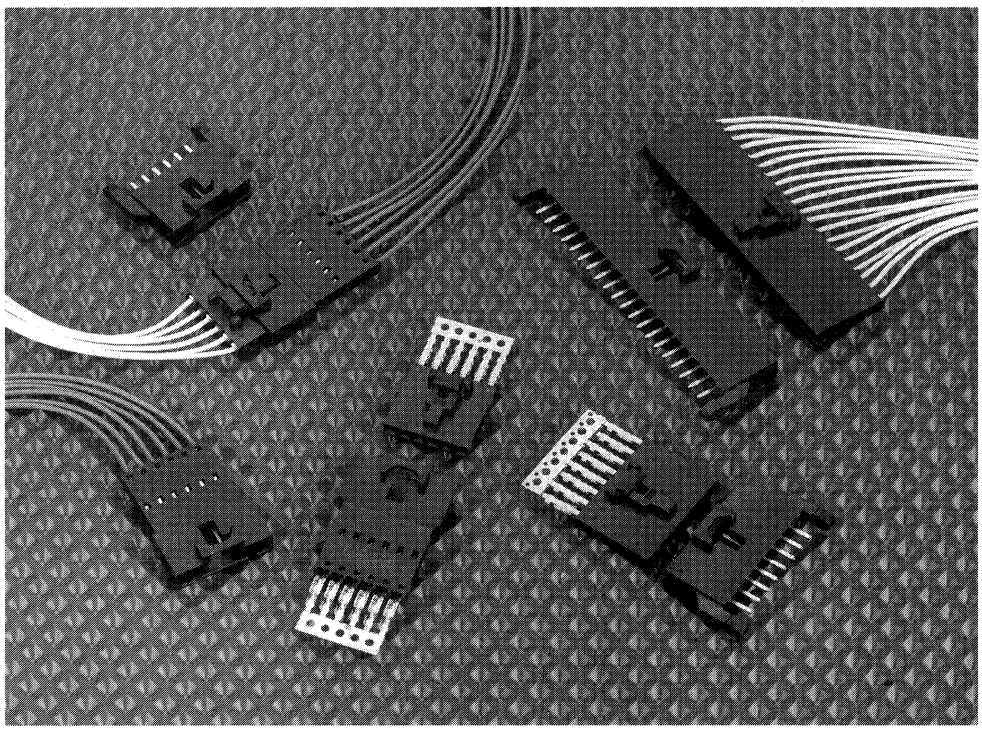
Specifications subject to change.

1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

METRIC

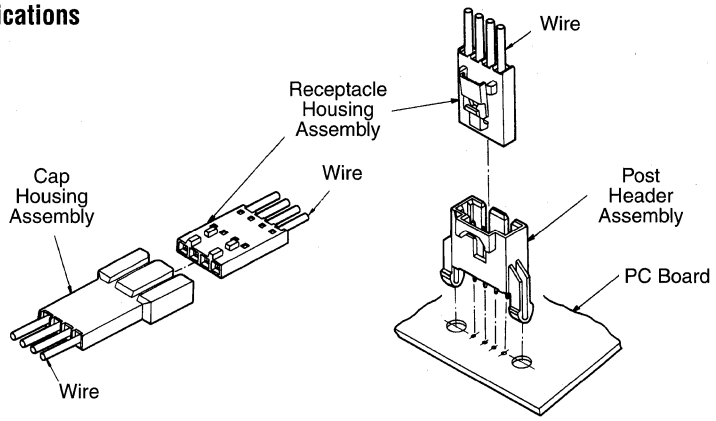
AMP Single-Row Linear (ASL) Connectors (Wire-to-Board, Wire-to-Wire)



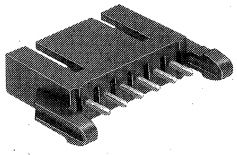
Product Facts

- Wire-to-wire and wire-to-board connectors
- 2.54 [.100] centerline pitch
- Receptacle and cap housings are furnished with insulation displacement type contacts partially inserted (preloaded); contacts are fully inserted automatically when terminated
- Accept two wire size ranges: 0.08-0.15 mm² [28-26 AWG] and 0.2 mm² [24 AWG]
- Post header features self-retaining legs
- Receptacle connectors mate with either cap connectors or post headers
- Housings available in five colors: black, blue, red, green and orange
- Mass termination
- Positive locking for easy mating and unmating

Typical Applications



Post Header Assemblies 0.64 [.025] Sq. Post



Note: 10 Pos. Housing Dim. (Typ.)—33.0 [1.30] L x 6.6 [.260] W x 17.0 [.669] H

No. of Positions	Part Numbers				
	Black*	Blue*	Red*	Green*	Orange*
2	173118-2	2-173118-2	4-173118-2	6-173118-2	8-173118-2
3	173118-3	2-173118-3	4-173118-3	6-173118-3	8-173118-3
4	173118-4	2-173118-4	4-173118-4	6-173118-4	8-173118-4
5	173118-5	2-173118-5	4-173118-5	6-173118-5	8-173118-5
6	173118-6	2-173118-6	4-173118-6	6-173118-6	8-173118-6
8	173118-8	2-173118-8	4-173118-8	6-173118-8	8-173118-8
10	1-173118-0	3-173118-0	5-173118-0	—	—
12	1-173118-2	3-173118-2	5-173118-2	—	—
16	1-173118-6	3-173118-6	5-172118-6	—	—
20	2-173118-0	4-173118-0	6-173118-0	—	—

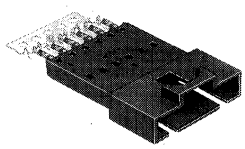
* Housing Color

SOURCE: Catalog 65816

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

METRIC

Cap Housing Assemblies
(Preloaded with Insulation Displacement Pin Contacts)

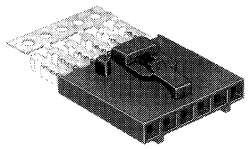


Note: 10 Pos. Housing Dim. (Typ.)—27.9 [1.10] L x 24.1 [.949] W x 6.1 [.240] H

Wire Range AWG/mm²	Code†	Insulation Diameter	No. of Positions	Part Numbers Black*	Blue*	Red*	Green*	Orange*
28-26 0.08-0.15	6	0.90-1.35 .035-.053	2	173116-2	2-173116-2	4-173116-2	6-173116-2	8-173116-2
			3	173116-3	2-173116-3	4-173116-3	6-173116-3	8-173116-3
			4	173116-4	2-173116-4	4-173116-4	6-173116-4	8-173116-4
			5	173116-5	2-173116-5	4-173116-5	6-173116-5	8-173116-5
			6	173116-6	2-173116-6	4-173116-6	6-173116-6	8-173116-6
			8	173116-8	2-173116-8	4-173116-8	6-173116-8	8-173116-8
			10	1-173116-0	3-173116-0	5-173116-0	—	—
			12	1-173116-2	3-173116-2	5-173116-2	—	—
			16	1-173116-6	3-173116-6	5-173116-6	—	—
			20	2-173116-0	4-173116-0	6-173116-0	—	—
24 0.20	4	0.90-1.35 .035-.053	2	173124-2	2-173124-2	4-173124-2	6-173124-2	8-173124-2
			3	173124-3	2-173124-3	4-173124-3	6-173124-3	8-173124-3
			4	173124-4	2-173124-4	4-173124-4	6-173124-4	8-173124-4
			5	173124-5	2-173124-5	4-173124-5	6-173124-5	8-173124-5
			6	173124-6	2-173124-6	4-173124-6	6-173124-6	8-173124-6
			8	173124-8	2-173124-8	4-173124-8	6-173124-8	8-173124-8
			10	1-173124-0	3-173124-0	5-173124-0	—	—
			12	1-173124-2	3-173124-2	5-173124-2	—	—
			16	1-173124-6	3-173124-6	5-173124-6	—	—
			20	2-173124-0	4-173124-0	6-173124-0	—	—

*Housing colors.
†Identification code stamped on pin contacts.

Receptacle Housing Assemblies
(Preloaded with Insulation Displacement Receptacle Contacts)



Note: 10 Pos. Housing Dim. (Typ.)—25.4 [1.00] L x 15.2 [.598] W x 6.6 [.260] H

Wire Range AWG/mm²	Code†	Insulation Diameter	No. of Positions	Part Numbers Black*	Blue*	Red*	Green*	Orange*
28-26 0.08-0.15	6	0.90-1.35 .035-.053	2	173114-2	2-173114-2	4-173114-2	6-173114-2	8-173114-2
			3	173114-3	2-173114-3	4-173114-3	6-173114-3	8-173114-3
			4	173114-4	2-173114-4	4-173114-4	6-173114-4	8-173114-4
			5	173114-5	2-173114-5	4-173114-5	6-173114-5	8-173114-5
			6	173114-6	2-173114-6	4-173114-6	6-173114-6	8-173114-6
			8	173114-8	2-173114-8	4-173114-8	6-173114-8	8-173114-8
			10	1-173114-0	3-173114-0	5-173114-0	—	—
			12	1-173114-2	3-173114-2	5-173114-2	—	—
			16	1-173114-6	3-173114-6	5-173114-6	—	—
			20	2-173114-0	4-173114-0	6-173114-0	—	—
24 0.20	4	0.90-1.35 .035-.053	2	173123-2	2-173123-2	4-173123-2	6-173123-2	8-173123-2
			3	173123-3	2-173123-3	4-173123-3	6-173123-3	8-173123-3
			4	173123-4	2-173123-4	4-173123-4	6-173123-4	8-173123-4
			5	173123-5	2-173123-5	4-173123-5	6-173123-5	8-173123-5
			6	173123-6	2-173123-6	4-173123-6	6-173123-6	8-173123-6
			8	173123-8	2-173123-8	4-173123-8	6-173123-8	8-173123-8
			10	1-173123-0	3-173123-0	5-173123-0	—	—
			12	1-173123-2	3-173123-2	5-173123-2	—	—
			16	1-173123-6	3-173123-6	5-173123-6	—	—
			20	2-173123-0	4-173123-0	6-173123-0	—	—

*Housing colors.
†Identification code stamped on receptacle contacts.

SOURCE: Catalog 65816

Specifications subject to change.

1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

AMPMODU System 50 Connectors

(.050 x .100 [1.27 x 2.54] Centers)

The AMPMODU System 50 connector family includes a wide variety of high density board-to-board (through-hole and surface-mount) and cable-to-board connectors. System 50 is composed of one- and two-row receptacles and post headers on .050 x .100 [1.27 x 2.54] spacing between contacts for extreme density and efficient use of printed circuit board area.

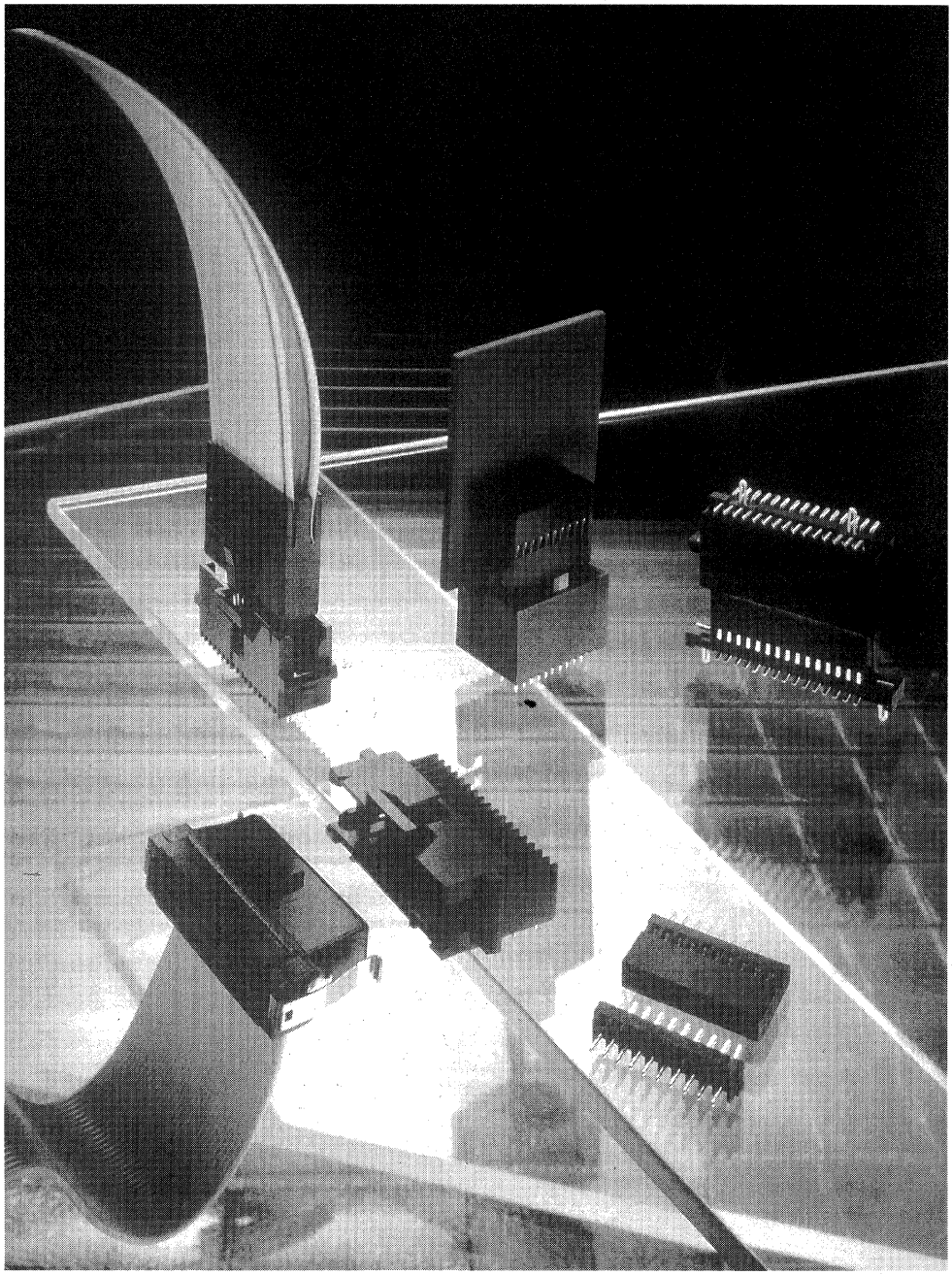
System 50 receptacles and header assemblies can be categorized in three groups: board-mount headers, board-mount receptacles and cable-to-board receptacles. Receptacle contacts and **mating .015 [0.38] square posts** are formed from high conductivity copper alloy and are selectively plated with gold to insure high performance and reliability.

Board-mounted through-hole post headers and receptacle connectors are available for right-angle and vertical mating configurations. Surface mounted connectors are available in vertical, double row styles for parallel stacking applications. Shrouded post headers provide polarization to mating cable receptacles and aid alignment of mating connectors. Unshrouded headers allow close stacking of daughtercards. Vertical stacking connectors space parallel mated boards as shown in the illustration on the next page. Housings on all board-mount assemblies are made of high temperature tolerant materials and incorporate stand-offs for free drainage of flux cleaning solutions.

Cable-to-board connectors have integral latches for positive locking to shrouded mating headers (through-hole or surface-mount). Ribbon cable connectors mass terminate 30 AWG [0.05 mm²] solid and 32 AWG [0.03 mm²] stranded, .025 [0.64] centerline ribbon cable with PVC or TEFLON insulation.

Connectors for mass termination to FFC cable or flexible etched circuitry have dual beam contacts; options include shielded cable and solder tabs. Both types of cable connectors are available as component parts and as completed assemblies.

The variety of components and application possibilities, combined with small size and outstanding quality, make System 50 perfect for high density systems.



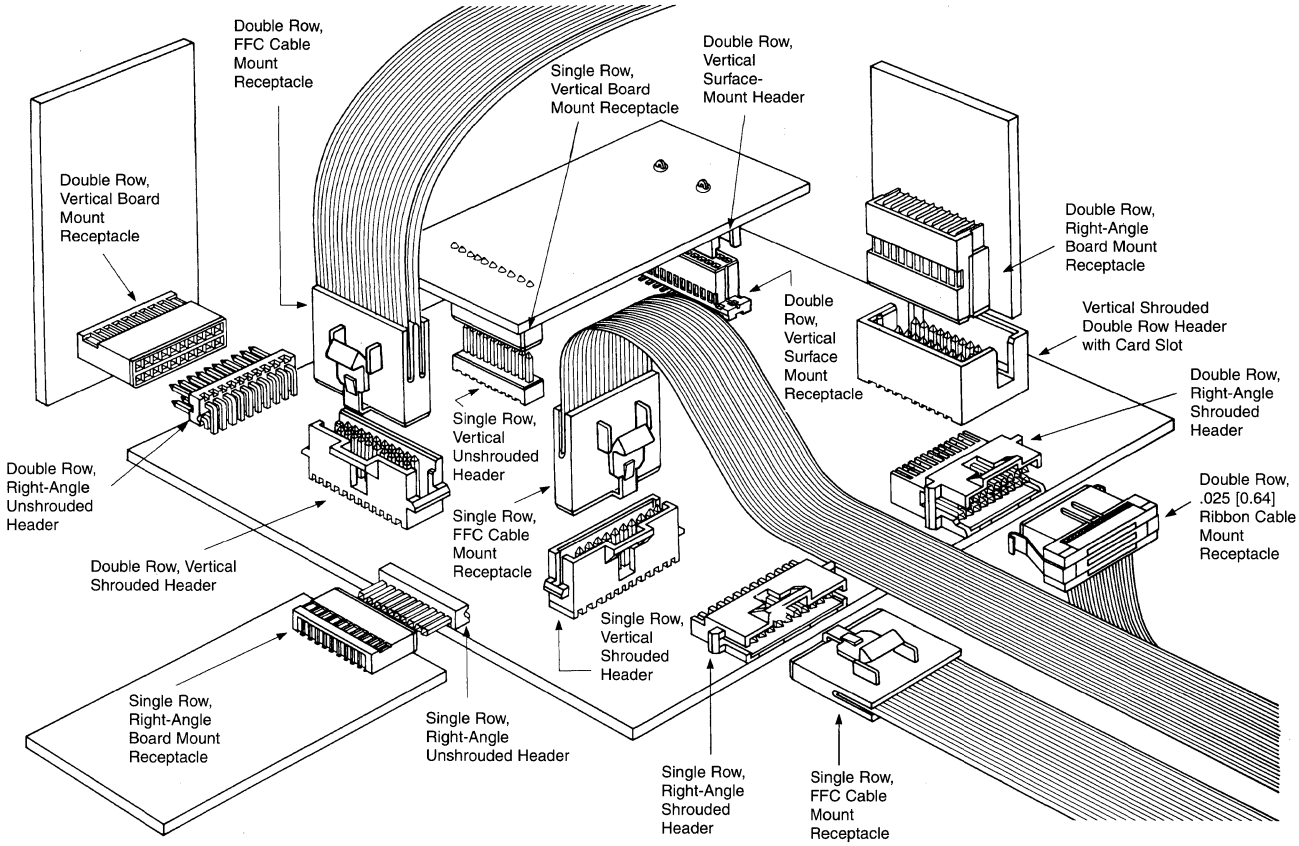
Product Facts

- **Recognized under the Component Program of Underwriters Laboratories Inc., File No. E28476**
- **Certified by Canadian Standards Association*, File No. LR 7189**

*CSA certification pending on certain products, as noted.

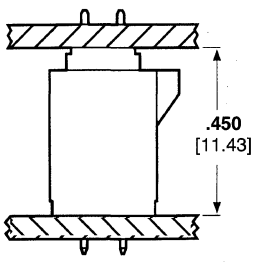
SOURCE: Catalog 82178

AMPMODU
System 50 Connectors
(.050 x .100 [1.27 x 2.54] Centers)
(Continued)

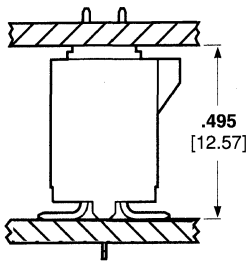


Board-to-Board Spacing* for Through-Hole and Surface-Mount Connector Combinations

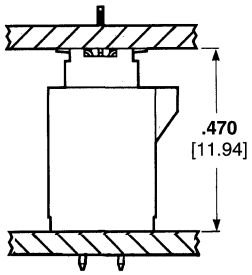
Through-Hole Receptacle—Through-Hole Header
(Single and Double Row, Shrouded and Unshrouded)



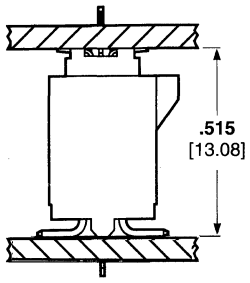
Through-Hole Receptacle—Surface-Mount Header
(Double Row, Shrouded)



Surface-Mount Receptacle—Through-Hole Header
(Double Row, Shrouded and Unshrouded)



Surface-Mount Receptacle—Surface-Mount Header
(Double Row, Shrouded)



*See PCB Parallel Stack Height Guide in Appendix.

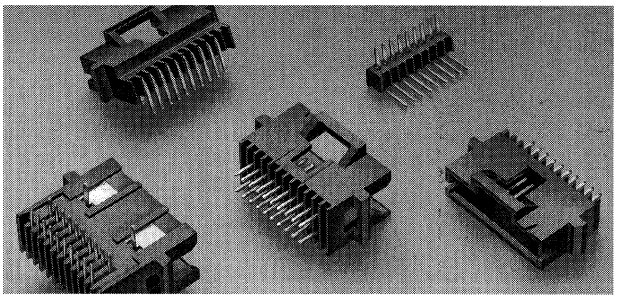
SOURCE: Catalog 82178

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

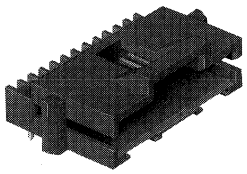
Board-to-Board and Board-to-Cable Connectors, Through-Hole Headers

Product Facts

- High density; contacts spaced on .050 x .100 [1.27 x 2.54] centers
- Single row; select sizes 4 thru 50 positions
- Double row; select sizes 8 thru 100 positions
- Stand-offs for ease of cleaning
- High temperature tolerant thermoplastic housings
- Shrouded and unshrouded headers available in single and double row, vertical and right-angle configurations



Shrouded, Single Row Right-Angle



Mates with— Through-Hole Receptacles (Single Row, Vertical) and Receptacles for FFC Cable

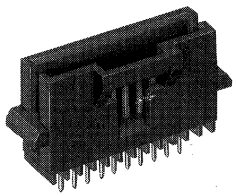
Note: 25 Pos. Housing Dim. (Typ.)— 1.380 [35.05] L x .440 [11.18] W x .250 [6.35] H

No. of Positions	Part Number
4	104074-7
5	104074-2
6	104074-8
7	104074-9
8	1-104074-0
10	104074-1
12	1-104074-1
15	104074-3

No. of Positions	Part Number
20	104074-4
22	1-104074-4
25	104074-5
30	104074-6
36	1-104074-6
40	1-104074-7
45	1-104074-8
50	1-104074-9

Note: With Holddown posts.

Shrouded, Single Row Vertical



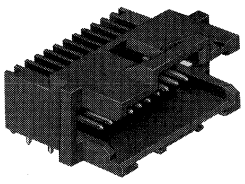
Mates with— Through-Hole Receptacles (Single Row, Vertical) and Receptacles for FFC Cable

Note: 25 Pos. Housing Dim. (Typ.)— 1.380 [35.05] L x .244 [6.20] W x .390 [9.91] H

No. of Positions	Part Number
4	104071-7
5	104071-2
6	104071-8
7	104071-9
8	1-104071-0
10	104071-1
12	1-104071-1
13	1-104071-2
15	104071-3

No. of Positions	Part Number
17	1-104071-3
20	104071-4
22	1-104071-4
25	104071-5
30	104071-6
36	1-104071-6
40	1-104071-7
45	1-104071-8
50	1-104071-9

Shrouded, Double Row Right-Angle



Mates with— Through-Hole and Surface-Mount Receptacles (Double Row, Vertical), Receptacles for FFC and Ribbon Cable

Note: 50 Pos. Housing Dim. (Typ.)— 1.380 [35.05] L x .540 [13.72] W x .350 [8.89] H

No. of Positions	Part Numbers	
	Post Length	
	.100 [2.54]	.145 [3.68]
12	—	104477-8
14	1-104069-0	—
20	104069-1	—
24	1-104069-2	—
26	1-104069-3	—
30	104069-5	104477-3
34	1-104069-4	—

No. of Positions	Part Numbers	
	Post Length	
	.100 [2.54]	.145 [3.68]
40	104069-6	—
50	104069-2	104477-5
60	104069-7	—
72	—	104477-1
80	104069-3	104477-6
100	1-104069-7	—

Note: With Holddown posts.

SOURCE: Catalog 82178

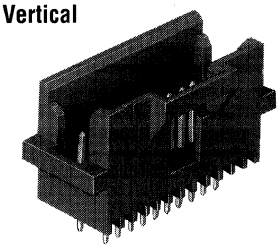
Specifications subject to change.

1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

Board-to-Board and Board-to-Cable Connectors, Through-Hole Headers (Continued)

Shrouded, Double Row Vertical

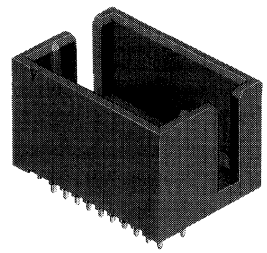


Note: 50 Pos. Housing Dim. (Typ.)— 1.380 [35.05] L x .344 [8.74] W x .390 [9.91] H

No. of Positions	Part Numbers — Post Length	
	.100 [2.54]	.145 [3.68]
10	104068-2	—
12	104068-8	—
16	1-104068-0	—
20	104068-1	—
24	1-104068-1	—
26	1-104068-2	—
30	104068-3	104666-2
34	1-104068-3	—
40	104068-4	104666-3
44	1-104068-4	—
50	104068-5	104666-4
60	104068-6	—
72	1-104068-5	—
80	1-104068-6	104666-5
100	1-104068-7	104666-6

Mates with— Through-Hole and Surface-Mount Receptacles (Double Row, Vertical), Receptacles for FFC and Ribbon Cable

Shrouded, Double Row Vertical (With Card Slots) Board-to-Board Only

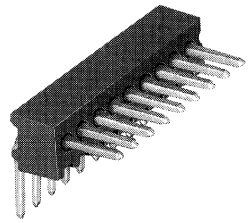


Note: 50 Pos. Housing Dim. (Typ.) — 1.394 [35.41] L x .442 [11.23] W x .390 [9.91] H

No. of Positions	Part Number
10	104076-5
20	104076-1
30	104076-6
40	104076-3
50	104076-7
60	104076-2
80	104076-4
100	104076-8

Mates with— Through-Hole Receptacles (Double Row, Right-Angle)

Unshrouded, Single Row Right-Angle

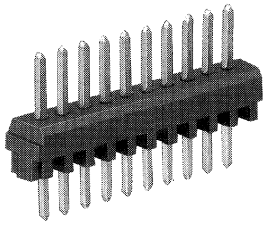


Note: 25 Pos. Housing Dim. (Typ.)— 1.265 [32.13] L x .100 [2.54] W x .116 [2.95] H

No. of Positions	Part Number
4	104186-1
5	104186-2
13	104186-8
15	104186-9
17	1-104186-0
20	1-104186-1
25	1-104186-3
30	1-104186-5
40	1-104186-7

Mates with— Through-Hole Receptacles (Single Row, Right-Angle or Vertical), Receptacles for FFC Cable

Unshrouded, Single Row Vertical



Note: 25 Pos. Housing Dim. (Typ.)— 1.265 [32.13] L x .096 [2.44] W x .100 [2.54] H

No. of Positions	Part Number
4	104178-1
5	104178-2
7	104178-4
8	104178-5
10	104178-6
12	104178-7
20	1-104178-1
22	1-104178-2
25	1-104178-3
50	1-104178-9

Mates with— Through-Hole Receptacles (Single Row, Right-Angle or Vertical), Receptacles for FFC Cable

SOURCE: Catalog 82178

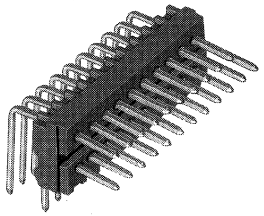
Specifications subject to change.

1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

Board-to-Board and Board-to-Cable Connectors, Through-Hole Headers
(Continued)

Unshrouded, Double Row, Right-Angle

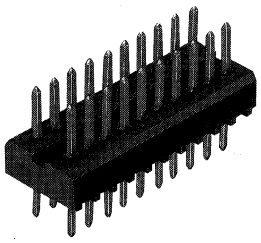


Note: 50 Pos. Housing Dim. (Typ.)—
1.265 [32.13] L x .100 [2.54] W x .216 [5.49] H

No. of Positions	Part Number
10	104118-3
14	104118-5
20	104118-7
30	1-104118-0
50	104118-1
60	1-104118-4
72	1-104118-5
80	1-104118-6
100	1-104118-7

Mates with—Through-Hole Receptacles (Double Row, Right-Angle or Vertical), Surface-Mount Receptacles (Double Row, Vertical), Receptacles for FFC Cable

Unshrouded, Double Row, Vertical



Note: 50 Pos. Housing Dim (Typ.)—
1.265 [32.13] L x .196 [4.98] W x .100 [2.54] H

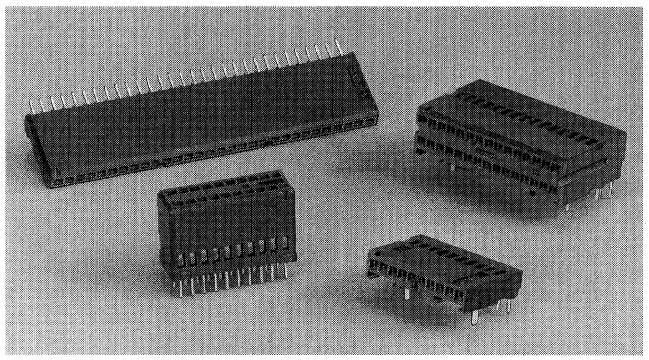
No. of Positions	Part Number
8	103916-3
16	103916-6
20	103916-2
26	103916-8
30	103916-9
40	1-103916-1
44	1-103916-2
50	1-103916-3
60	1-103916-4
72	1-103916-5
80	1-103916-6
100	1-103916-7

Mates with—Through-Hole Receptacles (Double Row, Right-Angle or Vertical), Surface-Mount Receptacles (Double Row, Vertical), Receptacles for FFC Cable

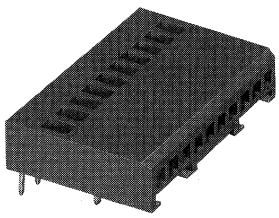
Board-to-Board Connectors, Through-Hole Receptacles

Product Facts

- **High density; contacts spaced on .050 x .100 [1.27 x 2.54] centers**
- **Right-angle and vertical styles**
- **Single row; select sizes 5 thru 30 positions**
- **Double row; select sizes 10 thru 100 positions**
- **Contacts are selectively plated with gold**
- **Stand-offs for removal of solder flux**



Single Row, Right-Angle



Note: 15 Pos. Housing Dim. (Typ.)—
.794 [20.17] L x .355 [9.02] W x .117 [2.97] H

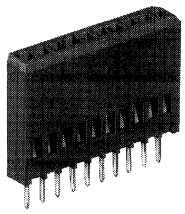
No. of Positions	Part Number
5	104196-8
10	104196-2
12	104196-3
15	104196-4
20	104196-5
25	104196-6

Note: With Holddown posts.

Mates with—Through-Hole Headers (Unshrouded, Single Row, Right-Angle or Vertical)

Board-to-Board Connectors, Through-Hole Receptacles
(Continued)

Single Row, Vertical

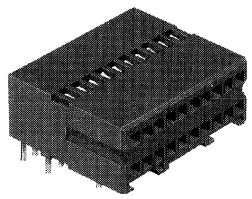


Note: 15 Pos. Housing Dim. (Typ.)—
.794 [20.17] L x .098 [2.49] W x .350 [8.89] H

No. of Positions	Part Numbers
5	104192-8
10	104192-2
15	104192-4
30	104192-7

Mates with—Through-Hole Headers (Shrouded or Unshrouded, Single Row, Right-Angle or Vertical)

Double Row, Right-Angle



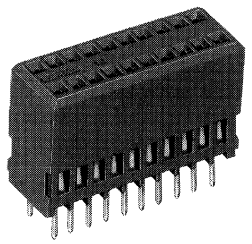
Note: 50 Pos. Housing Dim. (Typ.)—
1.294 [32.87] L x .455 [11.56] W x .217 [5.51] H

No. of Positions	Part Numbers
10	103911-1
20	103911-2
30	103911-7
40	103911-5
50	103911-4
60	103911-3
80	103911-6
100	103911-8

Note: With Holddown posts.

Mates with—Through-Hole Headers (Shrouded, Double Row, Vertical, with Card Slots) and (Unshrouded, Double Row, Right-Angle or Vertical)

Double Row, Vertical



Note: 50 Pos. Housing Dim. (Typ.)—
1.294 [32.87] L x .198 [5.03] W x .350 [8.89] H

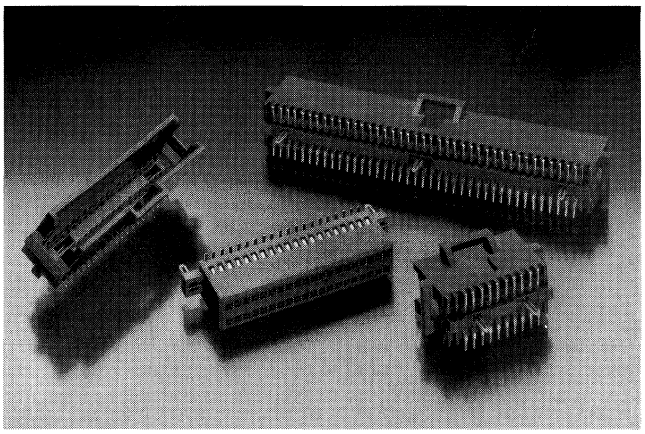
No. of Positions	Part Numbers	
	Post Length	
	.100 [2.54]	.145 [3.68]
10	104078-3	104744-3
20	104078-1	104744-1
24	104078-9	—
30	104078-4	104744-2
40	104078-2	—
50	104078-5	—
60	104078-6	—
80	104078-7	104744-4
100	104078-8	104744-5

Mates with—Through-Hole Headers (Shrouded or Unshrouded, Double Row, Right-Angle or Vertical) and Surface-Mount Headers (Shrouded, Double Row, Vertical)

Board-to-Board Connectors, Surface-Mount Headers and Receptacles

Product Facts

- **Surface-mount option for parallel board-to-board applications; completely intermateable with AMPMODU System 50 through-hole board-to-board and cable-to-board systems**
- **Double row, vertical, shrouded header and receptacle assemblies**
- **Available in select sizes from 10 through 100 positions**
- **High density; contacts spaced on .050 x .100 [1.27 x 2.54] centers; compact footprint**
- **Compatible with standard surface-mount processes**
- **Stand-offs for free drainage of flux cleaning solutions; visible solder joints for easy inspection**
- **Simple, low insertion-force holddown for process retention and long-term strain relief for solder joints**



SOURCE: Catalog 82178

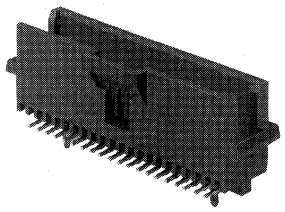
Specifications subject to change.

1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

Board-to-Board and Board-to-Cable Connectors, Surface-Mount (Continued)

Headers, Shrouded, Double Row, Vertical

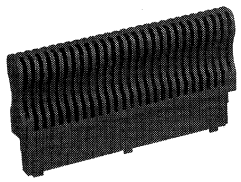


Note: 50 Pos. Housing Dim. (Typ.)—
1.380 [35.05] L x .344 [8.74] W x .435 [11.05] H

No. of Positions	Part Numbers	
	Header*	Hand Seating Tool
10	104549-1	104695-1
20	104549-2	104695-2
24	104549-3	104695-3
30	104549-5	104695-5
40	104549-6	104695-6
50	104549-7	104695-7
60	104549-8	104695-8
80	104549-9	104695-9
100	1-104549-0	1-104695-0

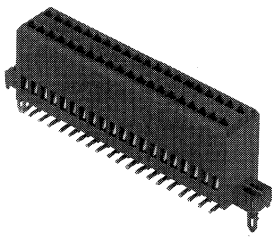
***Note:** With Holddown posts.

Mates with—Surface-Mount and Through-Hole Receptacles (Double Row, Vertical), Receptacles for FFC and Ribbon Cable



Hand Seating Tool

Receptacles, Double Row, Vertical

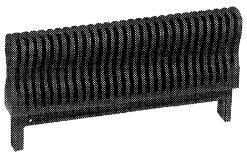


Note: 50 Pos. Housing Dim. (Typ.)—
1.294 [32.87] L x .198 [5.03] W x .370 [9.40] H

No. of Positions	Part Numbers	
	Receptacle*	Hand Seating Tool
10	104550-1	104696-1
20	104550-2	104696-2
24	104550-3	104696-3
30	104550-4	104696-4
40	104550-5	104696-5
50	104550-6	104696-6
60	104550-7	104696-7
80	104550-8	104696-8
100	104550-9	104696-9

***Note:** With Holddown posts.

Mates with—Surface-Mount Headers (Double Row, Vertical), Through-Hole Headers (Shrouded or Unshrouded, Double Row, Right-Angle or Vertical)



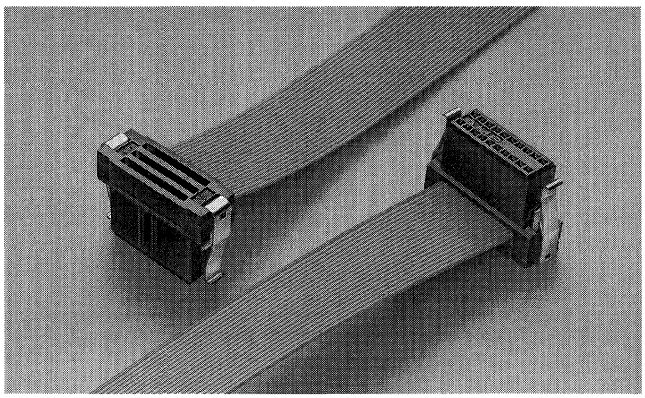
Hand Seating Tool

Cable-to-Board Connectors, .025 [0.64] Centerline Ribbon Cable

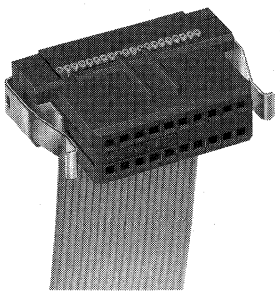
Product Facts

- **Preassembled housing and cover**
- **One-step termination**
- **End and daisy chain termination**
- **Positive end latching of connector to universal header**
- **Terminates 30 AWG [0.05 mm²] solid and 32 AWG [0.03 mm²]* stranded .025 [0.64] centerline ribbon cable**
- **0.5 ampere current rating (Limited by cable)**

* Consult AMP for recommendations when using 32 AWG [0.03 mm²] stranded cable



Double Row Receptacles



Note: 50 Pos. Housing Dim. (Typ.)—
1.445 [36.70] L x .484 [12.29] W x .254 [6.45] H

No. of Positions	Part Number*
20	111196-4
24	111196-5
30	111196-7
40	111196-9
44	1-111196-0
50	1-111196-1
60	1-111196-2
80	1-111196-5
100	1-111196-6

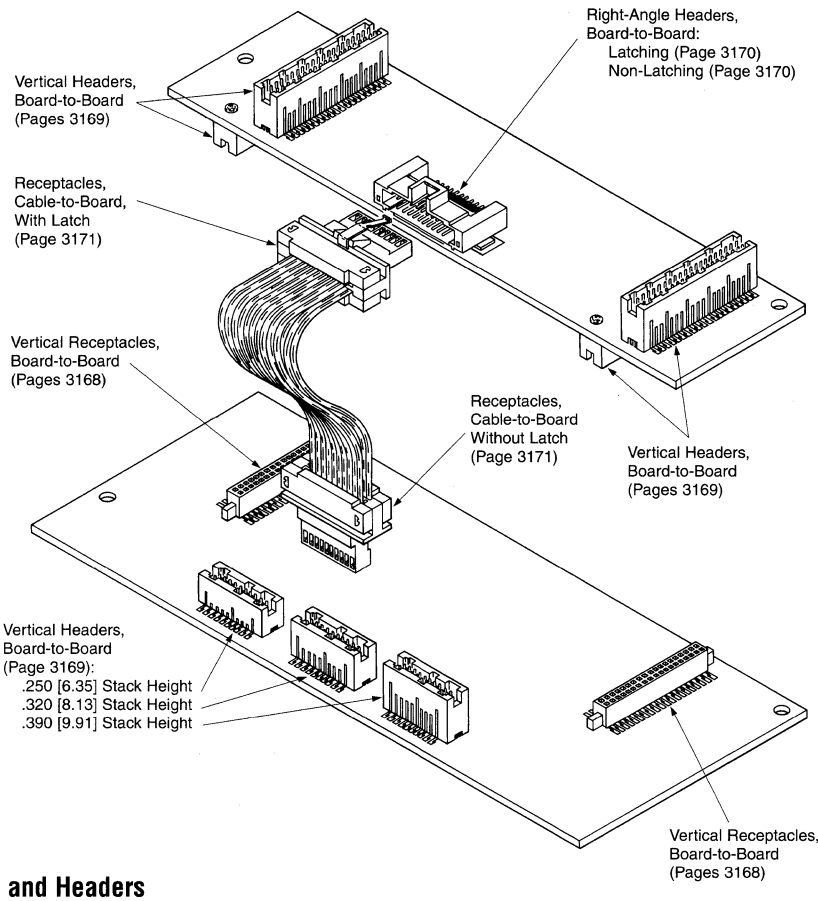
* CSA Certification pending

Mates with—Through-Hole Headers (Shrouded, Double Row, Right-Angle or Vertical), Surface-Mount Headers (Double Row, Vertical)

AMPMODU 50/50 Grid Connector System (.050 x .050 [1.27 x 1.27] Centers)

Produced under a Quality Management System certified to ISO 9001

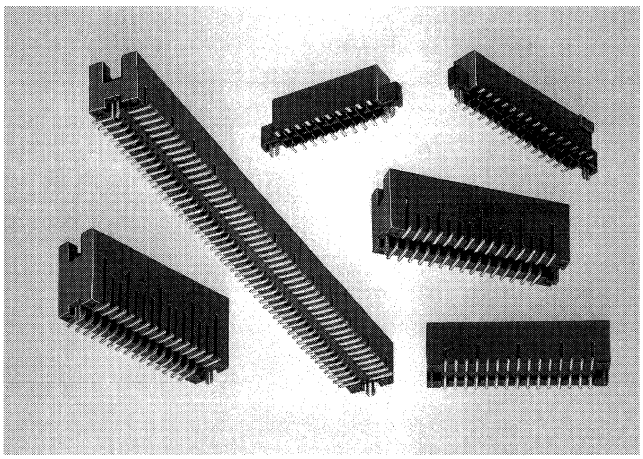
A copy of the certificate is available upon request.



Board-to-Board Vertical Receptacles and Headers

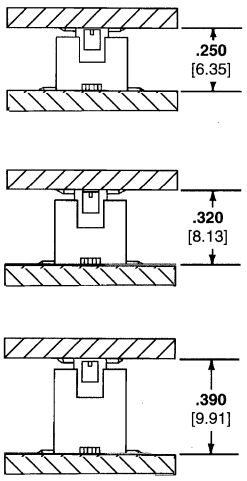
Product Facts

- Surface-mount products for parallel board-to-board applications, as well as right-angle board-to-board and cable-to-board applications
- Double row, vertical shrouded headers and receptacles
- High density .050 x .050 [1.27 x 1.27] centerline grid
- Three board-to-board stack heights: .250 [6.35], .320 [8.13] and .390 [9.91]
- Non-protrusive metallic holddowns designed for .062 [1.57] pc boards
- Reliable dual beam receptacle contacts for redundant contact
- Duplex plated receptacle and post contacts; gold plated on mating areas, tin-lead plated on tails
- Compatible with standard surface-mount processing (VPR and IR)

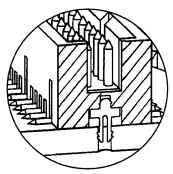


- Receptacle and header allow for drainage of processing fluids
- Anti-static tube packaging
- Polarized header and receptacle assemblies
- Sizes of 10, 20, 30, 40, 50, 60, 70, 80, 90 and 100 positions
- Recognized under the Component Program of Underwriters Laboratories Inc., File No. E28476
- Certified by Canadian Standards Association, File No. LR7189

Three Board Stack Heights



Non-Protrusive Metallic Holddowns



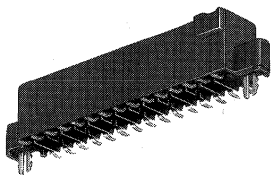
SOURCE: Catalog 82643

Specifications subject to change.

1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

Board-to-Board Vertical Receptacles, Double Row



Mates with—Vertical Headers and Right-Angle Non-Latching Headers

Packaging—Tube

With Standard Holddowns

No. of Pos.	Receptacle Part Numbers		Loading Tool Part Numbers	
	with Polarizing Tab	without Polarizing Tab	Non-Polarized	Polarized
10	104652-1	—	104723-1	104724-1
20	104652-2	—	104723-2	104724-2
30	104652-3	—	104723-3	104724-3
40	104652-4	104803-4	104723-4	104724-4
50	104652-5	104803-5	104723-5	104724-5
60	104652-6	104803-1	104723-6	104724-6
70	104652-7	—	104723-7	104724-7
80	104652-8	104803-2	104723-8	104724-8
90	104652-9	—	104723-9	104724-9
100	1-104652-0	—	1-104723-0	1-104724-0

With Asymmetrical Holddowns for Polarization to Pc Board

No. of Pos.	Receptacle Part Numbers (with Polarizing Tab)	Loading Tool Part Numbers	
		Non-Polarized	Polarized
10	104786-1	104723-1	104724-1
20	104786-2	104723-2	104724-2
30	104786-3	104723-3	104724-3
40	104786-4	104723-4	104724-4
50	104786-5	104723-5	104724-5
60	104786-6	104723-6	104724-6
70	104786-7	104723-7	104724-7
80	104786-8	104723-8	104724-8
90	104786-9	104723-9	104724-9
100	1-104786-0	1-104723-0	1-104724-0

With Large Holddowns for .062 [1.57] Diameter Pc Board Holes

No. of Pos.	Receptacle Part Numbers (with Polarizing Tab)	Loading Tool Part Numbers	
		Non-Polarized	Polarized
20	104819-2	104723-2	104724-2
40	104819-4	104723-4	104724-4
50	104819-5	104723-5	104724-5

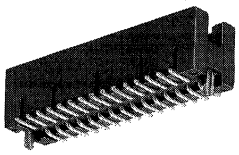
Note: Other sizes are available, consult AMP.

Note: All 50 Pos. Housing Dim. (Typ.)—
1.266 [32.16] L x.120 [3.05] W x .187 [4.75] H

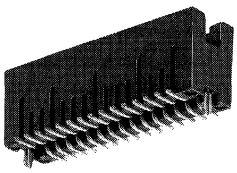
SOURCE: Catalog 82643

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

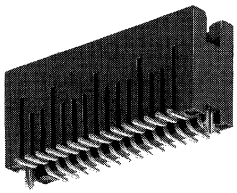
Board-to-Board Vertical Headers, Double Row



For .250 [6.35] Mated Height



For .320 [8.13] Mated Height



For .390 [9.91] Mated Height

With Standard Holddowns

No. of Pos.	Header Part Numbers			Loading Tool Part Numbers	
	.250 [6.35] Mated Height	.320 [8.13] Mated Height	.390 [9.91] Mated Height	Non-Polarized	Polarized
10	—	104656-1	—	104725-1	104726-1
20	104655-3	104656-2	104693-2	104725-2	104726-2
30	104655-4	104656-3	104693-3	104725-3	104726-3
40	104655-5	104656-4	104693-4	104725-4	104726-4
50	104655-6	104656-5	104693-5	104725-5	104726-5
60	104655-7	104656-6	104693-6	104725-6	104726-6
70	104655-8	104656-7	104693-7	104725-7	104726-7
80	104655-9	104656-8	104693-8	104725-8	104726-8
90	—	104656-9	104693-9	104725-9	104726-9
100	1-104655-1	1-104656-0	1-104693-0	1-104725-0	1-104726-0

With Asymmetrical Holddowns for Polarization to Pc Board

No. of Pos.	Header Part Numbers			Loading Tool Part Numbers	
	.250 [6.35] Mated Height	.320 [8.13] Mated Height	.390 [9.91] Mated Height	Non-Polarized	Polarized
10	104784-1	—	—	104725-1	104726-1
20	104784-2	104785-2	—	104725-2	104726-2
30	—	104785-3	—	104725-3	104726-3
40	104784-4	—	—	104725-4	104726-4
50	104784-5	104785-5	104823-5	104725-5	104726-5
70	104784-7	—	—	104725-7	104726-7
80	—	104785-8	—	104725-8	104726-8
90	—	104785-9	—	104725-9	104726-9
100	1-104784-0	—	1-104823-0	1-104725-0	1-104726-0

Note: Other sizes are available, consult AMP.

With Large Holddowns for .062 [1.57] Diameter Pc Board Holes

No. of Pos.	Header Part Numbers			Loading Tool Part Numbers	
	.250 [6.35] Mated Height	.320 [8.13] Mated Height	.390 [9.91] Mated Height	Non-Polarized	Polarized
50	104820-5	104821-5	104822-5	104725-5	104726-5

Note: Other sizes are available, consult AMP.

Mates with—Vertical Receptacles and Cable-to-Board Receptacle Connectors without Latch

Packaging—Tube

Note: All 50 Pos. Housing Dim. (Typ.)—
1.372 [34.85] L x .225 [5.71] W x .2255 [5.728] H (for .250 [6.35] Mated Height);
.2975 [7.557] H (for .320 [8.13] Mated Height); .3675 [9.335] H (for .390 [9.91] Mated Height.

SOURCE: Catalog 82643

Specifications subject to change.

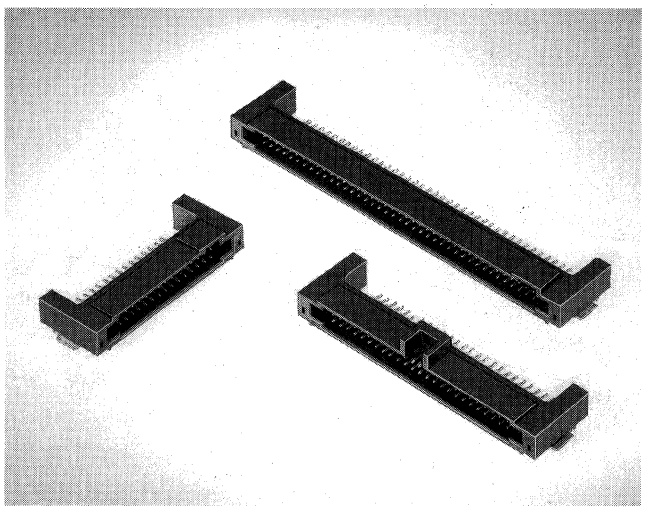
1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

Board-to-Board Right-Angle Headers, Double Row

Product Facts

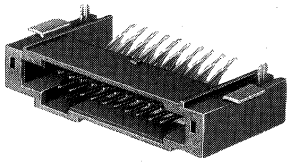
- Surface-mount products for right-angle board-to-board and cable-to-board applications
- Double-row, right-angle shrouded headers
- High density .050 x .050 [1.27 x 1.27] centerline grid
- Latching and non-latching versions available
- Non-protrusive metallic holddowns designed for .062 [1.57] pc boards
- Metallic tabs, when soldered to pc board pad, provide added mechanical support
- Duplex plated post contacts; gold plated on mating area, tin plated on tails
- Compatible with standard surface-mount processing (VPR and IR)
- Standoffs on header housings allow for drainage of processing fluids
- Anti-static tube packaging
- All headers are polarized
- Sizes of 10, 20, 30, 40, 50, 60, 70, 80, 90 and 100 positions
- Recognized under the Component Program of Underwriters Laboratories Inc., File No. E28476
- Certified by Canadian Standards Association, File No. LR7189



Non-Latching Headers

Mates with—Vertical Receptacles (with Standard Holddowns, with Asymmetrical Holddowns and with Large Holddowns); and Cable-to-Board Receptacle Connectors without Latch

Packaging—Tube



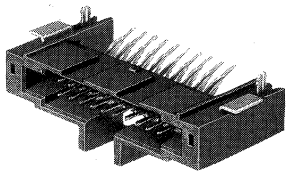
Note: 50 Pos. Housing Dim. (Typ.)—
1.630 [41.40] L x .430 [10.92] W x .213 [5.41] H

No of Pos.	Header Part Numbers
10	104894-1
20	104894-2
30	104894-3
40	104894-4
50	104894-5
60	104894-6
70	104894-7
80	104894-8
90	104894-9
100	1-104894-0

Latching Headers

Mates with—Vertical Receptacles (with Standard Holddowns, with Asymmetrical Holddowns and with Large Holddowns); and Cable-to-Board Receptacle Connectors with Latch

Packaging—Tube



Note: 50 Pos. Housing Dim. (Typ.)—
1.630 [41.40] L x .430 [10.92] W x .282 [7.17] H

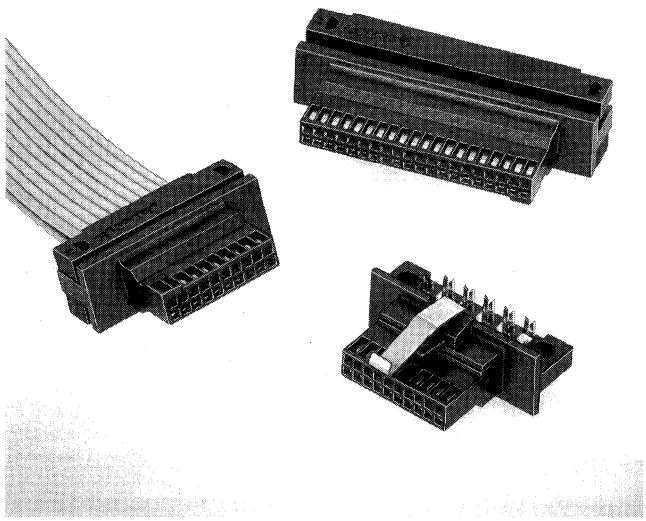
No of Pos.	Header Part Numbers
10	104895-1
20	104895-2
30	104895-3
40	104895-4
50	104895-5
60	104895-6
70	104895-7
80	104895-8
90	104895-9
100	1-104895-0

SOURCE: Catalog 82643

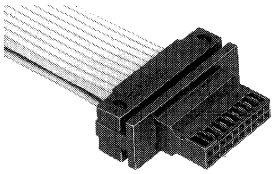
Cable-to-Board Receptacle Connectors, Double Row

Product Facts

- Double-row receptacle connectors provide cable-to-board connection capabilities for vertical headers (non-latching) and right-angle headers (latching and non-latching)
- IDC (Insulation Displacement Crimp) mass termination of solid or stranded round conductor .050 [1.27] centerline ribbon cable with PVC or polyethylene insulation
- Accommodates ribbon cable conductor sizes of 28 AWG [0.08-0.09 mm²] and 30 AWG [0.05 mm²] and insulation diameters up to .036 [0.91] maximum
- Reliable single beam receptacle contact design
- Duplex plated receptacle contacts; gold plated in mating area, bright tin-lead in termination area
- Terminating covers (sold separately) provide both strain relief and protection to the termination area
- Sizes of 10, 20, 30, 40, 50, 60, 70, 80, 90 and 100 positions
- Connectors available with or without metal latch
- Connectors without latches are polarized to prevent mismating
- Recognized under the Component Program of Underwriters Laboratories Inc., File No. E28476
- Certified by Canadian Standards Association, File No. LR7189



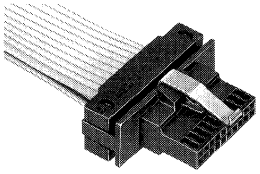
Receptacles



Without Latch

Mates with— Vertical Headers (with Standard Holddowns, with Asymmetrical Holddowns and with Large Holddowns); and Right-Angle Non-Latching Headers

Packaging—Tube



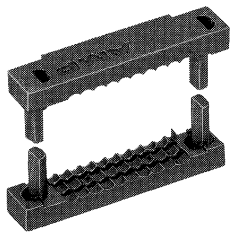
With Latch

Mates with— Right-Angle Latching Headers

Note: 50 Pos. Housing Dim. (Typ.)—1.578 [40.08] L x .627 [15.94] W x .284 [7.21] H

No of Pos.	Receptacle Part Numbers	
	Without Latch	With Latch
10	104893-1	104892-1
20	104893-2	104892-2
30	104893-3	104892-3
40	104893-4	104892-4
50	104893-5	104892-5
60	104893-6	104892-6
70	104893-7	104892-7
80	104893-8	104892-8
90	104893-9	104892-9
100	1-104893-0	1-104892-0

Terminating Covers for Cable Connectors



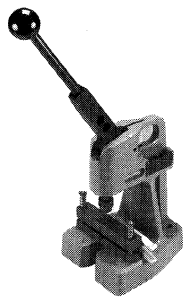
No of Pos.	Part Numbers	No of Pos.	Part Numbers
10	104891-1	60	104891-6
20	104891-2	70	104891-7
30	104891-3	80	104891-8
40	104891-4	90	104891-9
50	104891-5	100	1-104891-0

Note: Terminating covers must be purchased separately, two are required for each cable connector.

Application Tooling for Cable Connectors

Manual Miniature Application Frame Assembly

Part Number 91295-1
(shown with Cover Closing Kit **Part No. 543518-1**)



SOURCE: Catalog 82643

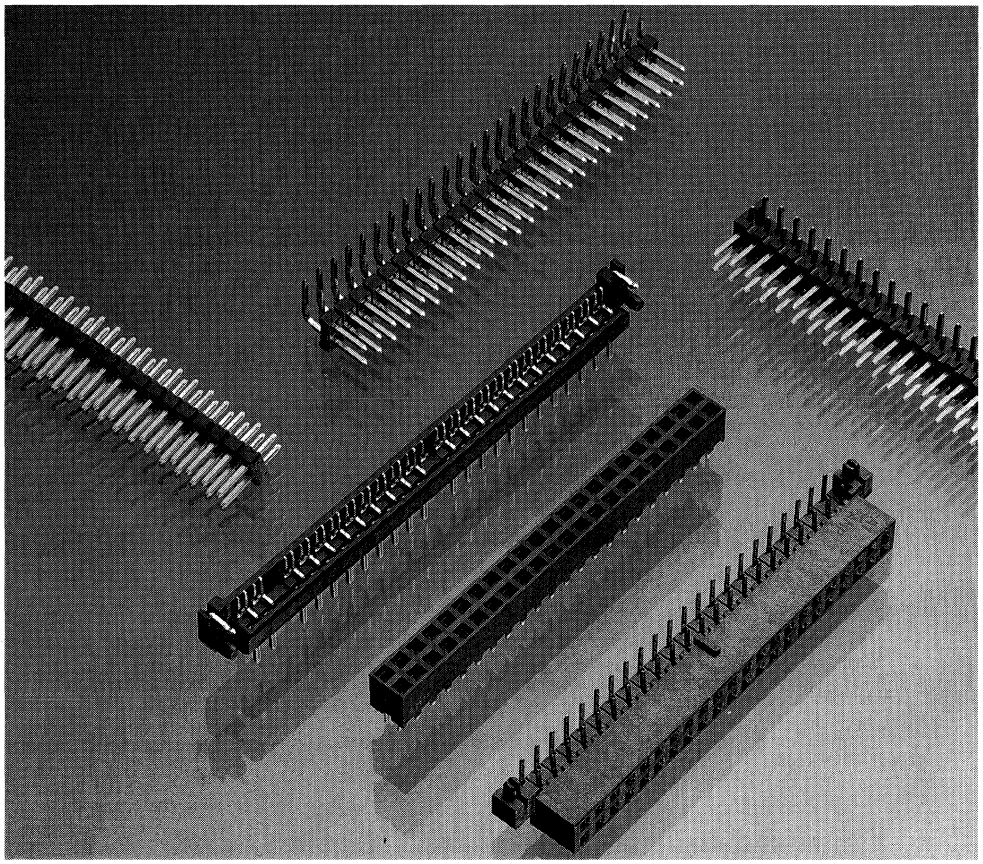
Specifications subject to change.

1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

METRIC

AMPMODU 2 mm Connectors (Board-to-Board)



Product Facts

- 2.0 x 2.0 [.08 x .08] centerline spacing
- Two-piece, double-row connector system
- Unshrouded header styles include: breakaway, wide body and surface-mount
- All headers with 0.5 [.02] square posted contacts
- Surface-mount right-angle headers available in four mating pin-to-pc board dimensional relationships
- Surface-mount right-angle headers compatible with standard surface-mount processing (VPR, IR)
- Closed top-entry receptacle assemblies include; vertical mount, raised vertical mount and right-angle
- Receptacle contacts employ dual cantilever beams for two-point electrical stability
- Duplex (gold/tin-lead) plated posted contacts and receptacle contacts
- Low cost alternative gold/palladium duplex plating available on surface-mount headers
- Thermoplastic housing material, 94V-0 rated
- Recognized under the Component Program of Underwriters Laboratories Inc., File No. E28476
- Certified by Canadian Standards Association, File No. LR7189
- Produced under a Quality Management System certified to ISO 9001

A copy of the certificate is available upon request.

AMPMODU 2 mm connectors reliably and economically meet the packaging and interconnection requirements of today's miniature sophisticated electronics. They are ideal for "Lap Top" and "Note Book" personal computers and disk drive applications.

This versatile double-row connector system is comprised of various straight and right-angle posted headers for thru-hole and surface mounting and several closed top-entry receptacle assemblies for vertical and horizontal mounting. Headers and receptacle assemblies are available in selected sizes ranging from 4 through 64 positions.

Thru-hole breakaway headers feature brass straight or right-angle posts with a post length of 4.0 [.16] and lead lengths of 1.5 [.06], 1.8 [.07] and 2.6 [.10]. The thru-hole wide body headers use copper alloy right-angle posts with a post length of 4.0 [.16] and lead lengths of 1.5 [.06] or 2.6 [.10].

Surface-mount right-angle headers are designed to allow low profile or mid-mount pc board orientation for customer low profile applications. Four mating pin-to-pc board dimensional relationships are offered.

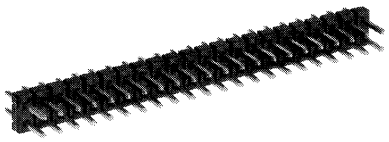
These headers are available with 0.00076 [.000030] gold or gold flash over palladium-nickel plating options. Also, two metallic spring hold-downs on each side of the header work with the plastic location features for pc board retention prior to solder reflow. The header housings are made of a high temperature material compatible with standard surface-mount processing (VPR and IR).

The receptacle assemblies employ phosphor bronze contacts with dual cantilever beams and built-in anti-overstress. This feature, coupled with duplex (gold/tin-lead) plating of the header posts and receptacle contacts, provide superior electrical performance as well as excellent solderability.

METRIC

Breakaway Headers, Unshrouded, Double Row, Thru-Hole Mount

0.5 [.02] Square Straight Posted Contacts



Material and Finish

Housing—Black thermoplastic, 94V-0 rated

Posted Contacts—Brass, duplex plated as follows:

A—0.00020 [.000008] min. gold on contact area, 0.00100 [.000039] min. tin-lead on solder area, with entire contact underplated 0.00130 [.000051] min. nickel

B—0.00076 [.000030] min. gold on contact area, 0.00100 [.000039] min. tin-lead on solder area, with entire contact underplated 0.00130 [.000051] min. nickel

Mates with— Receptacle Assemblies, Vertical Mount; Receptacle Assemblies, Vertical Mount, Raised (6.0 [.24]) Stack Height; and Receptacle Assemblies with Hold-downs, Right-Angle Mount

Note: 24 Pos. Housing Dim. (Typ.)—24.0 [.94] L x 4.2 [.17] W

No. of Positions	Header Part Numbers			
	Lead Length 1.5 [.06]** Contact Plating		Lead Length 2.6 [.10]** Contact Plating	
	Duplex A	Duplex B	Duplex A	Duplex B
4	178751-1	2-178751-5	176264-1	1-176264-6
6	178751-2	2-178751-6	176264-2	1-176264-7
8	178751-3	2-178751-7	176264-3	1-176264-8
10	178751-4	2-178751-8	176264-4	1-176264-9
12	178751-5	2-178751-9	176264-5	2-176264-0
14	178751-6	3-178751-0	176264-6	2-176264-1
16	178751-7	3-178751-1	176264-7	2-176264-2
18	178751-8	3-178751-2	176264-8	2-176264-3
20	178751-9	3-178751-3	176264-9	2-176264-4
22	1-178751-0	3-178751-4	1-176264-0	2-176264-5
24	1-178751-1	3-178751-5	1-176264-1	2-176264-6
26	1-178751-2	3-178751-6	1-176264-2	2-176264-7
28	1-178751-3	3-178751-7	1-176264-3	2-176264-8
30	1-178751-4	3-178751-8	1-176264-4	2-176264-9
32	1-178751-5	3-178751-9	1-176264-5	3-176264-0
34	—	—	3-176264-1	4-176264-0
36	—	—	3-176264-2	4-176264-1
38	—	—	3-176264-3	4-176264-2
40	—	—	3-176264-4	4-176264-3
42	2-178751-0	4-178751-4	3-176264-5	4-176264-4
44	—	—	3-176264-6	4-176264-5
46	2-178751-2	4-178751-6	3-176264-7	4-176264-6
48	—	—	3-176264-8	4-176264-7
50	2-178751-4	4-178751-8	3-176264-9	4-176264-8

**1.5 [.06] lead length for use with 0.5 [.02] thick Pc boards; 2.6 [.10] lead length for use with 1.6 [.062] thick Pc boards.
Note: Post length is 4.0 [.16]

SOURCE: Catalog 82771

Specifications subject to change.

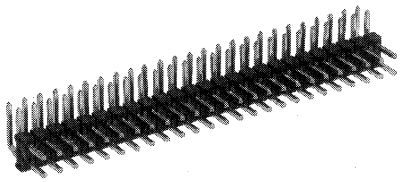
1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

METRIC

Breakaway Headers, Unshrouded, Double Row, Thru-Hole Mount
(Continued)

0.5 [.02] Square Right-Angle Posted Contacts



Material and Finish

Housing—Black thermoplastic, 94V-0 rated

Posted Contacts—Brass, duplex plated as follows:

A—0.00020 [.000008] min. gold on contact area, 0.00100 [.000039] min. tin-lead on solder area, with entire contact underplated 0.00130 [.000051] min. nickel

B—0.00076 [.000030] min. gold on contact area, 0.00100 [.000039] min. tin-lead on solder area, with entire contact underplated 0.00130 [.000051] min. nickel

Mates with— Receptacle Assemblies, Vertical Mount; Receptacle Assemblies, Vertical Mount, Raised (6.0 [.24]) Stack Height; and Receptacle Assemblies with Hold-downs, Right-Angle Mount

Note: 24 Pos. Housing Dim. (Typ.)— 24.0 [.94] L x 4.2 [.17] W

No. of Postions	Header Part Numbers			
	Lead Length 1.8 [.07]** Contact Plating		Lead Length 2.6 [.10]** Contact Plating	
	Duplex A	Duplex B	Duplex A	Duplex B
4	178698-1	2-178698-5	176837-1	2-176837-5
6	178698-2	2-178698-6	176837-2	2-176837-6
8	178698-3	2-178698-7	176837-3	2-176837-7
10	178698-4	2-178698-8	176837-4	2-176837-8
12	178698-5	2-178698-9	176837-5	2-176837-9
14	178698-6	3-178698-0	176837-6	3-176837-0
16	178698-7	3-178698-1	176837-7	3-176837-1
18	178698-8	3-178698-2	176837-8	3-176837-2
20	178698-9	3-178698-3	176837-9	3-176837-3
22	1-178698-0	3-178698-4	1-176837-0	3-176837-4
24	1-178698-1	3-178698-5	1-176837-1	3-176837-5
26	1-178698-2	3-178698-6	1-176837-2	3-176837-6
28	1-178698-3	3-178698-7	1-176837-3	3-176837-7
30	1-178698-4	3-178698-8	1-176837-4	3-176837-8
32	1-178698-5	3-178698-9	1-176837-5	3-176837-9
34	—	—	1-176837-6	4-176837-0
36	—	—	1-176837-7	4-176837-1
38	—	—	1-176837-8	4-176837-2
40	—	—	1-176837-9	4-176837-3
42	2-178698-0	4-178698-4	2-176837-0	4-176837-4
44	—	—	2-176837-1	4-176837-5
46	2-178698-2	4-178698-6	2-176837-2	4-176837-6
48	—	—	2-176837-3	4-176837-7
50	2-178698-4	4-178698-8	2-176837-4	4-176837-8

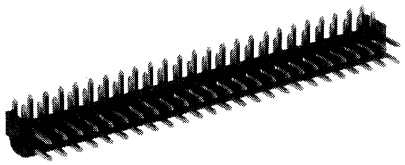
**1.8 [.07] lead length for use with 0.8 [.03] thick Pc boards; 2.6 [.10] lead length for use with 1.6 [.062] thick Pc boards.
Note: Post length is 4.0 [.16]

SOURCE: Catalog 82771

METRIC

Wide Body Headers, Unshrouded, Double Row, Thru-Hole Mount

0.5 [.02] Square Right-Angle Posted Contacts



Material and Finish

Housing—Black thermoplastic, 94V-0 rated

Posted Contacts—Copper alloy, duplex plated as follows:

A—0.00076 [.000030] min. gold on contact area, 0.00100 [.000039] min. tin-lead on solder area, with entire contact underplated 0.00130 [.000051] min. nickel

B—0.00038 [.000015] min. gold on contact area, 0.00100 [.000039] min. tin-lead on solder area, with entire contact underplated 0.00130 [.000051] min. nickel

Mates with— Receptacle Assemblies, Vertical Mount; Receptacle Assemblies, Vertical Mount, Raised (6.0 [.24]) Stack Height; and Receptacle Assemblies with Hold-downs, Right-Angle Mount

Note: 32 Pos. Housing Dim. (Typ.)—32.0 [1.26] L x 4.0 [.16] W x 4.2 [.17] H

No. of Positions	Header Part Numbers			
	Lead Length 1.5 [.06]** Contact Plating		Lead Length 2.6 [.10]** Contact Plating	
	Duplex A	Duplex B	Duplex A	Duplex B
4	84023-1	84022-1	84025-1	84024-1
6	84023-2	84022-2	84025-2	84024-2
8	84023-3	84022-3	84025-3	84024-3
10	84023-4	84022-4	84025-4	84024-4
12	84023-5	84022-5	84025-5	84024-5
14	84023-6	84022-6	84025-6	84024-6
16	84023-7	84022-7	84025-7	84024-7
18	84023-8	84022-8	84025-8	84024-8
20	84023-9	84022-9	84025-9	84024-9
22	1-84023-0	1-84022-0	1-84025-0	1-84024-0
24	1-84023-1	1-84022-1	1-84025-1	1-84024-1
26	1-84023-2	1-84022-2	1-84025-2	1-84024-2
28	1-84023-3	1-84022-3	1-84025-3	1-84024-3
30	1-84023-4	1-84022-4	1-84025-4	1-84024-4
32	1-84023-5	1-84022-5	1-84025-5	1-84024-5
34	1-84023-6	1-84022-6	1-84025-6	1-84024-6
36	1-84023-7	1-84022-7	1-84025-7	1-84024-7
38	1-84023-8	1-84022-8	1-84025-8	1-84024-8
40	1-84023-9	1-84022-9	1-84025-9	1-84024-9
42	2-84023-0	2-84022-0	2-84025-0	2-84024-0
44	2-84023-1	2-84022-1	2-84025-1	2-84024-1
46	2-84023-2	2-84022-2	2-84025-2	2-84024-2
48	2-84023-3	2-84022-3	2-84025-3	2-84024-3
50	2-84023-4	2-84022-4	2-84025-4	2-84024-4
52	2-84023-5	2-84022-5	2-84025-5	2-84024-5
54	2-84023-6	2-84022-6	2-84025-6	2-84024-6
56	2-84023-7	2-84022-7	2-84025-7	2-84024-7
58	2-84023-8	2-84022-8	2-84025-8	2-84024-8
60	2-84023-9	2-84022-9	2-84025-9	2-84024-9
62	3-84023-0	3-84022-0	3-84025-0	3-84024-0
64	3-84023-1	3-84022-1	3-84025-1	3-84024-1

**1.5 [.06] lead length for use with 0.3 [.01] max. thick Pc boards; 2.6 [.10] lead length for use with 1.6 [.062] thick Pc boards.
Note: Post length is 4.0 [.16]

SOURCE: Catalog 82771

Specifications subject to change.

1-800-522-6752
Product Information Center/ AMP FAX Service

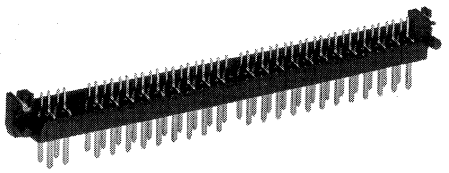
1-800-722-1111
Tooling/Technical Assistance Center

METRIC

Horizontal Headers with Hold-downs, Unshrouded, Double Row, Surface-Mount

1.25 [.050] Mating Pin-to-Pc Board Dimension

Two metallic spring hold-downs on each end of surface-mount right-angle header work with plastic location features for Pc board retention prior to solder flow.



Note: 50 Pos. Housing Dim. (Typ.)—56.2 [2.21] L x 3.73 [.147] W x 4.50 [.177] H

No. of Positions	Header Part Numbers Contact Plating		Posts Omitted
	Duplex A	Duplex B	
50	84094-1	—	24, 41, 42
	84094-2	84094-5	25, 45, 46
	84094-3	84094-6	5, 6, 26
	84094-4	—	9, 10, 27

Material and Finish

Housing—Black polyphenylene sulfide, 94V-0 rated

Posted Contacts—Copper alloy, duplex plated as follows:

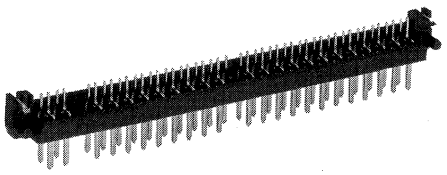
A—Gold flash over 0.00076 [.000030] min. palladium-nickel on contact area, 0.00508 [.000200] min. tin-lead on solder area, with entire contact underplated 0.00130 [.000051] min. nickel

B—0.00010 [.000004] min. gold on contact area, 0.00508 [.000200] min. tin-lead on solder area, with entire contact underplated 0.00130 [.000051] min. nickel

Mates with— Receptacle Assemblies, Vertical Mount; Receptacle Assemblies, Vertical Mount, Raised (6.0 [.24]) Stack Height; and Receptacle Assemblies with Hold-downs, Right-Angle Mount

1.25 [.050] Mating Pin-to-Pc Board Dimension

Two metallic spring hold-downs on each end of surface-mount right-angle header work with plastic location features for Pc board retention prior to solder flow.



Mates with— Receptacle Assemblies, Vertical Mount; Receptacle Assemblies, Vertical Mount, Raised (6.0 [.24]) Stack Height; and Receptacle Assemblies with Hold-downs, Right-Angle Mount

Note: 12 Pos. Housing Dim. (Typ.)—18.20 [.717] L x 3.73 [.147] W x 4.50 [.177] H

No. of Positions	Header Part Number	Posts Omitted
12	84104-1	None

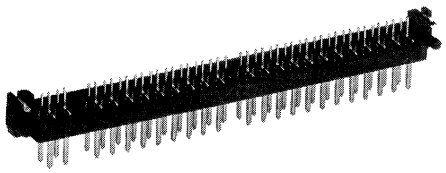
METRIC

Horizontal Headers with Hold-downs, Unshrouded, Double Row, Surface-Mount (Continued)

1.00 [.039] Mating Pin-to-Pc Board Dimension

Two metallic spring hold-downs on each end of surface-mount right-angle header work with plastic location features for Pc board retention prior to solder flow.

Mates with— Receptacle Assemblies, Vertical Mount; Receptacle Assemblies, Vertical Mount, Raised (6.0 [.24]) Stack Height; and Receptacle Assemblies with Hold-downs, Right-Angle Mount



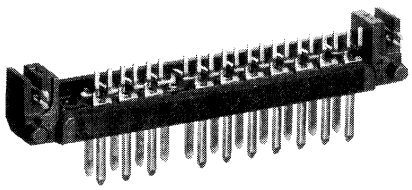
Note: 20 Pos. Housing Dim. (Typ.)—26.03 [1.025] L x 4.00 [.157] W x 3.72 [.146] H

No. of Positions	Header Part Numbers	Posts Omitted
18	84108-6	7, 8, 18
	84108-4	None
20	84108-5	None
34	84108-3	14
50	84108-2	25, 45, 46
	84108-1	24, 41, 42

0.66 [.026] Mating Pin-to-Pc Board Dimension

Two metallic spring hold-downs on each end of surface-mount right-angle header work with plastic location features for Pc board retention prior to solder flow.

Mates with— Receptacle Assemblies, Vertical Mount; Receptacle Assemblies, Vertical Mount, Raised (6.0 [.24]) Stack Height; and Receptacle Assemblies with Hold-downs, Right-Angle Mount



Note: 20 Pos. Housing Dim. (Typ.)—26.03 [1.025] L x 4.00 [.157] W x 4.80 [.189] H

No. of Positions	Header Part Numbers	Posts Omitted
6	84110-5	3
20	84110-4	13
50	84110-3	5, 6, 26
	84110-2	25, 45, 46
	84110-1	24, 41, 42

0.32 [.013] Mating Pin-to-Pc Board Dimension

Two metallic spring hold-downs on each end of surface-mount right-angle header work with plastic location features for Pc board retention prior to solder flow.

Material and Finish

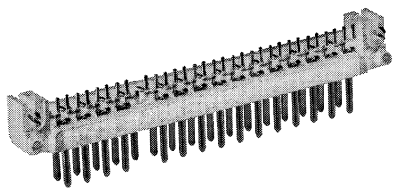
Housing—Black polyphenylene sulfide, 94V-0 rated

Posted Contacts—Copper alloy, duplex plated as follows:

A—Gold flash over 0.00076 [.000030] min. palladium-nickel on contact area, 0.00508 [.000200] min. tin-lead on solder area, with entire contact underplated 0.00130 [.000051] min. nickel

B—0.00076 [.000030] min. gold on contact area, 0.00508 [.00200] min. tin-lead on solder area, with entire contact underplated 0.00130 [.000051] min. nickel

Mates with— Receptacle Assemblies, Vertical Mount; Receptacle Assemblies, Vertical Mount, Raised (6.0 [.24]) Stack Height; and Receptacle Assemblies with Hold-downs, Right-Angle Mount



Note: 32 Pos. Housing Dim. (Typ.)—38.03 [1.497] L x 4.00 [.157] W x 4.80 [.189] H

No. of Positions	Header Part Numbers — Contact Plating		Posts Omitted
	Duplex A	Duplex B	
24	84156-3	—	11, 12, 17, 18
	—	84156-2	9
	—	84156-1	1, 2, 9
32	—	84156-4	1, 2, 9
	—	84156-5	9

SOURCE: Catalog 82771

Specifications subject to change.
1-800-522-6752
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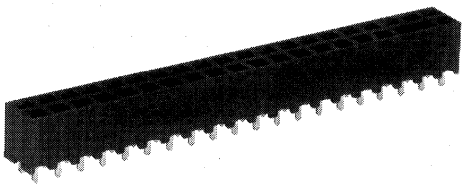
1-800-722-1111
Tooling/Technical Assistance Center

METRIC

Receptacle Assemblies, Double Row, Vertical Mount

Closed Top Entry



Material and Finish

Housing—Black thermoplastic, 94V-0 rated

Receptacle Contacts—Phosphor bronze, duplex plated as follows:

A—0.00020 [.000008] min. gold on contact area, 0.00100 [.000039] min. tin-lead on solder area, with entire contact underplated 0.00130 [.000051] min. nickel

B—0.00076 [.000030] min. gold on contact area, 0.00100 [.000039] min. tin-lead on solder area, with entire contact underplated 0.00130 [.000051] min. nickel

Mates with— Breakaway Headers, Wide Body Headers, and Horizontal Headers with Hold-downs

Note: 28 Pos. Housing Dim. (Typ.)—28.0 [1.10] L x 4.0 [.16] W x 4.5 [.18] H

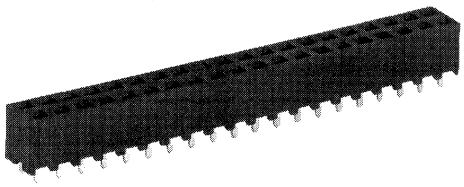
No. of Positions	Receptacle Assembly Part Numbers			
	Lead Length 1.2 [.05]** Contact Plating		Lead Length 2.6 [.10]** Contact Plating	
	Duplex A	Duplex B	Duplex A	Duplex B
4	176135-1	2-176135-5	1-176135-3	3-176135-7
6	4-176135-9	5-176135-5	5-176135-2	5-176135-8
8	176135-2	2-176135-6	1-176135-4	3-176135-8
10	176135-3	2-176135-7	1-176135-5	3-176135-9
12	176135-4	2-176135-8	1-176135-6	4-176135-0
14	176135-5	2-176135-9	1-176135-7	4-176135-1
16	176135-6	3-176135-0	1-176135-8	4-176135-2
18	176135-7	3-176135-1	1-176135-9	4-176135-3
20	176135-8	3-176135-2	2-176135-0	4-176135-4
22	176135-9	3-176135-3	2-176135-1	4-176135-5
24	1-176135-0	3-176135-4	2-176135-2	4-176135-6
26	1-176135-1	3-176135-5	2-176135-3	4-176135-7
28	5-176135-0	5-176135-6	5-176135-3	5-176135-9
30	5-176135-1	5-176135-7	5-176135-4	6-176135-0
32	1-176135-2	3-176135-6	2-176135-4	4-176135-8
34	6-176135-1	6-176135-7	6-176135-4	7-176135-0
36	7-176135-3	8-176135-5	7-176135-9	9-176135-1
38	7-176135-4	8-176135-6	8-176135-0	9-176135-2
40	6-176135-2	6-176135-8	6-176135-5	7-176135-1
42	7-176135-5	8-176135-7	8-176135-1	9-176135-3
44	7-176135-6	8-176135-8	8-176135-2	9-176135-4
46	7-176135-7	8-176135-9	8-176135-3	9-176135-5
48	7-176135-8	9-176135-0	8-176135-4	9-176135-6
50	6-176135-3	6-176135-9	6-176135-6	7-176135-2

**1.2 [.05] lead length for use with 0.3 [.01] max. thick Pc boards; 2.6 [.10] lead length for use with 1.6 [.062] thick Pc boards.

SOURCE: Catalog 82771

METRIC

Receptacle Assemblies, Double Row, Vertical Mount



Closed Top Entry with Keying

Material and Finish:

Housing—Black glass-filled nylon, 94V-0 rated

Receptacle Contacts—Phosphor bronze, duplex plated as follows:

A—0.00020 [.000008] min. gold on contact area, 0.00100 [.000039] min. tin-lead on solder area, with entire contact underplated 0.00130 [.000051] min. nickel

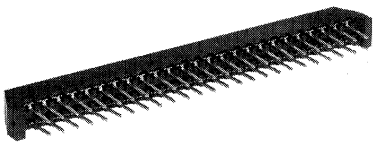
B—0.00076 [.000030] min. gold on contact area, 0.00100 [.000039] min. tin-lead on solder area, with entire contact underplated 0.00130 [.000051] min. nickel

Note: 14 Pos. Housing Dim. (Typ.)—14.0 [.55] L x 4.0 [.16] W x 4.5 [.18] H

No. of Positions	Lead Length**	Receptacle Assembly Part Numbers — Contact Plating		Keyed Positions (See Note)
		Duplex A	Duplex B	
8	**1.2** [.05]	—	1-176136-3	1, 6
10	**1.2** [.05]	176136-1	176136-3	3, 8
	2.6 [.10]	176136-2	176136-4	3, 8
12	**2.0** [.08]	1-176136-0	—	3
		1-176136-1	—	4
		1-176136-5	—	2
14	**2.0** [.08]	176136-5	176136-7	2
	2.6 [.10]	176136-6	176136-8	2
40	**1.2** [.05]	—	2-176136-1	17
	2.6 [.10]	—	2-176136-3	17
44	**1.2** [.05]	1-176136-6	—	20
	1.5 [.06]	2-176136-5	—	20
	2.6 [.10]	1-176136-7	—	20
50	**2.6** [.10]	1-176136-8	—	26
		—	2-176136-4	27

**1.2 [.05] lead length for use with 0.3 [.01] max. thick Pc boards; 1.5 [.06] lead length for use with 0.6 [.02] max. thick Pc boards; 2.0 [.08] lead length for use with 1.0 [.040] thick Pc boards; 2.6 [.10] lead length for use with 1.6 [.062] thick Pc boards.
Note: Keyed circuits contain contact with mating face molded shut.

Closed Top Entry, Sealed with Solder Barrier Tape



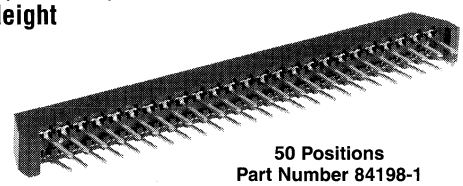
28 Positions
Part Number 84129-1

Note: Solder Barrier Tape provides protection for special applications, such as upside-down hand soldering

Mates with— Breakaway Headers, Wide Body Headers, and Horizontal Headers with Hold-downs

Note: 28 Pos. Housing Dim. (Typ.)—
28.0 [1.10] L x 4.0 [.16] W
x 4.7 [.185] H
2.6 [.10] lead length for use with 1.6 [.062] thick Pc board.

Closed Top Entry, Raised (6.0 [.24]) Stack Height



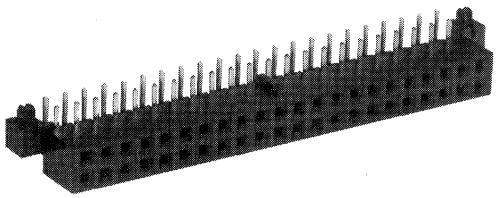
50 Positions
Part Number 84198-1

Mates with— Breakaway Headers, Wide Body Headers, and Horizontal Headers with Hold-downs

Note: 50 Pos. Housing Dim. (Typ.)—
53.90 [2.122] L x 4.0 [.16] W
x 6.0 [.24] H
2.8 [.11] lead length for use with 2.0 [.08] thick Pc board.

Receptacle Assemblies with Hold-downs, Double Row, Right-Angle Mount

Closed Top Entry with Hold-downs



Note: 44 Pos. Housing Dim. (Typ.)—49.8 [1.96] L x 7.4 [.29] W x 6.13 [.241] H

Mates with— Breakaway Headers, Wide Body Headers, and Horizontal Headers with Hold-downs

No. of Positions	Receptacle Assembly Part Numbers
14	84140-2
44	84140-1
50	84140-3

Note: Lead length 1.37 [.054]

SOURCE: Catalog 82771

Specifications subject to change.

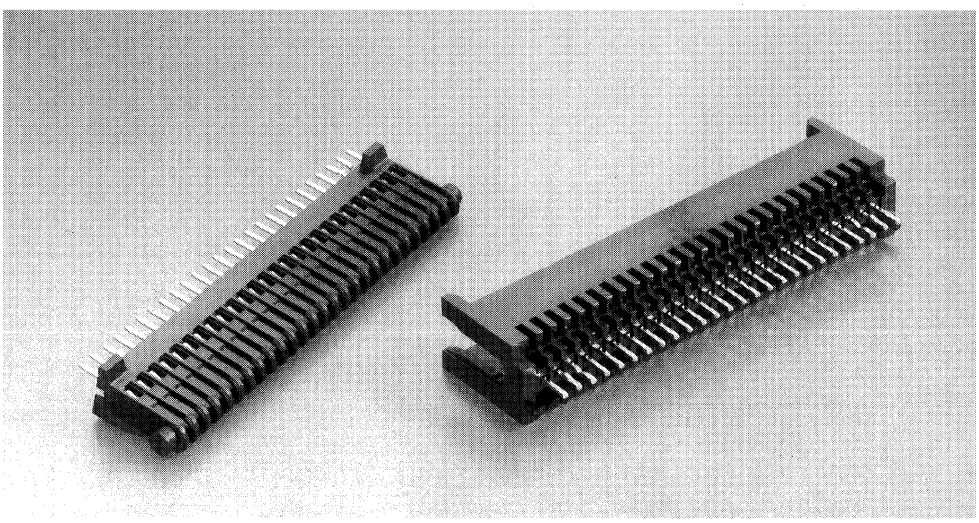
1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

METRIC

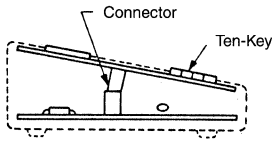
AMP ROCKER MATE Connectors (Board-to-Board) 2.0 mm [.079] Centerline

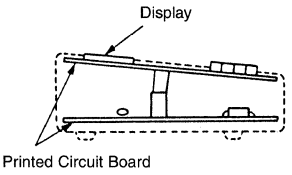
Stack Height Range 15 [.59] to 19.8 [.78]

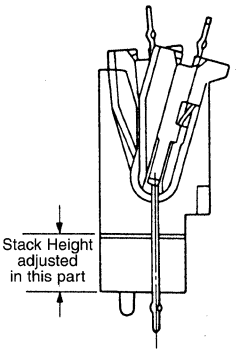


Product Facts

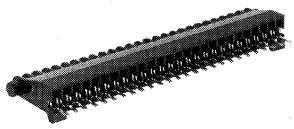
- A mounting angle-variable connector for board-to-board connection
- Prevents fretting of the contact area by vibration
- Contact pressure exceeds 250 g
- Contact area dimpled to concentrate contact pressure; double-dimpled to prevent eccentric displacement by rotation
- Header height can be adjusted easily—the connector is compatible with any dimensional requirements between boards, providing greater flexibility in product designs
- When mated, the receptacle connector is always butted against the header and capable of having a positive locking mechanism
- Connector's rotating angle can be changed readily to meet a wide range of product designs and connector can be mated and disengaged freely within specified angles
- Housing is provided with a leg on one side to prevent a reverse mounting when applied onto the printed circuit board
- Self-retaining feature post to prevent floating when soldering onto the board
- Available in sizes of 13-, 16-, 20- and 26-positions
- Outside dimension: 15-20 mm (H) x 12-44 mm (W) x 9 mm (D)
- Recommended pc board thickness—1.6 [.062]
- Board mounting hole is 0.8 ± 0.05 [.031 ± .002] in diameter



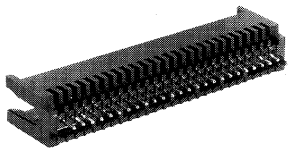




Receptacle Connectors and Post Headers



Receptacle Connectors



Post Headers

Note: 26 Pos. Housing Dim. (Typ.)—
Receptacle, 56 [2.20] L x 6.6 [.26] W x 12.3 [.48] H;
Post Header, 56 [2.20] L x 9 [.35] W x 14 [.55] H

No. of Pos.	Stack Height	Part Nos. (Encased in PVC Tube)	
		Receptacle Connector (Tube Qty.)	Post Header (Tube Qty.)
13	**15.4** [.61]	176472-3 (15)	1-176473-3 (15)
	19.8 [.78]		176473-3 (15)
16	**18.0** [.71]	176472-5 (13)	1-176473-5 (13)†
	19.8 [.78]		176473-5 (13)
20	**15.0** [.59]	176472-2 (10)	1-176473-2 (10)†
	15.4 [.61]		176473-2 (10)
	19.8 [.78]		2-176473-2 (10)
26	**15.0** [.59]	176472-4 (8)	176473-4 (8)

†Natural Color

SOURCE: Catalog 124962

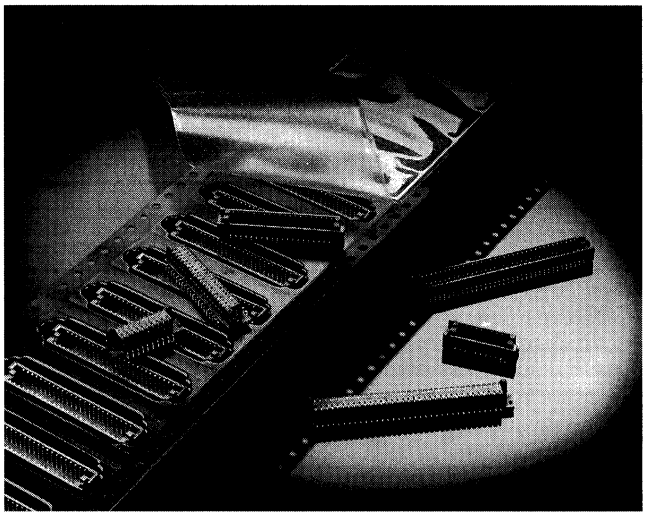
Specifications subject to change.

1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

METRIC

AMPMODU Metristak 1.0 mm Connector System



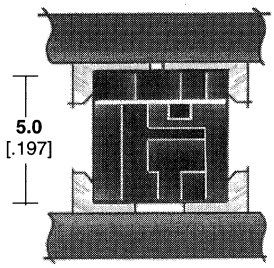
Product Facts

- 1.0 [.039] contact centerline
- 5.0 [.197] parallel board-to-board stack height
- Surface-mount connectors
- Connector sizes from 20 thru 70 positions in 10-position increments, with capabilities of up to 110 positions
- Connector polarization
- Ribbon style, tongue-and-groove contact interface
- Short electrical interconnection length . . . 50 picoseconds
- Connectors loaded in EIA 481 carrier tape
- Molded-in connector alignment pins
- Positive-lock mating
- Excellent true position of connector solder leads
- Connector coplanarity 0.076 [.003] exceeds industry standards
- 0.29 [.011] housing standoff
- 0.00076 [.000030] gold duplex plated contacts
- Recognized under the Component Program of Underwriters Laboratories Inc., File No. E28476
- Certification pending by Canadian Standards Association

The AMPMODU Metristak connector system is a surface-mount interconnection system with high-density, blind mateable, parallel board stacking connectors. This system provides the capability and flexibility of locating board-to-board connectors as independent modules at any location on the surface of planar boards. The miniature connectors reduce the electrical interconnection length in support of high-speed data transmission.

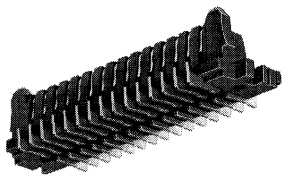
AMPMODU Metristak connectors are designed to be applied to pc boards from a carrier tape. This complies with EIA 481 requirements for high-speed, vacuum pick-and-place equipment, thus providing the economies associated with automatic high-speed insertion. Since pickup tape is not required for placement equipment to pick up the product, additional savings are realized due to the elimination of secondary operations associated with pickup tape removal and connector cleaning.

Double-row plug and receptacle assemblies feature contacts on 1.0 [.039] centerlines and, when mated, result in a 5.0 [.197] board-to-board stack height. Contacts are tongue-and-groove style for ruggedness and are duplex plated with gold on the mating face for electrical reliability and tin-lead on the solder leads to enhance solderability. This two-piece connector system also has an integral alignment mechanism molded in to facilitate blind mating. The connector design parameters allow the flexibility of placing more than one set of mating connectors side-to-side on the planar board surface. AMP offers these connectors in sizes of 20 through 70 positions in 10-position increments, with capabilities of producing up to 110 positions.



Parallel Board-to-Board Stack Height

Vertical Plug Assemblies

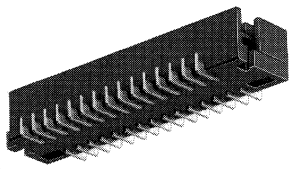


Note: 30 Pos. Housing Dim. (Typ.)— 19.25 [.758] L x 4.70 [.185] W x 3.93 [.155] H

No. of Positions*	Plug Assembly Part Numbers**
20	146056-1
30	146056-2
40	146056-3
50	146056-4
60	146056-5
70	146056-6

*Connector sizes up to 110 positions (in 10-position increments) can be made available, consult AMP.
**Connectors packaged per EIA 481 requirements.

Vertical Receptacle Assemblies



Note: 30 Pos. Housing Dim. (Typ.)— 19.25 [.758] L x 4.70 [.185] W x 3.32 [.131] H

No. of Positions*	Receptacle Assembly Part Numbers**
20	535697-1
30	535697-2
40	535697-3
50	535697-4
60	535697-5
70	535697-6

*Connector sizes up to 110 positions (in 10-position increments) can be made available, consult AMP.
**Connectors packaged per EIA 481 requirements.

SOURCE: Catalog 65790

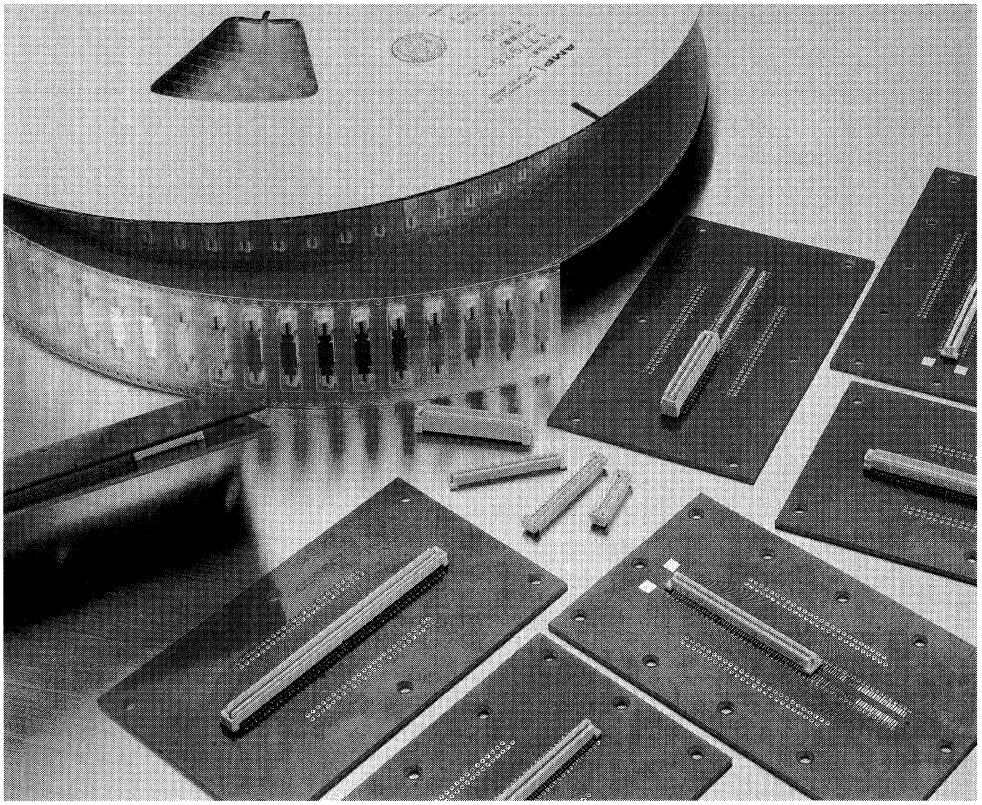
Specifications subject to change.

1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

METRIC

AMP FH (Free Height) 0.8 mm Surface-Mount Connectors (Board-to-Board)



Product Facts

- For board stacking applications
- High density packaging on 0.8 [.031] centerline spacing
- Available sizes from 40 to 200 positions (in 20 position increments)
- Board stacking heights available from 5 [.197] to 16 [.630] (in 1 [.039] increments)
- Plug and receptacle assemblies mounted on embossed tape for compatibility with automated applications (40, 60 and 80 positions only)
- Bellows type spring contacts are resistant to scooping and stubbing during mating and unmating
- Positioning bosses for proper on-board orientation
- Surface-mount holddown feature available upon request
- Produced under a Quality Management System certified to ISO 9001

A copy of the certificate is available upon request.

ISO 9001 Certified

AMP FH 0.8 mm surface-mount connectors are designed for board stacking applications using subminiature connectors to meet today's electronic industry requirements for high density packaging.

It is possible to save more than 50% of the required board space when compared to conventional 1.27 [.050] centerline connectors.

FH 0.8 mm connectors are ideally suited for application downsizing, such as PCs (Notebook, Pen Pad, etc.), cellular telephones and other electronic equipment requiring miniature connector packaging.

Vertical board-mount plug and receptacle assemblies are available. By mating combinations of plug and receptacle assembly housing heights, board-to-board stack heights from 5 [.197] to 16 [.630] (in 1 [.039] increments) can be achieved. 40-, 60- and 80-position plug and receptacle assemblies are mounted on embossed tape that complies with JIS-C-0808 specifications and are compatible with automated assembly applications.

The receptacle assemblies are preloaded with AMP's unique bellows-type spring contacts for reliable electrical connection with the plug assemblies.

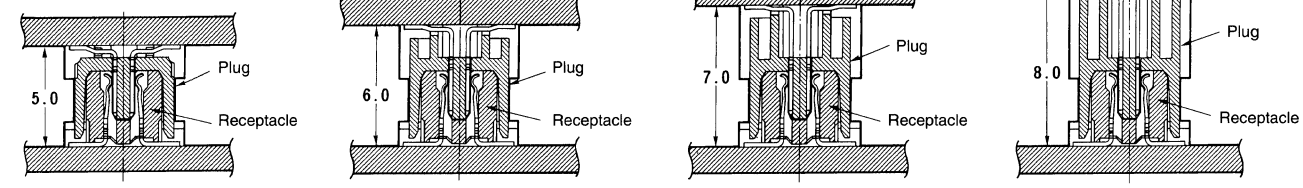
Surface-mount solder tines permit fast assembly operation.

SOURCE: Catalog 65981

METRIC

Board-to-Board Stacking Heights (By Plug/Receptacle Assembly Combinations)

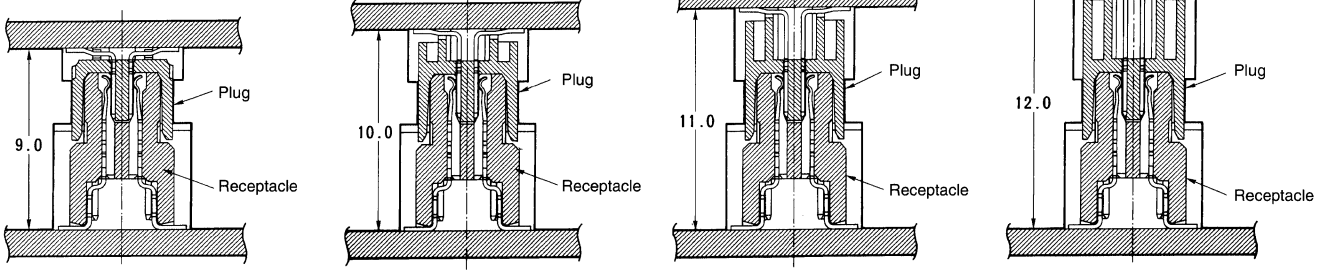
Part No.: 177984-□
Part No.: 179029-□
Part No.: 179030-□
Part No.: 179031-□



Part No.: 177983-□

5 [.197] Stacking Height | 6 [.236] Stacking Height | 7 [.276] Stacking Height | 8 [.315] Stacking Height

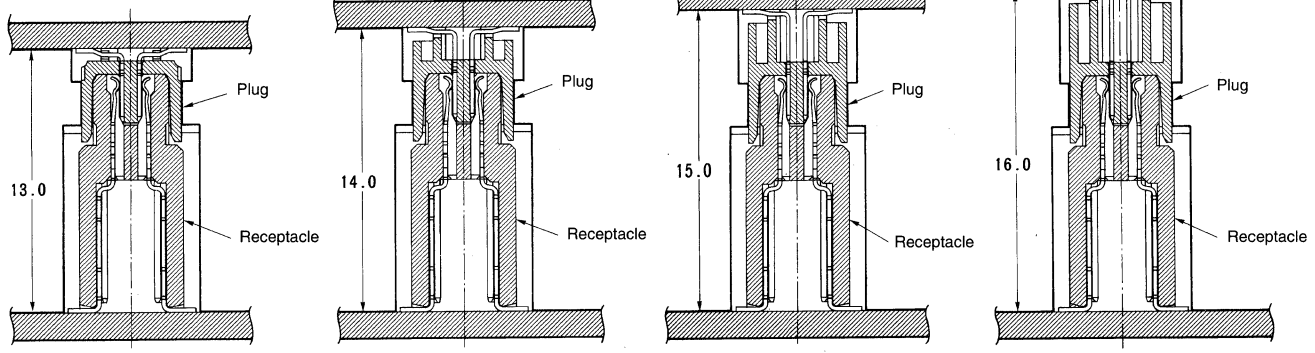
Part No.: 177984-□
Part No.: 179029-□
Part No.: 179030-□
Part No.: 179031-□



Part No.: 5-179009-□

9 [.354] Stacking Height | 10 [.394] Stacking Height | 11 [.433] Stacking Height | 12 [.472] Stacking Height

Part No.: 177984-□
Part No.: 179029-□
Part No.: 179030-□
Part No.: 179031-□



Part No.: 5-179010-□

13 [.512] Stacking Height | 14 [.551] Stacking Height | 15 [.590] Stacking Height | 16 [.630] Stacking Height

Note: For specific dash nos. of sizes 40 to 200 positions (in 20-position increments), see next page.

SOURCE: Catalog 65981

Specifications subject to change.

1-800-522-6752
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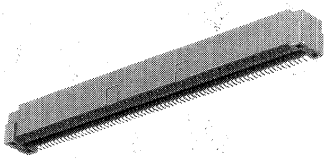
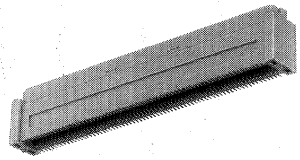
1-800-722-1111
Tooling/Technical Assistance Center

METRIC

Vertical Plug and Receptacle Assemblies



Plug



Receptacle

Note: 80 Pos. Plug Housing Dim. (Typ.)—37.80 [1.488] L x 6.0 [.236] W x 4.6 [.181] H

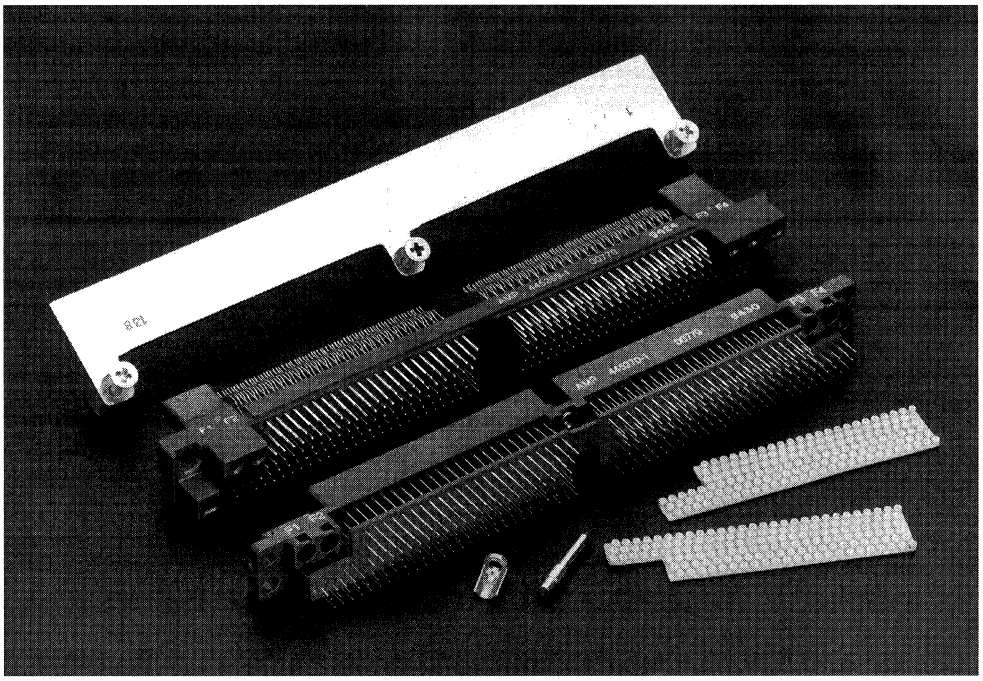
Stacking Heights (Board-to-Board)	Description	Vertical Plug/Receptacle Part No. Combinations* No. of Positions								
		40	60	80	100	120	140	160	180	200
5 [.197]	5 mm Plug	177984-1	177984-2	177984-3	177984-4	177984-5	177984-6	177984-8	—	1-177984-0
	5 mm Receptacle	177983-1	177983-2	177983-3	177983-4	177983-5	177983-6	177983-8	—	1-177983-0
6 [.236]	6 mm Plug	179029-1	179029-2	179029-3	179029-4	—	179029-6	179029-8	—	—
	5 mm Receptacle	177983-1	177983-2	177983-3	177983-4	177983-5	177983-6	177983-8	—	1-177983-0
7 [.276]	7 mm Plug	—	179030-2	—	179030-4	179030-5	179030-6	179030-8	—	1-179030-0
	5 mm Receptacle	177983-1	177983-2	177983-3	177983-4	177983-5	177983-6	177983-8	—	1-177983-0
8 [.315]	8 mm Plug	179031-1	179031-2	179031-3	—	179031-5	179031-6	—	179031-9	—
	5 mm Receptacle	177983-1	177983-2	177983-3	177983-4	177983-5	177983-6	177983-8	—	1-177983-0
9 [.354]	5 mm Plug	177984-1	177984-2	177984-3	177984-4	177984-5	177984-6	177984-8	—	1-177984-0
	9 mm Receptacle	5-179009-1	5-179009-2	5-179009-3	5-179009-4	5-179009-5	—	5-179009-8	—	—
10 [.394]	6 mm Plug	179029-1	179029-2	179029-3	179029-4	—	179029-6	179029-8	—	—
	9 mm Receptacle	5-179009-1	5-179009-2	5-179009-3	5-179009-4	5-179009-5	—	5-179009-8	—	—
11 [.433]	7 mm Plug	—	179030-2	—	179030-4	179030-5	179030-6	179030-8	—	1-179030-0
	9 mm Receptacle	5-179009-1	5-179009-2	5-179009-3	5-179009-4	5-179009-5	—	5-179009-8	—	—
12 [.472]	8 mm Plug	179031-1	179031-2	179031-3	—	179031-5	179031-6	—	179031-9	—
	9 mm Receptacle	5-179009-1	5-179009-2	5-179009-3	5-179009-4	5-179009-5	—	5-179009-8	—	—
13 [.512]	5 mm Plug	177984-1	177984-2	177984-3	177984-4	177984-5	177984-6	177984-8	—	1-177984-0
	13 mm Receptacle	—	5-179010-2	5-179010-3	5-179010-4	5-179010-5	5-179010-6	5-179010-8	5-179010-9	6-179010-0
14 [.551]	6 mm Plug	179029-1	179029-2	179029-3	179029-4	—	179029-6	179029-8	—	—
	13 mm Receptacle	—	5-179010-2	5-179010-3	5-179010-4	5-179010-5	5-179010-6	5-179010-8	5-179010-9	6-179010-0
15 [.591]	7 mm Plug	—	179030-2	—	179030-4	179030-5	179030-6	179030-8	—	1-179030-0
	13 mm Receptacle	—	5-179010-2	5-179010-3	5-179010-4	5-179010-5	5-179010-6	5-179010-8	5-179010-9	6-179010-0
16 [.630]	8 mm Plug	179031-1	179031-2	179031-3	—	179031-5	179031-6	—	179031-9	—
	13 mm Receptacle	—	5-179010-2	5-179010-3	5-179010-4	5-179010-5	5-179010-6	5-179010-8	5-179010-9	6-179010-0

*** Note:** For mating part number sizes not shown, consult AMP.
Packaging—Tube

SOURCE: Catalog 65981

AMP-HDI 6- and 8-Row LRM (Line Replaceable Module) Connectors

This connector system is your next generation, high performance, high density packaging system and the contact system has been in use and military qualified since 1975. A connector system built with high temperature plastics which allows you a choice of soldering techniques. You will also find contact alignment tools to minimize daughter-board assembly time, thereby reducing applied costs. Couple these features with a connector system meeting the DESC LRM specification, and you will find your next generation connector.



AMP-HDI Series 6-Row 306 Position Connector with Optics

Approval

- **AMP-HDI 6-Row connectors meet DESC LRM Specification #89065, and have been qualified to it. The exceptions are the fiber optic termini, (MIL-T-29504/5) which must be procured from another source.**

Note: 6-Row Housing Dim. (Typ.)—
Plug, 5.223 [132.66] L x .505 [12.83] W x .832 [21.13] H;
Receptacle, 5.152 [130.86] L x .467 [11.86] W x .459 [11.66] H

Description		Part Number
LRM Assembly		
Plug Housing Assembly		445269-1
Interfacial Seal	Left Half (153 Pos.)	445525-1
	Right Half (153 Pos.)	445274-1
Shell	A-Side	447007-1
	B-Side	447006-1
Backplane Assembly		
Receptacle Housing Assembly		445270-1
Guide Post (2 Required)		445287-1
Keys (Up to 4 Per Housing Assembly)		445282-1

Contact Alignment Tool Kit Part No. 445506-1
Contains Contact Alignment Tool **Part No. 761712-1**, Contact Support Bar **Part No. 761714-1** and Alignment Tool Holder **Part No. 761713-1**.

AMP-HDI Series 8-Row 428 Position Connector

Note: 8-Row Housing Dim. (Typ.)—
Plug, 5.223 [132.66] L x .585 [14.86] W x .472 [11.99] H;
Receptacle, 5.152 [130.86] L x .617 [15.67] W x .443 [11.25] H

Description		Part Number
Plug Housing Assembly		
Plug Half (214 Pos.)	B-Side	447444-4
		447444-2
	A-Side	447444-3
		447444-1
Receptacle Housing Assembly		447447-1
Shell	A-Side	447445-1
	B-Side	447446-1
Guide Post		447448-1
Keys (External)		445282-1

SOURCE: Catalog 65039

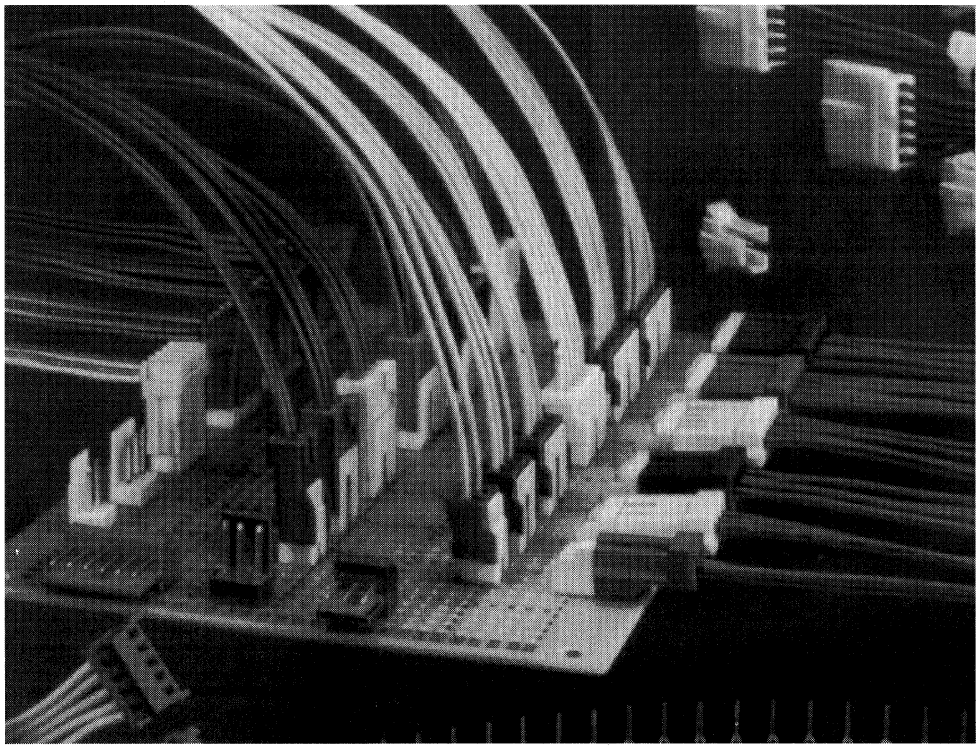
Specifications subject to change.

1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

METRIC

AMP Economy Interconnection (EI) Series Connectors



Product Facts

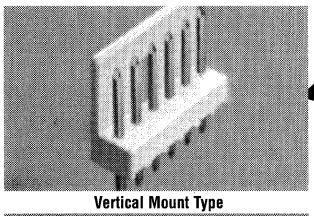
- Wire-to-board, wire-to-wire, and board-to-board application
- Standard and Low Profile styles available
- Post headers can be used with Standard and Low-Profile connectors
- Housing designed with locking mechanism, polarization and guide alignment
- Small in size, precision-built and economical
- Post headers, horizontal and vertical styles, are available on 2.5 mm [.098] and 5.0 mm [.197] centers
- Wire size range, Standard Type—30-20 AWG [0.05-0.52 mm²]; Low Profile Type—30-33 AWG [0.05-0.35 mm²]
- Recognized under the Component Program of Underwriters Laboratories Inc., File No. E28476
- Certified by Canadian Standards Association, File No. LR7189

Cap Connector (Wire applied)

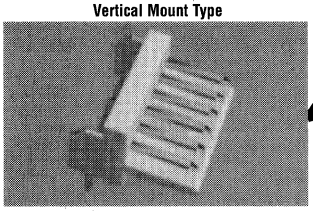
Free-Hanging Type

Panel Mount Type

Post Header (Board applied)



Vertical Mount Type



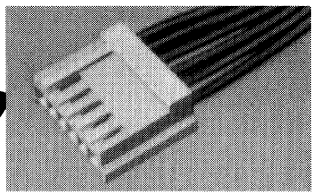
Horizontal Mount Type

Mating Styles

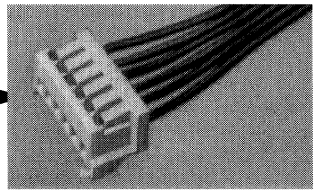
Wire-to-wire termination

Wire-to-board connection

Receptacle Connector (Wire applied)



Standard Type



Low-Profile Type

SOURCE: Catalog 124962

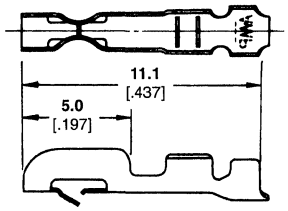
Specifications subject to change.

1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

METRIC

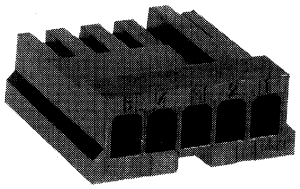
Standard Type Receptacle Contacts



Wire Size Range AWG [mm²]	Wire Ins. Dia.	Part Number					
		Brass/Pre-Tin		Phos Bronze/Pre-Tin		Phos Bronze/ Gold over Nickel*	
		Strip	Loose Piece	Strip	Loose Piece	Strip	Loose Piece
30-26 [0.05-0.15]	1.0-1.4 [.039-.055]	170263-1	170205-1	170263-2	170205-2	170263-3	170205-3
26-20 [0.14-0.52]	1.1-1.9 [.043-.075]	170262-1	170204-1	170262-2	170204-2	170262-4	170204-4

*Phosphor bronze, 0.38 µm gold on contact area with nickel underplated.

Standard Type Receptacle Housings 2.5 [.098] Centers



Mates with—
Cap Housings and Post Headers

For Standard Circuit

Note: 5 Pos. Housing Dim. (Typ.)— 14.4 [.567] L x 14 [.551] W x 6.7 [.264] H

No. of Pos.	Part Numbers				
	Natural	Black	Blue	Green	Red
2	171822-2	2-171822-2	4-171822-2	6-171822-2	8-171822-2
3	171822-3	2-171822-3	4-171822-3	6-171822-3	8-171822-3
4	171822-4	2-171822-4	4-171822-4	6-171822-4	8-171822-4
5	171822-5	2-171822-5	4-171822-5	6-171822-5	8-171822-5
6	171822-6	2-171822-6	4-171822-6	6-171822-6	8-171822-6
7	171822-7	2-171822-7	4-171822-7	6-171822-7	8-171822-7
8	171822-8	2-171822-8	4-171822-8	6-171822-8	8-171822-8
9	171822-9	2-171822-9	4-171822-9	6-171822-9	8-171822-9
10	1-171822-0	3-171822-0	5-171822-0	7-171822-0	9-171822-0
12	1-171822-2	3-171822-2	5-171822-2	7-171822-2	9-171822-2

For Standard Circuit Extraction-Reinforced Version (Compatible with JEMA Standard)

Note: 3 Pos. Housing Dim. (Typ.)—9.4 [.370] L x 14 [.551] W x 6.6 [.260] H

Mates with—
Cap Housings and Post Headers

No. of Pos.	Part Numbers				
	Natural	Black	Blue	Green	Red
2	172486-2	2-172486-2	4-172486-2	6-172486-2	8-172486-2
3	172486-3	2-172486-3	4-172486-3	6-172486-3	8-172486-3

For Reverse Circuit

Note: 5 Pos. Housing Dim. (Typ.)—14.4 [.567] L x 14 [.551] W x 6.7 [.264] H

Mates with—
Cap Housings and Post Headers

No. of Pos.	Part Numbers		
	Natural	Black	Blue
2	171880-2	2-171880-2	4-171880-2
3	171880-3	2-171880-3	4-171880-3
4	171880-4	2-171880-4	4-171880-4
5	171880-5	2-171880-5	4-171880-5
6	171880-6	2-171880-6	4-171880-6
7	171880-7	2-171880-7	4-171880-7
8	171880-8	2-171880-8	4-171880-8
9	171880-9	2-171880-9	4-171880-9
10	1-171880-0	3-171880-0	5-171880-0
12	1-171880-2	3-171880-2	5-171880-2

SOURCE: Catalog 124962

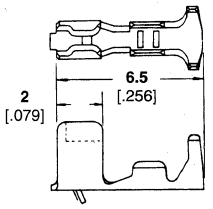
Specifications subject to change.

1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

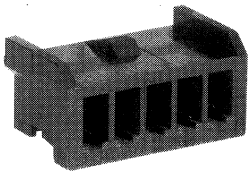
METRIC

Low-Profile Type Receptacle Contacts



Wire Size Range		Wire Ins. Dia.	Part Numbers	
AWG	mm²		Strip	Loose Piece
30-26	0.05-0.15	**1.0-1.5** [.039-.059]	170355-1	170370-1
26-22	0.12-0.35	**1.1-1.9** [.043-.075]	170354-1	170369-1

Low-Profile Type Receptacle Housings 2.5 [.098] Centers

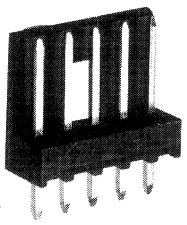


Mates with—
Post Headers

Note: 5 Pos. Housing Dim. (Typ.) —14.4 [.567] L x 8.0 [.315] W x 7.2 [.283] H

No. of Pos.	Part Numbers				
	Natural	Black	Blue	Green	Red
2	172142-2	2-172142-2	4-172142-2	6-172142-2	8-172142-2
3	172142-3	2-172142-3	4-172142-3	6-172142-3	8-172142-3
4	172142-4	2-172142-4	4-172142-4	6-172142-4	8-172142-4
5	172142-5	2-172142-5	4-172142-5	6-172142-5	8-172142-5
6	172142-6	2-172142-6	4-172142-6	6-172142-6	8-172142-6
7	172142-7	2-172142-7	4-172142-7	6-172142-7	8-172142-7
8	172142-8	2-172142-8	4-172142-8	6-172142-8	8-172142-8
9	172142-9	2-172142-9	4-172142-9	6-172142-9	8-172142-9
10	1-172142-0	3-172142-0	5-172142-0	7-172142-0	9-172142-0
12	1-172142-2	3-172142-2	5-172142-2	7-172142-2	9-172142-2

Post Headers, Vertical Mount Type 2.5 [.098] Centers



Mates with—
Receptacle Housings
(Standard and Low-Profile)

Note: 5 Pos. Housing Dim. (Typ.)—12.5 [.492] L x 4.9 [.193] W x 10.4 [.409] H

No. of Pos.	Part Numbers				Applied No. of Position Mating Receptacle Housing
	Copper/Tin			Nickel/Gold	
	Natural	Black	Blue	Natural	
2	171825-2	2-171825-2	4-171825-2	173081-2	2
3	171825-3	2-171825-3	4-171825-3	173081-3	3
4	171825-4	2-171825-4	4-171825-4	173081-4	4
5	171825-5	2-171825-5	4-171825-5	173081-5	5
6	171825-6	2-171825-6	4-171825-6	173081-6	6
7	171825-7	2-171825-7	4-171825-7	173081-7	7
8	171825-8	2-171825-8	4-171825-8	173081-8	8
9	171825-9	2-171825-9	4-171825-9	173081-9	9
10	1-171825-0	3-171825-0	5-171825-0	1-173081-0	10
12	1-171825-2	3-171825-2	5-171825-2	1-173081-2	12

Note: Recommended Pc board thickness—1.6 [.062].

Retention-Reinforced Version (Compatible with JEMA Standard)

Mates with—
Receptacle Housings (Standard and Low-Profile)

Note: 3 Pos. Housing Dim. (Typ.) —7.5 [.295] L x 4.9 [.193] W x 10.4 [.409] H

No. of Pos.	Part Numbers				
	Natural	Black	Blue	Green	Red
2	172487-2	2-172487-2	4-172487-2	6-172487-2	8-172487-2
3	172487-3	2-172487-3	4-172487-3	6-172487-3	8-172487-3

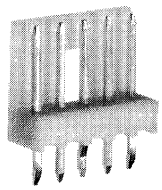
Note: Recommended Pc board thickness—1.6 [.062].

SOURCE: Catalog 124962

METRIC

Post Headers, (Continued)

Vertical Mount Type (With Self-Retaining Feature Posts) 2.5 [.098] Centers



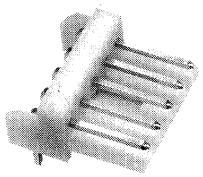
Mates with—
Receptacle Housings
(Standard and Low-Profile)

Note: 5 Pos Housing Dim. (Typ.)—12.5 [.492] L x 4.9 [.193] W x 10.4 [.409] H

No. of Pos.	Part Numbers							Applied No. of Position Mating Receptacle Housing
	Loose Piece			Tube				
	Natural	Black	Blue	Natural	Black	Blue	Qty.	
2	172732-2	2-172732-2	4-172732-2	172800-2	2-172800-2	4-172800-2	95	2
3	172732-3	2-172732-3	4-172732-3	172800-3	2-172800-3	4-172800-3	60	3
4	172732-4	2-172732-4	4-172732-4	172800-4	2-172800-4	4-172800-4	45	4
5	172732-5	2-172732-5	4-172732-5	172800-5	2-172800-5	4-172800-5	35	5
6	172732-6	2-172732-6	4-172732-6	172800-6	2-172800-6	4-172800-6	30	6
7	172732-7	2-172732-7	4-172732-7	172800-7	2-172800-7	4-172800-7	25	7
8	172732-8	2-172732-8	4-172732-8	172800-8	2-172800-8	4-172800-8	20	8
9	172732-9	2-172732-9	4-172732-9	172800-9	2-172800-9	4-172800-9	20	9
10	1-172732-0	3-172732-0	5-172732-0	1-172800-0	3-172800-0	5-172800-0	15	10
12	1-172732-2	3-172732-2	5-172732-2	1-172800-2	3-172800-2	5-172800-2	15	12

Note: Recommended Pc board thickness—1.6 [.062].

Horizontal Mount Type 2.5 [.098] Centers



Mates with—
Receptacle Housings
(Standard and Low-Profile)

Note: 5 Pos. Housing Dim. (Typ.)— 12.5 [.492] L x 13.5 [.531] W x 6.7 [.264] H

No. of Pos.	Part Numbers				Applied No. of Position Mating Receptacle Housing
	Tin Plated			Gold Plated	
	Natural	Black	Blue	Natural	
2	171826-2	2-171826-2	4-171826-2	176153-2	2
3	171826-3	2-171826-3	4-171826-3	176153-3	3
4	171826-4	2-171826-4	4-171826-4	176153-4	4
5	171826-5	2-171826-5	4-171826-5	176153-5	5
6	171826-6	2-171826-6	4-171826-6	176153-6	6
7	171826-7	2-171826-7	4-171826-7	—	7
8	171826-8	2-171826-8	4-171826-8	—	8
9	171826-9	2-171826-9	4-171826-9	—	9
10	1-171826-0	3-171826-0	5-171826-0	—	10
12	1-171826-2	3-171826-2	5-171826-2	—	12

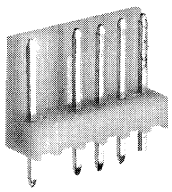
Note: Recommended Pc board thickness—1.6 [.062].

Polarized Post Headers 2.5 [.098] Centers

Mates with—
Receptacle Housings
(Standard and Low-Profile)

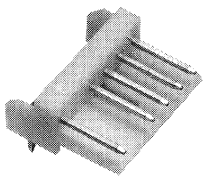
Vertical Mount Type

Note: 5 Pos. Housing Dim. (Typ.)—
15.0 [.591] L x 4.9 [.193] W x 10.4 [.409] H



Horizontal Mount Type

Note: 5 Pos. Housing Dim. (Typ.)—
15.0 [.591] L x 13.5 [.531] W x 6.7 [.264] H



No. of Pos.	Part Number		Applied No. of Position Mating Receptacle Housing*
	Vertical Mount Type	Horizontal Mount Type	
3	171886-4	171887-4	4
4	171886-5	171887-5	5
5	171886-6	171887-6	6
6	171886-7	171887-7	7
7	171886-8	171887-8	8
8	171886-9	171887-9	9
9	1-171886-0	1-171887-0	10
11	1-171886-2	—	12

*This post header is polarized to the board with post not loaded in the corresponding circuit number No. 2 in mating receptacle housing. Accordingly, receptacle to be used for mating must have one more position than post header.
Note: Recommended Pc board thickness—1.6 [.062].

SOURCE: Catalog 124962

Specifications subject to change.

1-800-522-6752
Product Information Center/ AMP FAX Service

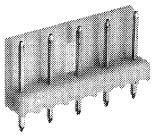
1-800-722-1111
Tooling/Technical Assistance Center

METRIC

Post Headers
5.0 [.197] Centers

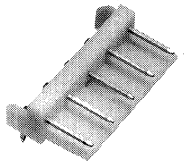
Vertical Mount Type

Note: 5 Pos. Housing Dim. (Typ.)—
22.5 [.886] L x 4.9 [.193] W x 10.4 [.409] H



Horizontal Mount Type

Note: 5 Pos. Housing Dim. (Typ.)—
22.5 [.886] L x 13.5 [.531] W x 6.7 [.264] H

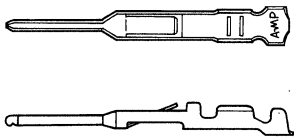


Mates with—Receptacle Housings (Standard and Low-Profile)

No. of Pos.	Part Numbers				Applied No. of Position Mating Receptacle Housing
	Vertical Mount Type			Horizontal Mount Type	
	Natural	Black	Blue	Natural	
2	172106-2	2-172106-2	4-172106-2	172107-2	3
3	172106-3	2-172106-3	4-172106-3	172107-3	5
4	172106-4	2-172106-4	4-172106-4	172107-4	7
5	172106-5	2-172106-5	4-172106-5	172107-5	9
6	172106-6	2-172106-6	4-172106-6	172107-6	12

Note: Recommended Pc board thickness—1.6 [.062].

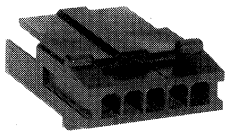
Standard Type
Pin Contacts



Wire Size Range		Wire Ins. Dia.	Part Numbers					
			Brass/Pre-Tin		Phos Bronze/Pre-Tin		Phos Bronze/ Gold over Nickel*	
AWG	mm²		Strip	Loose Piece	Strip	Loose Piece	Strip	Loose Piece
30-26	0.05-0.15	**1.0-1.4** [.039-.055]	170377-1	170430-1	170377-2	170430-2	170377-3	170430-3
26-20	0.14-0.52	**1.1-1.9** [.043-.075]	170376-1	170429-1	170376-2	170429-2	170376-3	170429-3

*Phosphor bronze, 0.38 µm max. gold on mating end with nickel underplated.

Cap Housings
Free-Hanging Style
2.5 [0.98] Centers

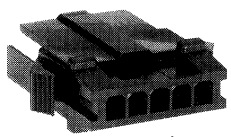


Mates with—Standard Receptacle Housings (Standard and Reverse Circuit)

Note: 5 Pos. Housing Dim. (Typ.)—15.4 [.606] L x 19.7 [.776] W x 8.0 [.315] H

No. of Pos.	Part Numbers					
	For Standard Circuit			For Reverse Circuit		
	Natural	Black	Blue	Natural	Black	Blue
2	172211-2	2-172211-2	4-172211-2	172212-2	2-172212-2	4-172212-2
3	172211-3	2-172211-3	4-172211-3	172212-3	2-172212-3	4-172212-3
4	172211-4	2-172211-4	4-172211-4	172212-4	2-172212-4	4-172212-4
5	172211-5	2-172211-5	4-172211-5	172212-5	2-172212-5	4-172212-5
6	172211-6	2-172211-6	4-172211-6	172212-6	2-172212-6	4-172212-6
8	172211-8	2-172211-8	—	—	—	—
10	1-172211-0	—	—	—	—	—
12	1-172211-2	—	—	—	—	—

Cap Housings for Panel Mount
2.5 [.098] Centers



Mates with—Standard Receptacle Housings (Standard and Reverse Circuit)

Note: 5 Pos. Housing Dim. (Typ.)—21.0 [.827] L x 19.7 [.776] W x 8.0 [.315] H

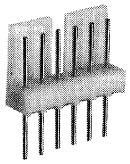
No. of Pos.	Part Numbers					
	For Standard Circuit			For Reverse Circuit		
	Natural	Black	Blue	Natural	Black	Blue
2	172213-2	2-172213-2	4-172213-2	172214-2	2-172214-2	4-172214-2
3	172213-3	2-172213-3	4-172213-3	172214-3	2-172214-3	4-172214-3
4	172213-4	2-172213-4	4-172213-4	172214-4	2-172214-4	4-172214-4
5	172213-5	2-172213-5	4-172213-5	172214-5	2-172214-5	4-172214-5
6	172213-6	2-172213-6	4-172213-6	172214-6	2-172214-6	4-172214-6
7	172213-7	2-172213-7	—	—	—	—
8	172213-8	—	—	—	—	—

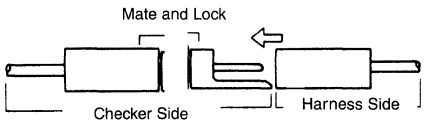
Note: Recommended Pc board thickness—0.8-1.6 [.031-.062].

SOURCE: Catalog 124962

METRIC

Wire Harness Check Connectors 2.5 [.098] Centers



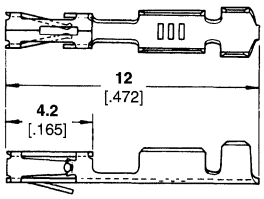


Note: 5 Pos. Housing Dim. (Typ.)—Post Header, 12.5 [.492] L x 4.9 [.193] W x 10.4 [.409] H; Receptacle Housing, 13.3 [.524] L x 5.3 [.209] W x 15.0 [.591] H

No. of Pos.	Part Numbers			
	Mating Wire Harness Check Connectors		Mating Standard Receptacle Housing	
	Post Header	Receptacle Housing[1]	Standard Type	Low-Profile Type
2	172012-2	172013-2	171822-2	172142-2
3	172012-3	172013-3	171822-3	172142-3
4	172012-4	172013-4	171822-4	172142-4
5	172012-5	172013-5	171822-5	172142-5
6	172012-6	172013-6	171822-6	172142-6
7	172012-7	172013-7	171822-7	172142-7
8	172012-8	172013-8	171822-8	172142-8
9	172012-9	172013-9	171822-9	172142-9
10	1-172012-0	1-172013-0	1-171822-0	1-172142-0
12	1-172012-2	1-172013-2	1-171822-2	1-172142-2

[1]See Receptacle Contacts below

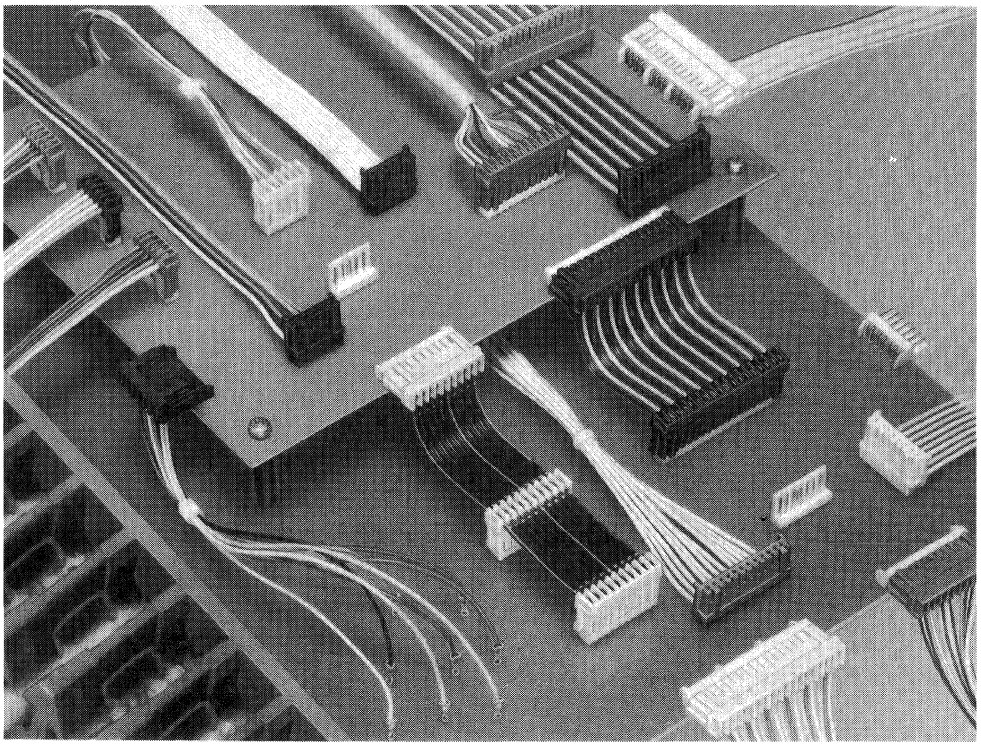
Wire Harness Check Receptacle Contacts



Wire Size Range		Wire Ins. Dia.	Finish	Part Numbers	
AWG	mm²			Strip	Loose Piece
24-20	0.20-0.56	1.27-1.45 [.050-.057]	Gold Flash over Nickel, Gold on Contact Area only	171275-1	171276-1
			Pre-Tin	171275-2	171276-2
			Nickel, Gold on Contact Area only	171275-3	171276-3

METRIC

AMP Mass Termination EI Series Connectors (MTEI) Wire-to-Board 2.5 [.098] Centers



Product Facts

- **Receptacle housing is preloaded with insulation displacement receptacle contacts which do not need prestripping of wires**
- **Contacts accept discrete wire, ribbon cable, laminated ribbon cable, shield drain wire and jacketed cable**
- **Contacts are on 2.5 [.098] centers**
- **Receptacle housing is made of UL-Recognized, flame retardant grade, 94V-0 66 nylon**
- **Color coded by wire sizes**
  - **AWG 28 (green)**
  - **AWG 26 (natural)**
  - **AWG 24 (black)**
  - **AWG 22 (red)**
- **Receptacle contacts are tin-plated phosphor bronze**
- **Receptacle housing is provided with polarization to prevent mismating and a guide for correct alignment of contacts**
- **Post header made of UL-Recognized, flame retardant grade, 94V-0 66 nylon. Posts are of brass, tin-over-copper plating**
- **Post headers are available in two styles, one for horizontal mounting on the board and the other for vertical mounting**

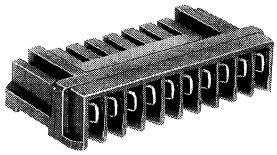
AMP Mass Termination EI Series Connectors are wire-to-board connectors based on the unique mass termination technique which are designed for high density connection of wiring inside equipment, labor saving in assembling operations and high reliability. A substantial cost reduction can be achieved by using the connectors in appliances, business machines, communication equipment, computers and other electronic equipment which require compact wire-to-board interconnection. The connectors consist of a receptacle assembly for wire termination with receptacle contacts preloaded and a board-mount post header to mate with the receptacle assembly. The post header is intermateable with AMP EI Series connectors with crimp, snap-in contacts for wire termination.

SOURCE: Catalog 124962

METRIC

Wire-to-Board Connectors 2.5 [.098] Centers

Standard Type Receptacle Assemblies



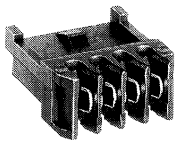
Mates with—Post Headers (Vertical Mount and Right-Angle)

Note: 10 Pos. Housing Dim. (Typ.)—27.5 [1.083] L x 6.5 [.256] W x 13.8 [.543] H

No. of Pos.	Part Numbers			
	Wire Size AWG 28 (Green)*	Wire Size AWG 26 (Natural)*	Wire Size AWG 24 (Black)*	Wire Size AWG 22 (Red)*
2	172054-2	172053-2	172052-2	172051-2
3	172054-3	172053-3	172052-3	172051-3
4	172054-4	172053-4	172052-4	172051-4
5	172054-5	172053-5	172052-5	172051-5
6	172054-6	172053-6	172052-6	172051-6
7	172054-7	172053-7	172052-7	172051-7
8	172054-8	172053-8	172052-8	172051-8
9	172054-9	172053-9	172052-9	172051-9
10	1-172054-0	1-172053-0	1-172052-0	1-172051-0
12	1-172054-2	1-172053-2	1-172052-2	1-172051-2
14	1-172054-4	1-172053-4	1-172052-4	1-172051-4
16	1-172054-6	1-172053-6	1-172052-6	1-172051-6
18	1-172054-8	1-172053-8	1-172052-8	1-172051-8
20	2-172054-0	2-172053-0	2-172052-0	2-172051-0

*Housing Color

Feed-through Type Receptacle Assemblies



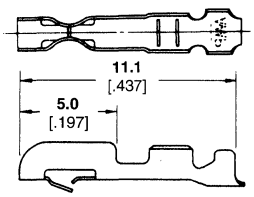
Mates with—Post Headers (Vertical Mount and Right-Angle)

Note: 10 Pos. Housing Dim. (Typ.)—27.5 [1.083] L x 6.5 [.256] W x 13.8 [.543] H

No. of Pos.	Part Numbers			
	Wire Size AWG 28 (Green)*	Wire Size AWG 26 (Natural)*	Wire Size AWG 24 (Black)*	Wire Size AWG 22 (Red)*
3	—	—	172186-3	—
4	—	—	172186-4	—
6	172188-6	172187-6	172186-6	172185-6
8	172188-8	172187-8	172186-8	172185-8
10	1-172188-0	1-172187-0	1-172186-0	1-172185-0
14	1-172188-4	1-172187-4	1-172186-4	1-172185-4
16	1-172188-6	1-172187-6	1-172186-6	1-172185-6
20	2-172188-0	2-172187-0	2-172186-0	2-172185-0

*Housing Color

Replacement Receptacle Contacts (Crimp Type for EI Series)



Wire Range		Ins. Dia.	Part Numbers			
			Pre-tin Brass		Pre-tin Phos Bronze	
AWG	mm²		Strip Form	Loose Piece	Strip Form	Loose Piece
30-26	0.05-0.15	**1.0-1.4** [.039-.055]	170263-1	170205-1[1]	170263-2	170205-2[1]
26-20	0.14-0.52	**1.1-1.9** [.043-.075]	170262-1	170204-1[2]	170262-2	170204-2[2]

[1]Hand Tool **Part No. 722561-1**
[2]Hand Tool **Part No. 722560-1**

SOURCE: Catalog 124962

Specifications subject to change.

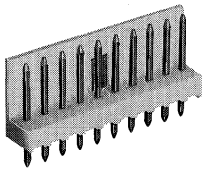
1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

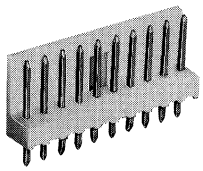
METRIC

Wire-to-Board Connectors
2.5 [.098] Centers
Vertical Mount
Post Headers

Mates with—Receptacle Assemblies
(Standard and Feed-through)



Without Self-Retaining Feature Posts



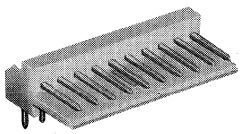
With Self-Retaining Feature Posts

Note: 10 Pos. Housing Dim. (Typ.)—25.0 [.984] L x 4.9 [.193] W x 10.4 [.409] H

No. of Pos.	Part Numbers								
	Without Self-Retaining Feature Posts*			With Self-Retaining Feature Posts					
				Loose Piece			Tube		
	Natural	Black	Blue	Natural	Black	Blue	Natural	Black	Blue
2	171825-2	2-171825-2	4-171825-2	172732-2	2-172732-2	4-172732-2	172800-2	2-172800-2	4-172800-2
3	171825-3	2-171825-3	4-171825-3	172732-3	2-172732-3	4-172732-3	172800-3	2-172800-3	4-172800-3
4	171825-4	2-171825-4	4-171825-4	172732-4	2-172732-4	4-172732-4	172800-4	2-172800-4	4-172800-4
5	171825-5	2-171825-5	4-171825-5	172732-5	2-172732-5	4-172732-5	172800-5	2-172800-5	4-172800-5
6	171825-6	2-171825-6	4-171825-6	172732-6	2-172732-6	4-172732-6	172800-6	2-172800-6	4-172800-6
7	171825-7	2-171825-7	4-171825-7	172732-7	2-172732-7	4-172732-7	172800-7	2-172800-7	4-172800-7
8	171825-8	2-171825-8	4-171825-8	172732-8	2-172732-8	4-172732-8	172800-8	2-172800-8	4-172800-8
9	171825-9	2-171825-9	4-171825-9	172732-9	2-172732-9	4-172732-9	172800-9	2-172800-9	4-172800-9
10	1-171825-0	3-171825-0	5-171825-0	1-172732-0	3-172732-0	5-172732-0	1-172800-0	3-172800-0	5-172800-0
12	1-171825-2	3-171825-2	5-171825-2	1-172732-2	3-172732-2	5-172732-2	1-172800-2	3-172800-2	5-172800-2
14	1-172057-4	—	—	1-173051-4	—	—	—	—	—
16	1-172057-6	—	—	1-173051-6	—	—	—	—	—
18	1-172057-8	—	—	1-173051-8	—	—	—	—	—
20	2-172057-0	—	—	2-173051-0	—	—	—	—	—

*Also available in green—Part No. with prefix of 6 (for 2-9 positions) and prefix of 7 (for 10 & 12 positions); and in red—Part No. with prefix of 8 (for 2-9 positions) and prefix of 9 (for 10 & 12 positions).

Right-Angle
Post Headers



Mates with—Receptacle Assemblies
(Standard and Feed-through)

Note: 10 Pos. Housing Dim. (Typ.)—25.0 [.984] L x 13.5 [.531] W x 6.7 [.264] H

No. of Pos.	Part Numbers*		
	Natural	Black	Blue
2	171826-2	2-171826-2	4-171826-2
3	171826-3	2-171826-3	4-171826-3
4	171826-4	2-171826-4	4-171826-4
5	171826-5	2-171826-5	4-171826-5
6	171826-6	2-171826-6	4-171826-6
7	171826-7	2-171826-7	4-171826-7
8	171826-8	2-171826-8	4-171826-8
9	171826-9	2-171826-9	4-171826-9
10	1-171826-0	3-171826-0	5-171826-0
12	1-171826-2	3-171826-2	5-171826-2
14	1-172058-4	—	—
16	1-172058-6	—	—
18	1-172058-8	—	—
20	2-172058-0	—	—

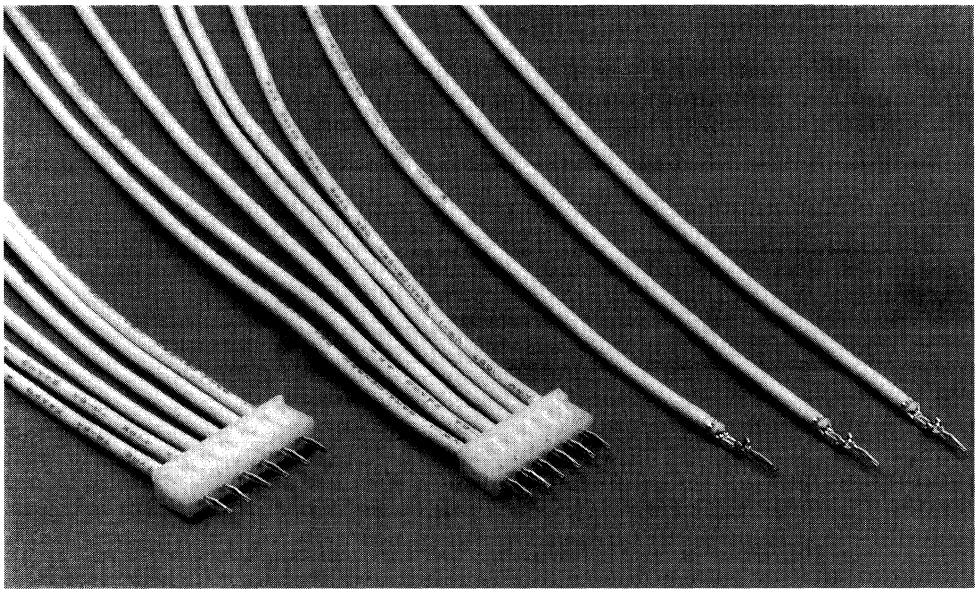
* Also available in green—Part No. with prefix of 6 (for 2-9 positions) and prefix of 7 (for 10 & 12 positions); and in red —Part No. with prefix of 8 (for 2-9 positions) and prefix of 9 (for 10 & 12 positions).

SOURCE: Catalog 124962

METRIC

Low Profile Mini AMP-IN Connectors

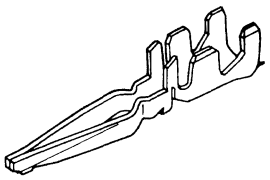
(Wire-to-Board)

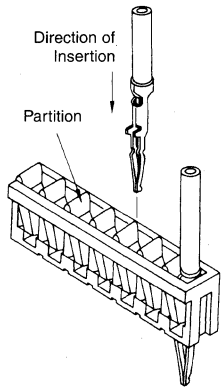


Product Facts

- Two types available: Crimp and MT Type
- Connector housing provides gang insertion into pc board
- Crimp Type housings are available in 2 through 10, 12 and 15 positions for 2 [.079] centerline and 2 through 20 positions for 2.5 [.098] centerline spacing; MT Type housings are available in 2 through 12 positions for 2 [.079] centerline and 2 through 15 positions for 2.5 [.098] centerline spacing
- 2 [.079] and 2.5 [.098] centerlines available
- Crimp Type—contacts accommodate wires sizes ranging from 30-22 AWG [0.05-0.35 mm²]; MT Type—contacts on 2.0 [.079] centerline accommodate 28-26 AWG [0.08-0.15 mm²], and 2.5 [.098] centerline accommodate 26-24 AWG [0.12-0.22 mm²]
- Housing insulates and provides short-circuit protection between contacts

Crimp Type Contacts





Wire Size Range		Wire Ins. Dia.	Material/ Finish	PC Board Hole Dia.	Part Numbers	
AWG	mm²				Strip*	Loose Piece
30-26	0.05-0.15	1.1-1.4 [.043-.055]	Brass/ Pre-Tin	0.8 [.031]	172781-1	172797-1
				1.0 [.039]	172781-2	172797-2
26-22	0.12-0.35	1.4-1.5 [.055-.059]		0.8 [.031]	172782-1	172798-1
				1.0 [.039]	172782-2	172798-2

Extraction Tool **Part No. 753760-1**
*Contact AMP Tooling/Technical Assistance Center.

SOURCE: Catalog 124962

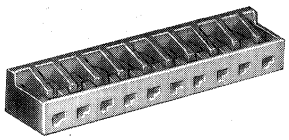
Specifications subject to change.

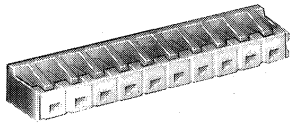
1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

Headers, Crimp Type

METRIC



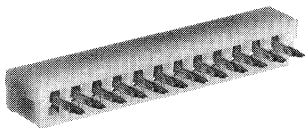


Note: 10 Pos. Housing Dim. (Typ.)—
2.0 mm [.079]— 20.8 [.819] L x 3.5 [.138] W x 5.0 [.197] H
2.5 mm [.098]— 26.0 [1.02] L x 3.5 [.138] W x 5.0 [.197] H

No. of Pos.	Part Numbers	
	2 [.079] Centerline	2.5 [.098] Centerline
2	172890-2	172520-2
3	172890-3	172520-3
4	172890-4	172520-4
5	172890-5	172520-5
6	172890-6	172520-6
7	172890-7	172520-7
8	172890-8	172520-8
9	172890-9	172520-9
10	1-172890-0	1-172520-0
11	—	1-172520-1
12	1-172890-2	1-172520-2
13	—	1-172520-3
14	—	1-172520-4
15	1-172890-5	1-172520-5
20	—	2-172520-0

Note: Recommended Pc board thickness—1.2-1.6 [.047-.062].

Headers, MT Type



Note: 10 Pos. Housing Dim. (Typ.)—
2.0 mm [.079]— 22.0 [.866] L x 4.2 [.165] W x 5.0 [.197] H;
2.5 mm [.098]— 27.5 [1.083] L x 4.5 [.177] W x 5.0 [.197] H

No. of Pos.	2 [.079] Centerline			2.5 [.098] Centerline		
	Wire Range AWG [mm²]	Wire Ins. Dia.	Part Numbers	Wire Range AWG [mm²]	Wire Ins. Dia.	Part Numbers
2	**28-26** [0.08-0.15 mm²]	**0.88-1.1** [.035-.043]	173039-2	**26-24** [0.12-0.22 mm²]	**0.98-1.56** [.039-.061]	175953-2
3	**28-26** [0.08-0.15 mm²]	**0.88-1.1** [.035-.043]	173039-3	**26-24** [0.12-0.22 mm²]	**0.98-1.56** [.039-.061]	175953-3
4	**28-26** [0.08-0.15 mm²]	**0.88-1.1** [.035-.043]	173039-4	**26-24** [0.12-0.22 mm²]	**0.98-1.56** [.039-.061]	175953-4
5	**28-26** [0.08-0.15 mm²]	**0.88-1.1** [.035-.043]	173039-5	**26-24** [0.12-0.22 mm²]	**0.98-1.56** [.039-.061]	175953-5
6	**28-26** [0.08-0.15 mm²]	**0.88-1.1** [.035-.043]	173039-6	**26-24** [0.12-0.22 mm²]	**0.98-1.56** [.039-.061]	175953-6
7	**28-26** [0.08-0.15 mm²]	**0.88-1.1** [.035-.043]	173039-7	**26-24** [0.12-0.22 mm²]	**0.98-1.56** [.039-.061]	175953-7
8	**28-26** [0.08-0.15 mm²]	**0.88-1.1** [.035-.043]	173039-8	**26-24** [0.12-0.22 mm²]	**0.98-1.56** [.039-.061]	175953-8
9	**28-26** [0.08-0.15 mm²]	**0.88-1.1** [.035-.043]	173039-9	**26-24** [0.12-0.22 mm²]	**0.98-1.56** [.039-.061]	175953-9
10	**28-26** [0.08-0.15 mm²]	**0.88-1.1** [.035-.043]	1-173039-0	**26-24** [0.12-0.22 mm²]	**0.98-1.56** [.039-.061]	1-175953-0
11	**28-26** [0.08-0.15 mm²]	**0.88-1.1** [.035-.043]	1-173039-1	**26-24** [0.12-0.22 mm²]	**0.98-1.56** [.039-.061]	1-175953-1
12	**28-26** [0.08-0.15 mm²]	**0.88-1.1** [.035-.043]	1-173039-2	**26-24** [0.12-0.22 mm²]	**0.98-1.56** [.039-.061]	1-175953-2
13	**28-26** [0.08-0.15 mm²]	**0.88-1.1** [.035-.043]	—	**26-24** [0.12-0.22 mm²]	**0.98-1.56** [.039-.061]	1-175953-3
14	**28-26** [0.08-0.15 mm²]	**0.88-1.1** [.035-.043]	—	**26-24** [0.12-0.22 mm²]	**0.98-1.56** [.039-.061]	1-175953-4
15	**28-26** [0.08-0.15 mm²]	**0.88-1.1** [.035-.043]	—	**26-24** [0.12-0.22 mm²]	**0.98-1.56** [.039-.061]	1-175953-5

Note: Recommended Pc board thickness- 0.8-1.6 [.031-.062]

Specifications subject to change.

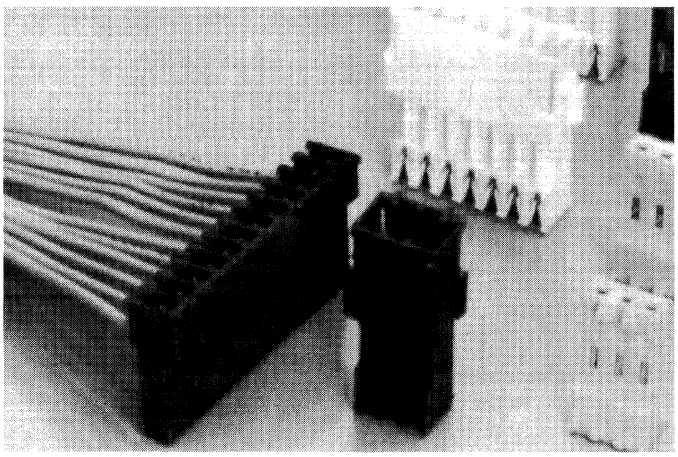
1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

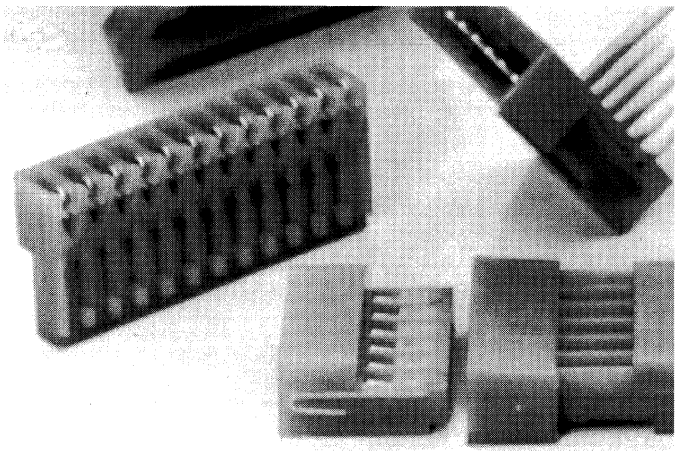
AMP MT-6/MT-7 Connector System

Product Facts

- Connector system for economical mass production
- Minimizes wiring mistakes due to high degree of automation
- Pin headers are upright, solder connections in rows
- Pins are fully protected by plastic shells
- Ribs on the bottom of pin header body for solder fume outlet
- Connectors with loaded insulation displacement contacts on .100 [2.54] and .156 [3.96] centerline
- Receptacles with one sided flat spring
- Crimp snap-In contacts for subsequent circuit changes (service) or for special conductors (contact AMP)
- Long spring travel allows low mating force and long life
- Insulation displacement connections with insulation support
- 2 to 12 position pin headers and receptacles with locking device
- Connectors are polarized and can be keyed
- Recognized under the Component Program of Underwriters Laboratories Inc., File No. E28476
- Certified by Canadian Standards Association, File No. LR 42868



MT-6 Connector System



MT-7 Connector System

The AMP MT-6 and MT-7 connectors present a complete connection system for printed circuit boards. Insulation displacement technology has drastically reduced manufacturing time. This technology allows the termination of multiple single wires or ribbon cable with one connector in only one operation.

This operation requires the same amount of time as terminating one single wire. Wires can be easily terminated with connectors on both ends using specially developed application tooling. When making a cable assembly terminated only on one side, the free leads are cut out and stripped to length.

With the reduced manufacturing time, savings of 50% to 90% can be achieved.

MT-6 Connectors .156 [3.96] Centerline

Color Coding by Wire Size
UL 94V-2

26 AWG* [0.12-0.15 mm²] - 24 AWG [0.2 mm²] — Blue**

24 AWG* [0.2 mm²] - 22 AWG [0.3-0.4 mm²] — Natural**

22 AWG* [0.3-0.4 mm²] - 20 AWG [0.5-0.6 mm²] — Red**

20 AWG* [0.5-0.6 mm²] - 18 AWG [0.8-0.9 mm²] — Yellow**

*Solid Wire
** 7 Stranded Wire

SOURCE: Catalog 124799

Specifications subject to change.

1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

MT-6 Connectors .156 [3.96] Centerline (Continued)

Female Connectors, Without Lock

Note: 6 Pos. Housing Dim. [Typ.]—.937 [23.8] L x .326 [8.3] W x .763 [19.4] H

No. of Positions	Part Numbers			
	Blue	Red	Natural	Yellow
2	167343-2	167344-2	167389-2	167589-2
3	167343-3	167344-3	167389-3	167589-3
4	167343-4	167344-4	167389-4	167589-4
5	167343-5	167344-5	167389-5	167589-5
6	167343-6	167344-6	167389-6	167589-6
7	167343-7	167344-7	167389-7	167589-7
8	167343-8	167344-8	167389-8	167589-8
9	167343-9	167344-9	167389-9	167589-9
10	1-167343-0	1-167344-0	1-167389-0	1-167589-0
11	1-167343-1	1-167344-1	1-167389-1	1-167589-1
12	1-167343-2	1-167344-2	1-167389-2	1-167589-2

Hand Tool **Part No. 169756-1**
Hand Tool with Die Set, **Part No. 734173-1**
Die Set **Part No. 734172-1**

Female Connectors, With Lock

Note: 6 Pos. Housing Dim. [Typ.]—.937 [23.8] L x .326 [8.3] W x .763 [19.4] H

No. of Positions	Part Numbers			
	Blue	Red	Natural	Yellow
2	167341-2	167342-2	167388-2	167588-2
3	167341-3	167342-3	167388-3	167588-3
4	167341-4	167342-4	167388-4	167588-4
5	167341-5	167342-5	167388-5	167588-5
6	167341-6	167342-6	167388-6	167588-6
7	167341-7	167342-7	167388-7	167588-7
8	167341-8	167342-8	167388-8	167588-8
9	167341-9	167342-9	167388-9	167588-9
10	1-167341-0	1-167342-0	1-167388-0	1-167588-0
11	1-167341-1	1-167342-1	1-167388-1	1-167588-1
12	1-167341-2	1-167342-2	1-167388-2	1-167588-2

Hand Tool **Part No. 169756-1**
Hand Tool with Die Set **Part No. 734173-1**
Die Set **Part No. 734172-1**

Male Connectors, Free-Hanging or Panel Mount

Note: 6 Pos. Housing Dim. [Typ.]—1.09 [27.7] L x .370 [9.4] W x 1.11 [28.3] H

No. of Positions	Part Numbers			
	Red	Natural	Blue	Yellow
2	167697-2	167698-2	167747-2	167735-2
3	167697-3	167698-3	167747-3	167735-3
4	167697-4	167698-4	167747-4	167735-4
5	167697-5	167698-5	167747-5	167735-5
6	167697-6	167698-6	167747-6	167735-6
7	167697-7	167698-7	167747-7	167735-7
8	167697-8	167698-8	167747-8	167735-8
9	167697-9	167698-9	167747-9	167735-9
10	1-167697-0	1-167698-0	1-167747-0	1-167735-0
11	1-167697-1	1-167698-1	1-167747-1	1-167735-1
12	1-167697-2	1-167698-2	1-167747-2	1-167735-2

Hand Tool **Part No. 169756-1**
Die Set **Part No. 734174-1**
Hand Tool with Die Set **Part No. 734175-1**

Fully Shrouded Post Headers

Note: 6 Pos. Housing Dim. [Typ.]—1.01 [25.7] L x .366 [9.3] W x .614 [15.6] H

No. of Positions	Part Numbers					
	Natural	Black	Red	Yellow	Green	Blue
2	342702-1	342702-3	342702-5	342702-7	342702-8	342702-9
3	342703-1	342703-3	342703-5	342703-7	342703-8	342703-9
4	342704-1	342704-3	342704-5	342704-7	342704-8	342704-9
5	342705-1	342705-3	342705-5	342705-7	342705-8	342705-9
6	342706-1	342706-3	342706-5	342706-7	342706-8	342706-9
7	342707-1	342707-3	342707-5	342707-7	342707-8	342707-9
8	342708-1	342708-3	342708-5	342708-7	342708-8	342708-9
9	342709-1	342709-3	342709-5	342709-7	342709-8	342709-9
10	342710-1	342710-3	342710-5	342710-7	342710-8	342710-9
11	342711-1	342711-3	342711-5	342711-7	342711-8	342711-9
12	342712-1	342712-3	342712-5	342712-7	342712-8	342712-9

SOURCE: Catalog 124799

MT-6 Connectors .156 [3.96] Centerline (Continued)

Covers

Note: 6 Pos. Housing Dim. [Typ.]—
MT-6 Female/Male, .933 [23.7] L x .413 [10.5] W x .126 [3.2] H;
MT-6 Male, .933 [23.7] L x .413 [10.5] W x .531 [13.5] H

No. of Positions	Part Numbers*	
	for Female/Male Connectors	for Male Connectors
2	167739-2	167740-2
3	167739-3	167740-3
4	167739-4	167740-4
5	167739-5	167740-5
6	167739-6	167740-6
7	167739-7	167740-7
8	167739-8	167740-8
9	167739-9	167740-9
10	1-167739-0	1-167740-0
11	1-167739-1	1-167740-1
12	1-167739-2	1-167740-2

*Color—Red

Post Headers (which meet VDE—250V)

Note: 7 Pos. Housing Dim. (Typ.)—1.169 [29.7] L x .366 [9.3] W x .614 [15.6] H

No. of Positions	No. of Posts	Unloaded Cavity No.	Part Numbers Red
3	2	2	342721-5
5	3	2, 4	342722-5
7	4	2, 4, 6	342723-5
9	5	2, 4, 6, 8	342724-5
11	6	2, 4, 6, 8, 10	342750-5

MT-7 Connectors .100 [2.54] Centerline

28 AWG* [0.08-0.09 mm²] - 26 AWG**
[0.12-0.15 mm²] — Green

26 AWG* [0.12-0.15 mm²] - 24 AWG**
[0.2 mm²] — Blue

Color Coding by Wire Size UL 94V-2

*Solid Wire
** 7 Stranded Wire

SOURCE: Catalog 124799

Specifications subject to change.

1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

MT-7 Connectors .100 [2.54] Centerline (Continued)

Female Connectors, Friction Lock

Note: 8 Pos. Housing Dim. [Typ.]—.799 [20.3] L x .248 [6.3] W x .520 [13.2] H

No. of Positions	Part Numbers	
	Blue	Green
2	167736-2	167737-2
3	167736-3	167737-3
4	167736-4	167737-4
5	167736-5	167737-5
6	167736-6	167737-6
7	167736-7	167737-7
8	167736-8	167737-8
9	167736-9	167737-9
10	1-167736-0	1-167737-0
11	1-167736-1	1-167737-1
12	1-167736-2	1-167737-2
14*	1-167736-4	1-167737-4
16*	1-167736-6	1-167737-6
18*	1-167736-8	1-167737-8
20*	2-167736-0	2-167737-0

*Without friction lock
Hand Tool **Part No. 169756-1**
Die Set **Part No. 734176-1**
Hand Tool with Die Set **Part No. 734177-1**

Male Connectors, Free-Hanging

Note: 7 Pos. Housing Dim. [Typ.]—.799 [20.3] L x .248 [6.3] W x .760 [19.3] H

No. of Positions	Part Numbers	
	Blue	Green
2	167803-2	167804-2
3	167803-3	167804-3
4	167803-4	167804-4
5	167803-5	167804-5
6	167803-6	167804-6
7	167803-7	167804-7
8	167803-8	167804-8
9	167803-9	167804-9
10	1-167803-0	1-167804-0
11	1-167803-1	1-167804-1
12	1-167803-2	1-167804-2

Hand Tool **Part No. 169756-1**
Die Set **Part No. 734178-1**
Hand Tool with Die Set **Part No. 734179-1**

Fully Shrouded Post Headers

Note: 9 Pos. Housing Dim. [Typ.]—.945 [24.0] L x .252 [6.4] W x .378 [9.6] H

No. of Positions	Part Numbers					
	Natural	Black	Red	Yellow	Green	Blue
2	342725-1	342725-3	342725-5	342725-7	342725-8	342725-9
3	342726-1	342726-3	342726-5	342726-7	342726-8	342726-9
4	342727-1	342727-3	342727-5	342727-7	342727-8	342727-9
5	342728-1	342728-3	342728-5	342728-7	342728-8	342728-9
6	342729-1	342729-3	342729-5	342729-7	342729-8	342729-9
7	342730-1	342730-3	342730-5	342730-7	342730-8	342730-9
8	342731-1	342731-3	342731-5	342731-7	342731-8	342731-9
9	342732-1	342732-3	342732-5	342732-7	342732-8	342732-9
10	342733-1	342733-3	342733-5	342733-7	342733-8	342733-9
11	342734-1	342734-3	342734-5	342734-7	342734-8	342734-9
12	342735-1	342735-3	342735-5	342735-7	342735-8	342735-9
14	—	—	—	—	—	342737-9
16	—	—	—	—	—	342739-9
18	—	—	—	—	—	342741-9
20	—	—	—	—	—	342743-9

SOURCE: Catalog 124799

Specifications subject to change.

1-800-522-6752
Product Information Center/ AMP FAX Service

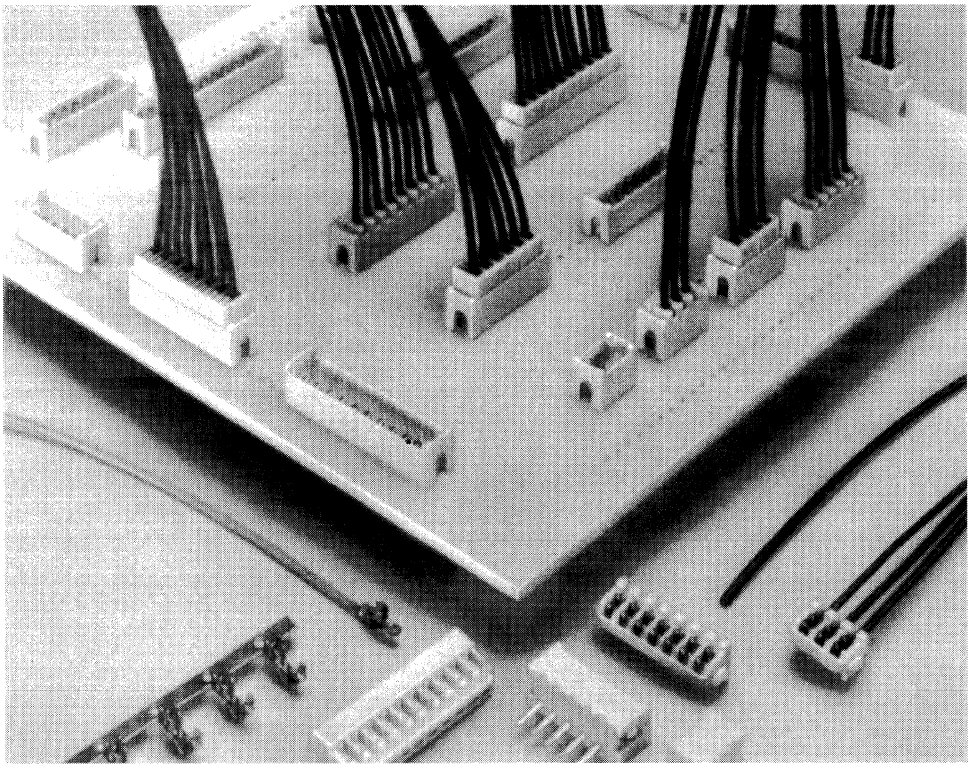
1-800-722-1111
Tooling/Technical Assistance Center

METRIC

Wire-to-Board Connectors

AMP ULTREX Interconnection System

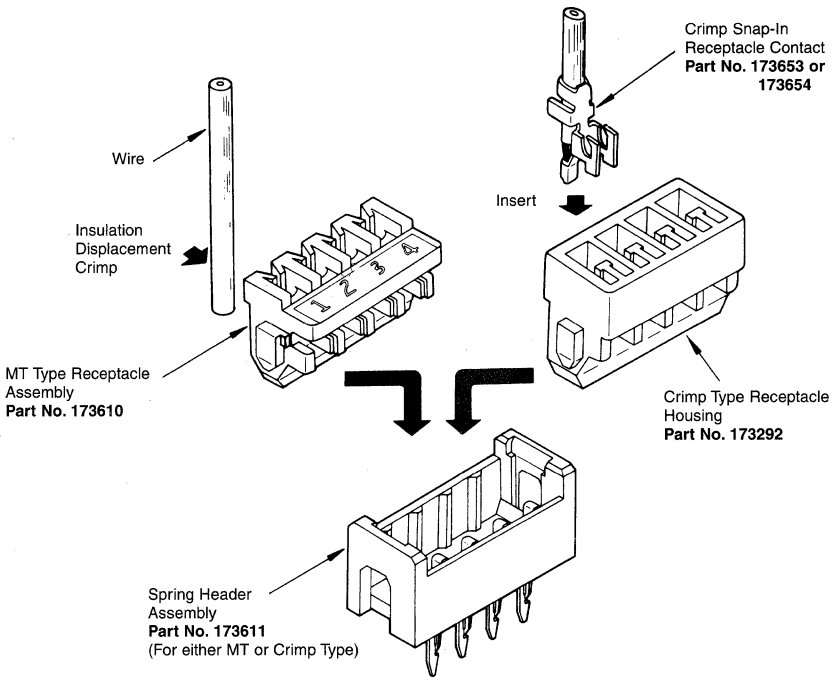
2 mm [.079] Centerline Low Profile



Product Facts

- Design prevents contact deformation and damage by scooping at mating/unmating
- Receptacle connector is available in Crimp and MT styles
- Crimp and MT versions are available in 2 through 12 positions
- Spring header is available in 2 through 12 positions
- Receptacle crimp snap-in contacts are available in 30-22 AWG [0.05-0.30 mm²], with an insulation diameter range of 0.7-1.6 [.028-.063]

Typical Assemblies



SOURCE: Catalog 124962

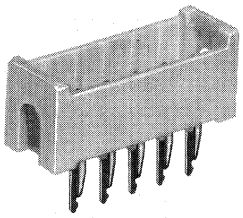
Specifications subject to change.

1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

Spring Header Assemblies

METRIC



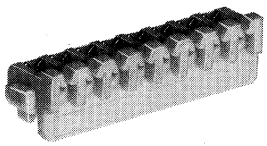
Mates with—MT Type Receptacle Assemblies And Crimp Type Receptacle Housings

Note: 5 Pos. Housing Dim. (Typ.)—12.6 [.496] L x 4.5 [.177] W x 4.8 [.190] H

No. of Positions	Part Numbers			
	Natural*	Blue*	Red*	Green*
2	173611-2	2-173611-2	4-173611-2	6-173611-2
3	173611-3	2-173611-3	4-173611-3	—
4	173611-4	—	—	—
5	173611-5	—	—	—
6	173611-6	—	—	—
7	173611-7	—	—	—
8	173611-8	—	4-173611-8	—
9	173611-9	—	—	—
10	1-173611-0	—	—	—
11	1-173611-1	—	—	—
12	1-173611-2	3-173611-2	5-173611-2	—

*Housing Color

MT Type Receptacle Assemblies



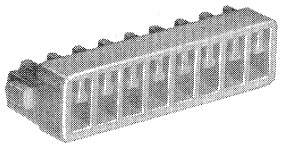
Mates with—Spring Header Assemblies

Note: 6 Pos. Housing Dim. (Typ.)—14.0 [.551] L x 4.5 [.177] W x 4.9 [.193] H

No. of Positions	Part Numbers			
	Natural*	Blue*	Red*	Green*
2	173610-2	2-173610-2	4-173610-2	6-173610-2
3	173610-3	2-173610-3	4-173610-3	—
4	173610-4	—	—	—
6	173610-6	—	—	—
7	173610-7	—	—	—
8	173610-8	—	4-173610-8	—
9	173610-9	—	—	—
10	1-173610-0	—	—	—
11	1-173610-1	—	—	—
12	1-173610-2	3-173610-2	5-173610-2	—

*Housing Color
Note: Wire Range—28-26 AWG [0.08-0.15 mm²]; Insulation Diameter Range—0.88-1.1 [.035-.043]

Crimp Type Receptacle Housings



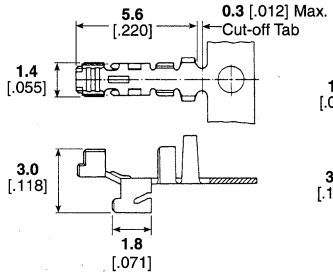
Mates with—Spring Header Assemblies

Note: 6 Pos. Housing Dim. (Typ.)— 14.0 [.551] L x 4.5 [.177] W x 6.3 [.248] H

No. of Positions	Part Numbers*
2	173292-2
3	173292-3
4	173292-4
5	—
6	173292-6
7	173292-7
8	173292-8
9	173292-9
10	1-173292-0
11	1-173292-1
12	1-173292-2

*Housing color is natural.

Crimp Snap-In Receptacle Contacts



Wire Size Range		Insulation Dia. Range	Part Numbers (Strip Form)
AWG	mm²		
30-26	0.05-0.14	**0.7-1.1** [.028-.043]	173653-1
26-22	0.14-0.30	**0.9-1.6** [.035-.063]	173654-1

Extraction Tool **Part No. 755210-1**

SOURCE: Catalog 124962

METRIC

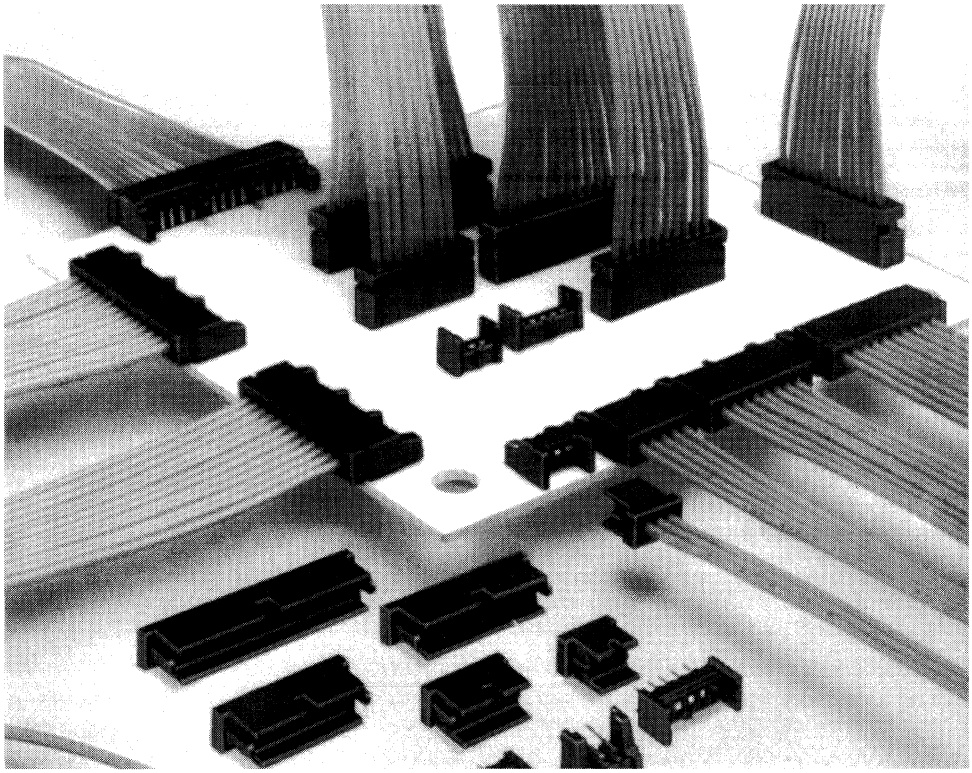
Wire-to-Board Connectors

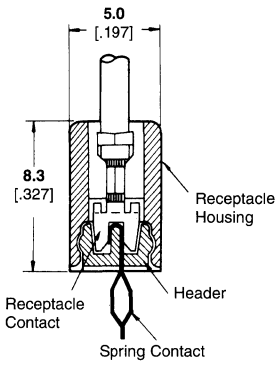
AMP ULTREX Interconnection System

2 mm [.079] Centerline Standard Profile

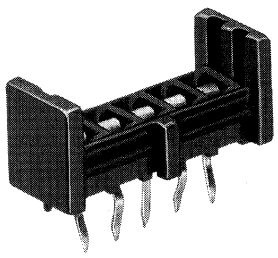
Product Facts

- Stored energy for contact pressure is provided by male contact, having a spring character, instead of the female contact receptacle
- Spring header is available in two styles– vertical and horizontal; available in 2 through 15 positions
- Receptacle housing is available in 2 through 15 positions
- Receptacle contacts are available in 30-22 AWG [0.05-0.35 mm²] with an insulation diameter range of 0.9-1.4 [.035-.055]





Vertical Type Top Entry, Spring Headers



Mates with—
Receptacle Housings

Note: 5 Pos. Housing Dim. (Typ.)—12.5 [.492] L x 5.0 [.197] W x 5.5 [.216] H

No. of Positions	Part Numbers
2	172429-2
3	172429-3
4	172429-4
5	172429-5
6	172429-6
7	172429-7
8	172429-8
9	172429-9
10	1-172429-0
11	1-172429-1
12	1-172429-2
13	1-172429-3
14	1-172429-4
15	1-172429-5

SOURCE: Catalog 124962

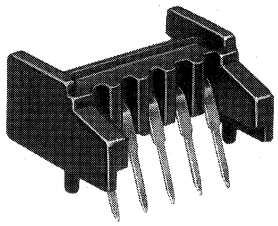
Specifications subject to change.

1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

METRIC

Horizontal Type Side Entry, Spring Headers

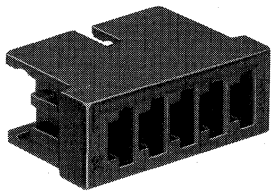


Mates with—
Receptacle Housing

Note: 5 Pos. Housing Dim. (Typ.)— 12.5 [.492] L x 9.5 [.374] W x 5.4 [.213] H

No. of Positions	Part Numbers
2	172430-2
3	172430-3
4	172430-4
5	172430-5
6	172430-6
7	172430-7
8	172430-8
9	172430-9
10	1-172430-0
11	1-172430-1
12	1-172430-2
13	1-172430-3
14	1-172430-4
15	1-172430-5

Receptacle Housings

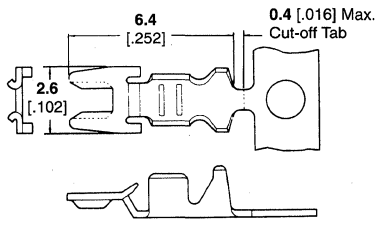


Mates with—Spring Headers, Vertical and Horizontal

Note: 5 Pos. Housing Dim. (Typ.)—12.5 [.492] L x 5.0 [.197] W x 8.1 [.319] H

No. of Positions	Part Numbers
2	172426-2
3	172426-3
4	172426-4
5	172426-5
6	172426-6
7	172426-7
8	172426-8
9	172426-9
10	1-172426-0
11	1-172426-1
12	1-172426-2
13	1-172426-3
14	1-172426-4
15	1-172426-5

Receptacle Contacts



Wire Size Range AWG [mm²]	Insulation Diameter Range	Part Numbers	
		Strip Form	Loose Piece
30-26 [0.05-0.15]	**0.9-1.3** [.035-.051]	170493-1	170494-1
26-22 [0.12-0.35]	**1.0-1.4** [.039-.055]	170495-1	170496-1

Insertion Tool **Part No. 724797-1**, Extraction Tool **Part No. 724798-1**.

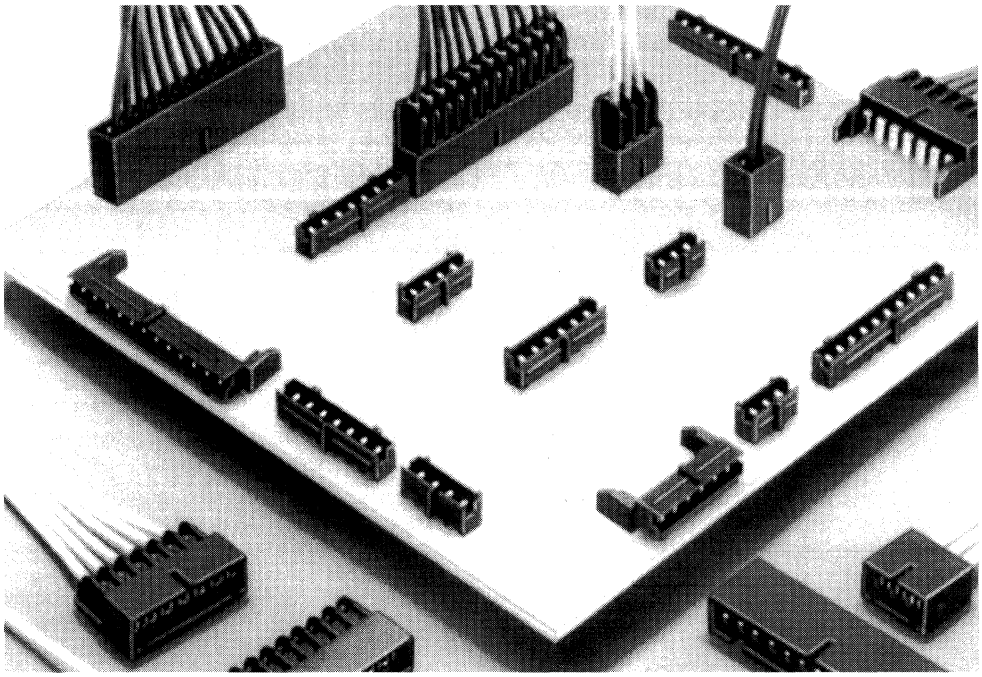
SOURCE: Catalog 124962

METRIC

Wire-to-Board Connectors

AMP ULTREX Interconnection System

2.5 mm [.098] and 2.54 mm [.100] Centerlines



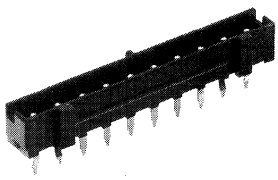
Product Facts

- Both the male contact preloaded in the board-mount header and the female contact in the receptacle connector are designed to have spring characteristics
- Size of mateable connector is compact
- High contact pressure in spite of low insertion force
- Anti-overstress, wiping and anti-vibration measure included in the design
- Receptacles accept either 2.5 [.098] or 2.54 [.100] centerline spring headers
- Receptacle connector available in 2 through 15 positions in crimp type and 2 through 20 positions in mass termination type

- Recognized under the Component Program of Underwriters Laboratories Inc., File No. E28476
- Certified by Canadian Standards Association, File No. LR7189

Vertical Type Top Entry Spring Headers

Mates with—
Receptacle Housings, Crimp and MT Type



Note: 10 Pos. Housing Dim. (Typ.)—26.5 [1.043] L x 4.7 [.185] W x 3.9 [.154] H

No. of Pos.	Part Numbers	
	2.5 mm [.098] Centerline	2.54 mm [.100] Centerline*
2	172681-2	172681-2
3	172681-3	172681-3
4	172681-4	172681-4
5	172681-5	172681-5
6	172681-6	172681-6
7	172681-7	172682-7
8	172681-8	172682-8
9	172681-9	172682-9
10	1-172681-0	1-172682-0
11	1-172681-1	1-172682-1
12	1-172681-2	1-172682-2
13	1-172681-3	1-172682-3
14	1-172681-4	1-172682-4
15	1-172681-5	1-172682-5
16	1-172681-6	1-172682-6
18	1-172681-8	1-172682-8
20	2-172681-0	2-172682-0

*2.54 mm [.100] centerline header ranging in 2 to 6 positions, also used for 2.5 mm [.098] centerline.

SOURCE: Catalog 124962

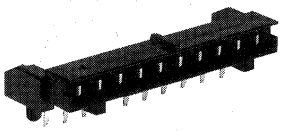
Specifications subject to change.

1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

METRIC

Horizontal Type Side Entry Spring Headers



Mates with—
Receptacle Housings, Crimp and MT Type

Note: 10 Pos. Housing Dim. (Typ.)—27.5 [1.083] L x 10.0 [.394] W x 5.1 [.201] H

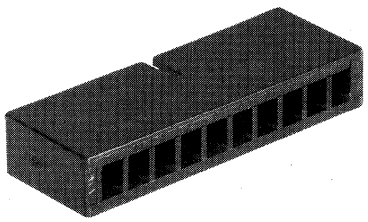
No. of Pos.	Part Numbers **	
	2.5 mm [.098] Centerline	2.54 mm [.100] Centerline
2	172683-2	172683-2
3	172683-3	172683-3
4	172683-4	172683-4
5	172683-5	172683-5
6	172683-6	172683-6
7	172683-7	172684-7
8	172683-8	172684-8
9	172683-9	172684-9
10	1-172683-0	1-172684-0

No. of Pos.	Part Numbers **	
	2.5 mm [.098] Centerline	2.54 mm [.100] Centerline
11	1-172683-1	1-172684-1
12	1-172683-2	1-172684-2
13	1-172683-3	1-172684-3
14	1-172683-4	1-172684-4
15	1-172683-5	1-172684-5
16	1-172683-6	1-172684-6
18	1-172683-8	1-172684-8
20	2-172683-0	2-172684-0

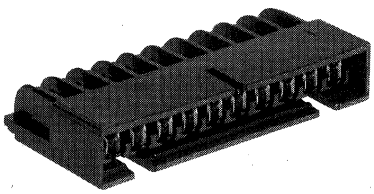
**2.54 mm [.100] centerline header ranging in 2 to 6 positions, also used for 2.5 mm [.098] centerline.

Receptacle Housings

Mates with—
Spring Headers, Horizontal and Vertical



Crimp Type



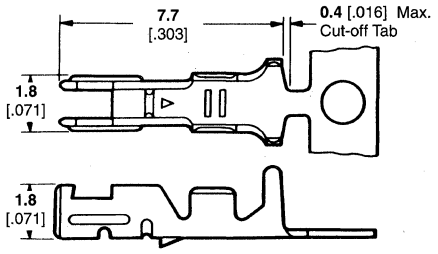
MT Type

Note: 10 Pos. Housing Dim. (Typ.)—Crimp Type, 27.5 [1.083] L x 9.7 [.382] W x 5.2 [.205] H; MT Type, 27.5 [1.083] L x 12.8 [.504] W x 3.2 [.126] H

No. of Pos.	Part Numbers	
	Crimp Type	MT Type
2	172677-2	172685-2
3	172677-3	172685-3
4	172677-4	172685-4
5	172677-5	172685-5
6	172677-6	172685-6
7	172677-7	172685-7
8	172677-8	172685-8
9	172677-9	172685-9
10	1-172677-0	1-172685-0

No. of Pos.	Part Numbers	
	Crimp Type	MT Type
11	1-172677-1	1-172685-1
12	1-172677-2	1-172685-2
13	1-172677-3	1-172685-3
14	1-172677-4	1-172685-4
15	1-172677-5	1-172685-5
16	—	1-172685-6
18	—	1-172685-8
20	—	2-172685-0

Crimp Snap-In Type Receptacle Contacts



Wire Size Range AWG [mm²]	Insulation Diameter	Part Numbers	
		Strip Form	Loose Piece
30-26 [0.05-0.15]	**0.7-1.5** [.028-.059]	171609-1	171611-1
26-22 [0.12-0.35]	**1.0-1.9** [.039-.075]	171610-1	171612-1

SOURCE: Catalog 124962

METRIC

Wire-to-Board Connectors

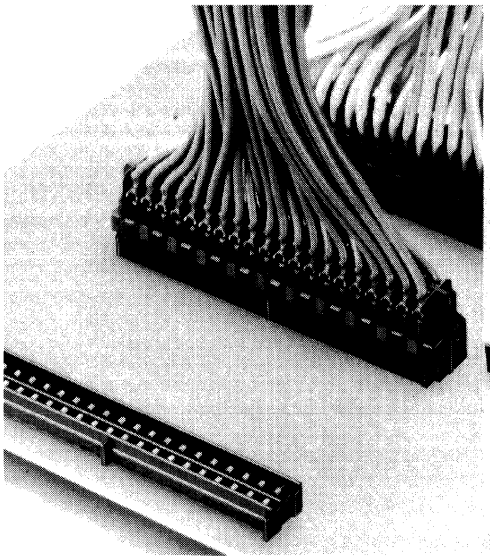
AMP ULTREX Interconnection System

2.54 x 2.54 mm [.100 x .100] Centerlines

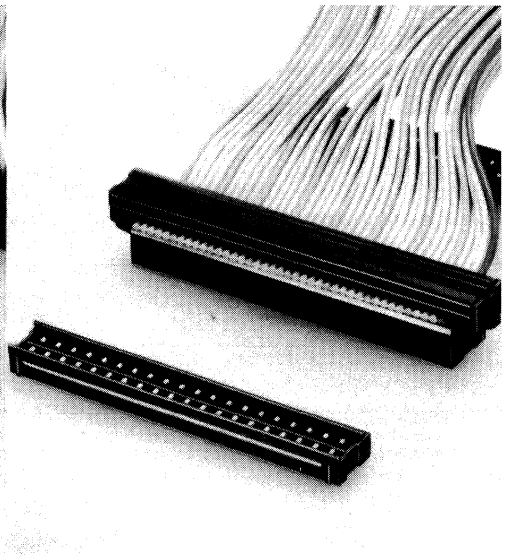
Double-Row

Product Facts

- Design prevents contact deformation and damage by scooping at mating/unmating
- Header preloaded with male spring contacts with solder tails on 2.54 x 2.54 [.100 x .100] centerline grid
- Header mates with receptacle connector of either crimp/IDC mass termination (MT) or AMP-LATCH connector type
- Spring header is available in 18 through 50 positions
- Receptacle connector is available in crimp and MT versions and AMP-LATCH receptacle assemblies
- Crimp and MT versions are available in 18 through 50 positions; AMP-LATCH assembly is available in 20 through 50 positions

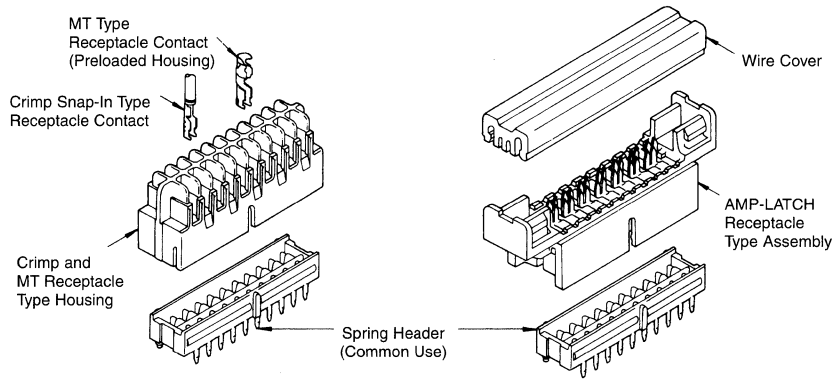


Crimp/IDC, Mass Termination Type

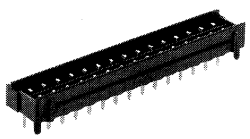


AMP-LATCH Receptacle Type

Typical Application



Spring Header Assemblies



Mates with—Crimp and MT Receptacle Type Housing and AMP-LATCH Receptacle Type Assembly

Note: 30 Pos. Housing Dim. (Typ.)— 40.6 [1.598] L x 8.4 [.331] W x 4.5 [.177] H

No. of Pos.	Part Numbers	
	With Polarization	Without Polarization
18	1-172870-8	1-173052-8
20	2-172870-0	2-173052-0
22	2-172870-2	2-173052-2
24	2-172870-4	2-173052-4
26	2-172870-6	2-173052-6
28	2-172870-8	2-173052-8

No. of Pos.	Part Numbers	
	With Polarization	Without Polarization
30	3-172870-0	3-173052-0
32	3-172870-2	3-173052-2
34	3-172870-4	3-173052-4
36	3-172870-6	3-173052-6
40	4-172870-0	4-173052-0
50	5-172870-0	5-173052-0

Note: This spring header mates with the receptacle connector of either Crimp/IDC or AMP-LATCH connector type.

SOURCE: Catalog 124962

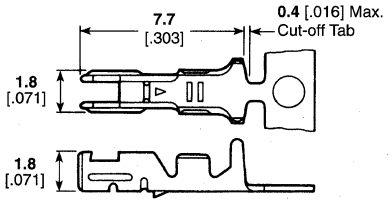
Specifications subject to change.

1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

METRIC

Crimp Snap-In Receptacle Type Contacts

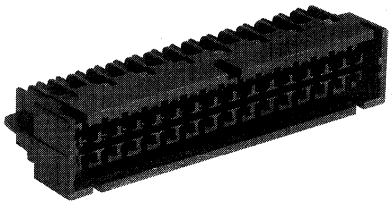


Wire Size Range AWG [mm²]	Insulation Diameter	Part Number		Hand Tool No.
		Strip Form	Loose Piece	
30-26 [0.05-0.15]	**0.7-1.5** [.028-.059]	171609-1	171611-1	753800-1
26-22 [0.12-0.35]	**1.0-1.9** [.039-.075]	171610-1	171612-1	

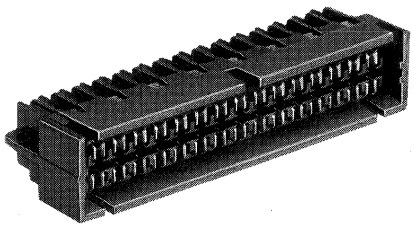
Extraction Tool **Part No. 753802-1**, **Part No. 753883-1** (For Crimp and MT Type)

Crimp Receptacle Type Housings and MT Receptacle Type Connectors

Mates with—
Spring Header Assemblies



Crimp Receptacle Type Housings



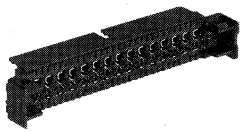
MT Receptacle Type Connectors

Note: 30 Pos. Housing Dim. (Typ.)—
Crimp Type, 43.1 [1.697] L x 12.8 [.504] W x 9.3 [.366] H;
MT Type, 43.1 [1.697] L x 12.8 [.504] W x 9.3 [3.66] H

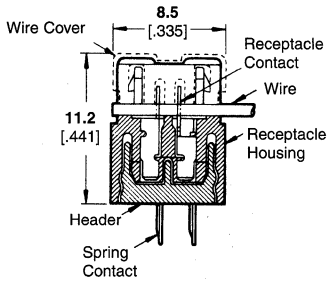
No. of Pos.	Part Numbers	
	Crimp Type[1]	MT Type[2]
18	1-172865-8	1-172866-8
20	2-172865-0	2-172866-0
22	2-172865-2	2-172866-2
24	2-172865-4	2-172866-4
26	2-172865-6	2-172866-6
28	2-172865-8	2-172866-8
30	3-172865-0	3-172866-0
32	3-172865-2	3-172866-2
34	3-172865-4	3-172866-4
36	3-172865-6	3-172866-6
40	4-172865-0	4-172866-0
50	5-172865-0	5-172866-0

[1]Crimp Snap-In Receptacle type contacts shown above.
[2]Wire size—28-24 AWG [0.08-0.2 mm²]; Insulation diameter—0.88-1.56 [.035-.061].

AMP-LATCH Receptacle Type Connector Assemblies



Mates with—
Spring Header Assemblies



Note: 30 Pos. Housing Dim. (Typ.)—
47.6 [1.874] L x 8.5 [.335] W x 11.2 [.441] H

No. of Pos.	Part Numbers	
	Receptacle Assembly	Wire Cover
20	2-173121-0	2-173122-0
26	2-173121-6	2-173122-6
30	3-173121-0	3-173122-0
34	3-173121-4	3-173122-4
40	4-173121-0	4-173122-0
50	5-173121-0	5-173122-0

Note: Wire size—28 AWG [0.08 mm²], 1.27 [.050] centerline; Insulation diameter—0.8-1.0 [.031-.039].

SOURCE: Catalog 124962

Specifications subject to change.

1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

METRIC

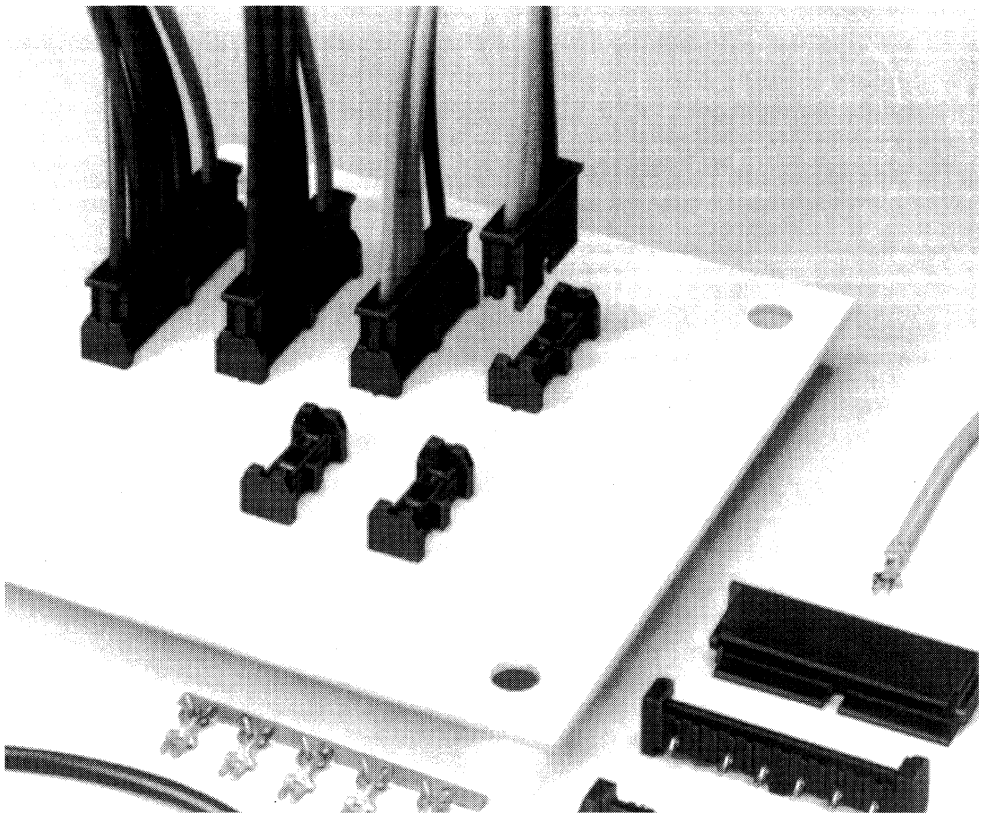
Wire-to-Board Connectors

AMP ULTREX Interconnection System

5 [.197] /7.5 mm [.295] Centerlines

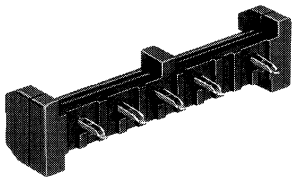
Product Facts

- Header available in vertical mount version only
- Design prevents contact deformation and scooping damage at mating/unmating
- Header preloaded with male spring contacts with solder tails
- Spring header provides anti-flux feature and self-retaining solder tails
- Available in 2 through 6 positions



Spring Header Assemblies

Mates with—
Receptacle Housings

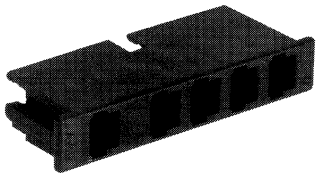


Note: 5 Pos. Housing Dim. (Typ.)—32.5 [1.280] L x 8.0 [.315] W x 6.6 [.260] H

No. of Positions	Part Numbers
2	2-173270-2
3	2-173270-3
4	2-173270-4
5	2-173270-5
6	2-173270-6

Receptacle Housings

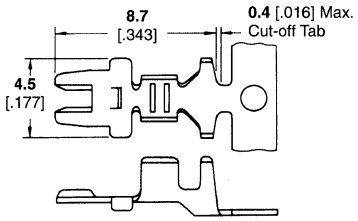
Mates with—
Spring Header Assemblies



Note: 5 Pos. Housing Dim. (Typ.)—32.5 [1.280] L x 11.9 [.469] W x 6.1 [.240] H

No. of Positions	Part Numbers
2	2-173268-2
3	2-173268-3
4	2-173268-4
5	2-173268-5
6	2-173268-6

Crimp Snap-In Receptacle Contacts



Wire Size Range		Insulation Dia.	Part Numbers	
AWG	mm²		Strip Form	Loose Piece
24-20	0.2-0.56	**1.5-2.5** [.059-.098]	171600-2	171601-2
22-18	0.3-0.89	**2.2-3.0** [.087-.118]	171602-2	171603-2

SOURCE: Catalog 124962

Specifications subject to change.

1-800-522-6752
Product Information Center/ AMP FAX Service

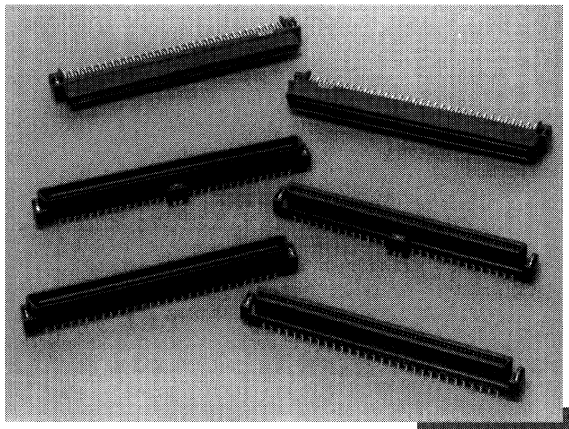
1-800-722-1111
Tooling/Technical Assistance Center

CHAMP .050 Connectors

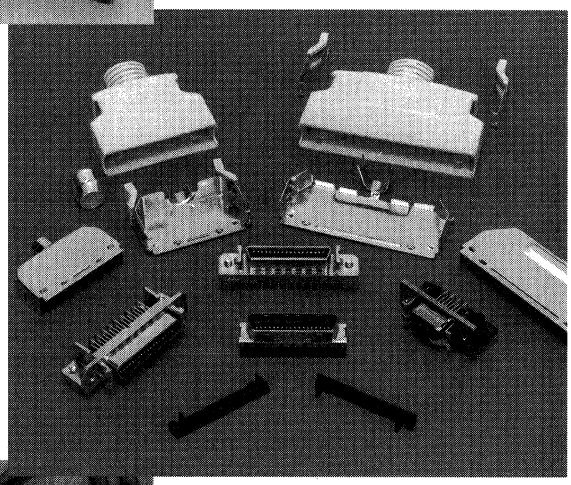
Product Facts

- High density .050 [1.27] contact centerlines
- Leaf contacts accommodate mating misalignment
- D-shaped polarized mating face
- Variety of application tooling available to meet all production volumes
- Free 3D and 2D CAD images—
See page 56

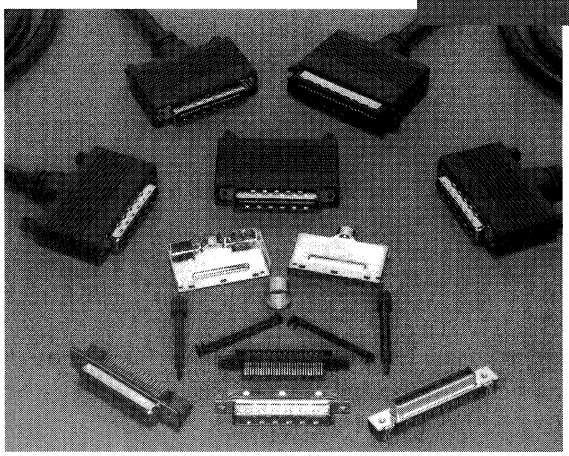
EADS CD-ROM



Board-to-Board
Series I



Wire-to-Board
Series II



Wire-to-Board
Series III

CHAMP .050 connectors meet the needs for high density .050 inch contact centerlines required by constantly emerging miniaturized designs. These connectors allow the printed circuit board designer to maximize valuable Pc board real estate without sacrificing interconnection capability.

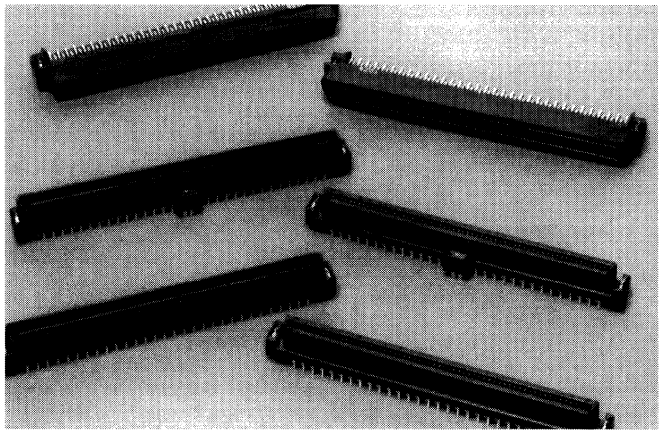
The CHAMP .050 connector family has grown to six distinctively different categories. These six product offerings afford the customer maximum flexibility in packaging and efficient use of space for both internal and external interconnection applications.

The trapezoidal, D-shaped mating face is a familiar industry standard, along with the ribbon, or leaf, contact design that is durable enough to withstand the rigors of repeated mating.

Whether the application need is for board-to-board, wire-to-board or box-to-box interconnections, the CHAMP .050 connector family provides a solution.

SOURCE: Catalog 82244

Board-to-Board Applications
CHAMP .050 Series I

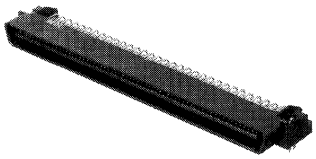


Product Facts

- All-plastic Pc board mounting
- Vertical and right-angle plugs and receptacles
- Parallel, perpendicular, and in-line interconnections
- Single-spring contact design for high tolerance to mating depth variations
- Receptacle connectors will mate with .062 [1.57] printed circuit boards to allow service as card edge connectors
- 20 through 200 selected positions
- Free 3D and 2D CAD images— See page 56

EADS CD-ROM

Right-Angle Plug

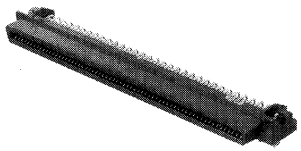


Mates with—Right-Angle and Vertical Receptacle

Note: 80 Pos. Housing Dim. (Typ.)—2.391 [60.73] L x .693 [17.60] W x .301 [7.65] H

No. of Pos.	Part Numbers	
	Standard	High Temp.
20	5-175472-1	—
30	5-175472-3	557100-1
40	5-175472-5	557100-5
50	5-175472-6	557100-9
60	5-175472-7	1-557100-3
68	5-175472-8	1-557100-7
80	5-175472-9	2-557100-1
100	6-175472-0	2-557100-5
120	6-175472-1	2-557100-9
130	6-175472-2	3-557100-3
140	—	4-557100-9
160	—	3-557100-7
200	—	4-557100-1

Right-Angle Receptacle

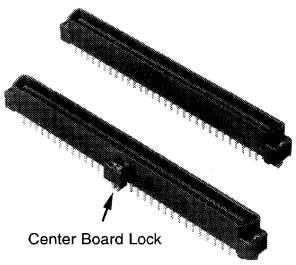


Mates with—Right-Angle and Vertical Plug

Note: 80 Pos. Housing Dim. (Typ.)—2.391 [60.73] L x .693 [17.60] W x .301 [7.65] H

No. of Pos.	Part Numbers	
	Standard	High Temp.
20	5-175474-1	—
30	5-175474-3	557101-1
40	5-175474-5	557101-5
50	5-175474-6	557101-9
60	5-175474-7	1-557101-3
68	5-175474-8	1-557101-7
80	5-175474-9	2-557101-1
100	6-175474-0	2-557101-5
120	6-175474-1	2-557101-9
130	6-175474-2	3-557101-3
140	—	4-557101-9
160	—	3-557101-7
180	—	5-557101-3
200	—	4-557101-1

Vertical Plug



Mates with—Right-Angle and Vertical Receptacle

Note: 80 Pos. Housing Dim. (Typ.)—2.447 [62.15] L x .283 [7.20] W x .402 [10.20] H

No. of Pos.	Part Numbers			
	Standard[1]	High Temp.		
		Keying Post[2]	Center Board Lock[3]	Without Post
20	5-175473-1	—	—	—
30	5-175473-3	*	—	—
40	5-175473-5	557102-5	—	—
50	5-175473-6	*	—	557170-9
60	5-175473-7	1-557102-3	—	—
68	5-175473-8	*	—	1-557170-7
80	5-175473-9	2-557102-1	—	2-557170-1
100	6-175473-0	2-557102-5	—	—
120	6-175473-1	2-557102-9	557053-1	—
130	6-175473-2	3-557102-3	557053-2	—
140	—	4-557102-9	557053-5	—
160	—	3-557102-7	557053-3	—
180	—	4-557102-3	—	—
200	—	4-557102-1	557053-4	—

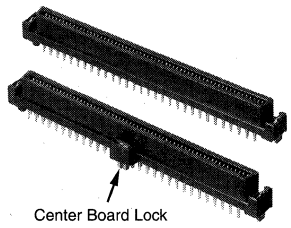
*Contact AMP.
[1]End Board Locks
[2]End Board Locks and Keying Post
[3]End and Center Board Locks and Keying Post

SOURCE: Catalog 82244

Specifications subject to change.
1-800-522-6752 Product Information Center/ AMP FAX Service
1-800-722-1111 Tooling/Technical Assistance Center

Board-to-Board Applications CHAMP .050 Series I (Continued)

Vertical Receptacle



Mates with—Right-Angle and Vertical Plug

Note: 80 Pos. Housing Dim. (Typ.)—2.447 [62.15] L x .402 [10.20] W x .394 [10.00] H

No. of Pos.	Part Numbers			
	Standard[1]	High Temp.		
		Keying Post[2]	Center Board Lock[3]	Without Post
20	5-175475-1	—	—	—
30	5-175475-3	557103-1	—	—
40	5-175475-5	*	—	—
50	5-175475-6	557103-9	—	786925-9
60	5-175475-7	1-557103-3	—	1-786925-3
68	5-175475-8	1-557103-7	—	1-786925-7
80	*	2-557103-1	—	2-786925-1
100	6-175475-0	2-557103-5	—	—
120	6-175475-1	2-557103-9	557054-1	—
130	6-175475-2	3-557103-3	557054-2	—
140	—	*	*	—
160	—	3-557103-7	557054-3	—
200	—	4-557103-1	557054-4	—

*Contact AMP.
[1]End Board Locks
[2]End Board Locks and Keying Post
[3]End and Center Board Locks and Keying Post

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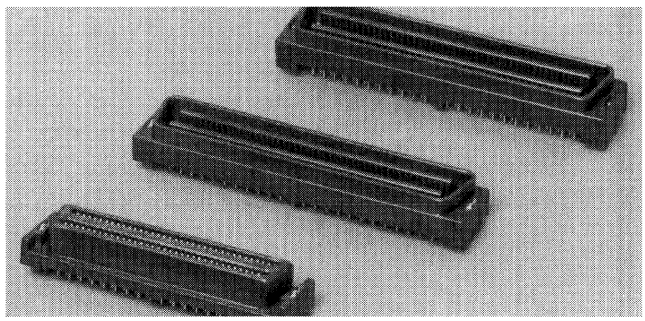
Board-to-Board Applications CHAMP .050 HD Connectors

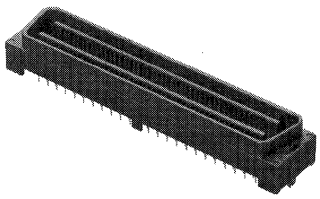
Product Facts

- Special single leaf contact design provides low mating force
- 4-row contact arrangement
- High temperature LCP material
- Vertical headers in plug and receptacle genders
- 140 through 300 selected positions
- Keying post assures correct board orientation
- Free 3D and 2D CAD images— See page 56

EADS CD-ROM



Vertical Plug



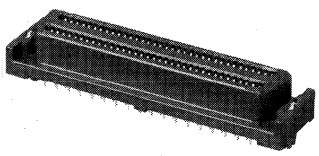
Mates with—Vertical Receptacle

Note: 188 Pos. Housing Dim. (Typ.)—
Low Profile, 2.879 [73.13] L x .565 [14.35] W x .371 [9.42] H; Standard Profile, 2.879 [73.13] L x .565 [14.35] W x .422 [10.72] H

No. of Pos.	Part Numbers			
	Low Profile		Std. Profile	
	Solder Tail Length		Solder Tail Length	
	.089 [2.26]	.136 [3.45]	.089 [2.26]	.136 [3.45]
140	557096-1	1-557096-0	*	*
160	*	*	*	*
188	557096-3	1-557096-1	557147-3	557147-4
200	*	1-557096-2	*	*
220	*	*	*	*
240	*	*	*	*
280	*	*	*	*
300	557096-8	*	*	*

* Contact AMP for sizes not completed in table.
Note: Low Profile Stack Height, .500 [12.70]; Standard Profile Stack Height, .550 [13.97].

Vertical Receptacle



Mates with—Vertical Plug

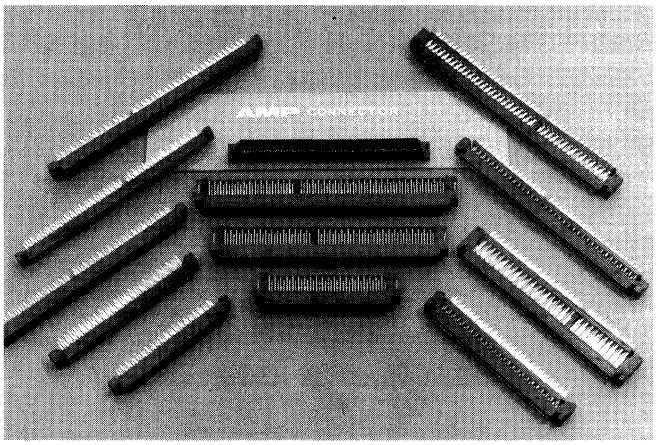
Note: 188 Pos. Housing Dim. (Typ.)— 2.879 [73.13] L x .565 [14.35] W x .490 [12.44] H

No. of Pos.	Part Numbers	
	Std. Profile	
	Solder Tail Length	
	.089 [2.26]	.136 [3.45]
140	557095-1	1-557095-0
160	*	*
188	557095-3	557095-9
200	*	1-557095-2
220	*	*
240	*	*
280	*	*
300	557095-8	*

* Contact AMP for sizes not completed in table.
Note: Stack Height .500 [12.70].

SOURCE: Catalog 82244

Board-to-Board Applications
CHAMP .050 FH (Free Height) Connectors

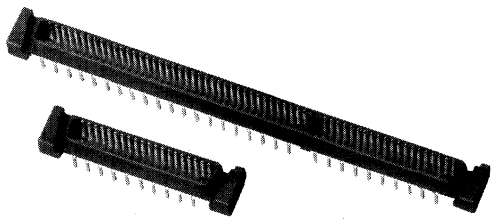


Product Facts

- All plastic headers for board-to-board interconnections
- Proprietary single-spring leaf contact design
- Right-angle and vertical headers available in both plug and receptacle for full range of interconnections including parallel, perpendicular and in-line
- 40 through 160 positions available in most genders
- Vertical receptacles available in eleven heights for variation of stack height (.315-.709 [8 mm-18 mm] in .04 [1 mm] increments)
- Alternative to Series I
- Closed bottom inhibits flux/solder contamination
- Detent locking system with tactile feedback
- Free 3D and 2D CAD images— See page 56

EADS CD-ROM

Vertical Receptacle, .315 [8 mm] Stack Height



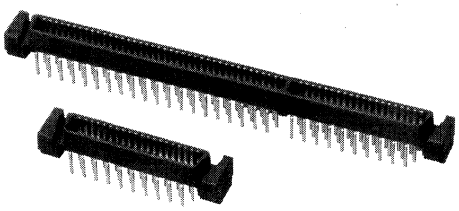
Mates with—Right-Angle and Vertical Plug

Note: 100 Pos. Housing Dim. (Typ.)—2.953 [75.00] L x .323 [8.20] W x .224 [5.70] H

No. of Pos.	Part Number		
	Enhanced*	Standard	High Temp.
40	176368-1	917628-1	—
60	176368-2	917628-2	—
80	176368-3	917628-3	—
100	176368-4	917628-4	179528-4
120	176368-5	917628-5	—
140	176368-6	917628-6	—
160	176368-7	917628-7	—
180	176368-8	917628-8	—

Note: Other sizes can be made available, contact AMP.
*Enhanced FH Connectors with Sealed Bottom.

Vertical Receptacle, .354 [9 mm] and .394 [10 mm] Stack Height



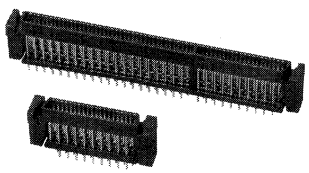
Mates with—Right-Angle and Vertical Plug

Note: 100 Pos. Housing Dim. (Typ.)—.354 [9 mm] Stack Height, 2.953 [75.00] L x .315 [8.00] W x .264 [6.70] H; .394 [10 mm] Stack Height, 2.953 [75.00] L x .315 [8.00] W x .303 [7.70] H

No. of Pos.	Part Numbers					
	Standard		Enhanced*		High Temp.	
	.354 [9 mm]	.394 [10 mm]	.354 [9 mm]	.394 [10 mm]	.354 [9 mm]	.394 [10 mm]
40	917629-1	917630-1	176369-1	176370-1	—	—
60	917629-2	917630-2	176369-2	176370-2	—	—
80	917629-3	917630-3	176369-3	176370-3	—	—
100	917629-4	917630-4	176369-4	176370-4	—	—
120	917629-5	917630-5	176369-5	176370-5	179529-5	—
140	917629-6	917630-6	176369-6	176370-6	—	—
160	—	917630-7	—	176370-7	—	—
180	—	917630-8	—	176370-8	—	—

Note: Other sizes can be made available, contact AMP.
*Enhanced FH Connectors with Sealed Bottom.

Vertical Receptacle, .433 [11 mm] to .709 [18 mm] Stack Height



Mates with—Right-Angle and Vertical Plug

Note: 100 Pos. Housing Dim. (Typ.)—.551 [14 mm] Stack Height, 2.953 [75.00] L x .323 [8.20] W x .461 [11.70] H; .709 [18 mm] Stack Height, 2.953 [75.00] L x .323 [8.20] W x .618 [15.70] H

No. of Pos.	Part Numbers — Stack Height							
	.433 [11 mm]	.472 [12 mm]	.512 [13 mm]	.551 [14 mm]	.591 [15 mm]	.630 [16 mm]	.669 [17 mm]	.709 [18 mm]
40	176371-1	176372-1	176373-1 179533-1[1]	176374-1	—	176376-1 179536-1[1]	176377-1	176378-1
60	176371-2	176372-2	176373-2 176533-2[1]	176374-2	176375-2	176376-2	—	176378-2
80	176371-3	176372-3	176373-3 176533-3[1]	176374-3	176375-3	176376-3	176377-3	176378-3
100	176371-4 179531-4[1]	176372-4 179532-4[1]	176373-4 176533-4[1]	176374-4	—	176376-4	176377-4	176378-4
120	176371-5 179531-5[1]	176372-5	—	176374-5	176375-5	176376-5	176377-5	176378-5
140	176371-6	176372-6	—	176374-6	—	176376-6	—	176378-6 179538-6[1]
160	—	—	—	176374-7	—	—	—	176378-7
180	—	—	—	—	—	—	176377-8	176378-8

Note: Other sizes can be made available, contact AMP.
[1]High Temperature

SOURCE: Catalog 82244

Specifications subject to change.

1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

Board-to-Board Applications
CHAMP .050 FH (Free Height) Connectors
(Continued)

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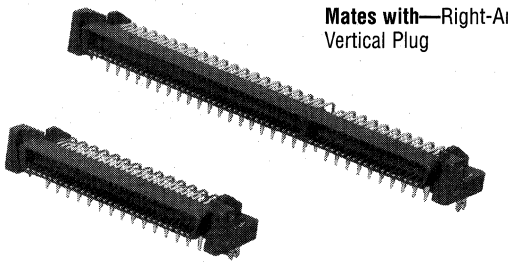
Right-Angle Receptacle



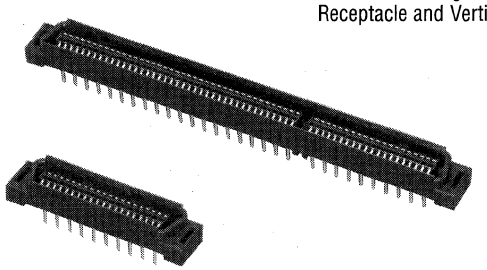
Mates with—Right-Angle and Vertical Plug

Note: 100 Pos. Housing Dim. (Typ.)—2.953 [75.00] L x .579 [14.70] W x .335 [8.50] H

No. of Pos.	Part Numbers	
	Standard	High Temp.
40	*	*
60	176379-2	179539-2
80	176379-3	*
100	176379-4	*
120	176379-5	*
140	176379-6	*
160	176379-7	*
180	176379-8	*

* Contact AMP.

Vertical Plug



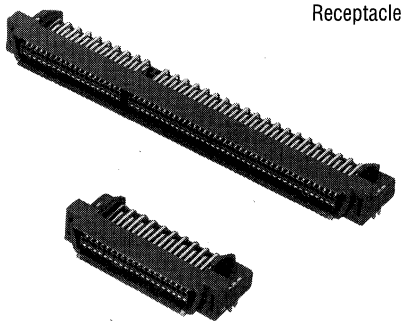
Mates with—Right-Angle Receptacle and Vertical Receptacle

Note: 100 Pos. Housing Dim. (Typ.)—2.947 [74.85] L x .315 [8.00] W x .276 [7.00] H

No. of Pos.	Part Numbers		
	High Temp.	Enhanced	Standard*
40	179540-1	176380-1	917631-1
60	179540-2	176380-2	917631-2 179656-2†
80	179540-3	176380-3	917631-3
100	179540-4	176380-4	917631-4 179657-4††
120	179540-5	176380-5	917631-5
140	179540-6	176380-6	917631-6
160	—	176380-7	917631-7
180	—	176380-8	—

*Enhanced FH Connectors with Sealed Bottom.
†Surface mount with solder peg.
††Surface mount with thru-hole flange.

Right-Angle Plug



Mates with—Right-Angle Receptacle and Vertical Receptacle

Note: 100 Pos. Housing Dim. (Typ.)—2.947 [74.85] L x .638 [16.20] W x .335 [8.50] H

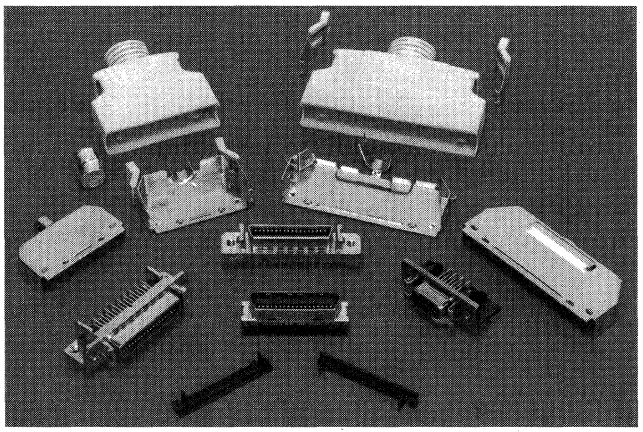
No. of Pos.	Part Numbers
40	176381-1
60	176381-2
80	176381-3
100	176381-4
120	176381-5
140	176381-6
160	176381-7
180	176381-8

Wire-to-Board Applications
CHAMP .050 Series II

Product Facts

- **Cable plug connectors terminate 28 AWG [.08–.09 mm²] wire**
- **75° and 180° cable exit**
- **Pc board mounting receptacle connectors with rugged zinc die cast body or stamped metal shield**
- **Double-spring contact design to ensure intermateability and conformance to standards**
- **14 through 100 selected positions available**
- **Free 3D and 2D CAD images—**
See page 56

EADS CD-ROM

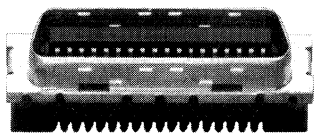


SOURCE: Catalog 82244

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

Wire-to-Board Applications CHAMP .050 Series II
(Continued)

Plug Cable Connectors



Mates with—Right-Angle and Vertical Receptacle

Note: 36 Pos. Housing Dim. (Typ.)—1.276 [32.40] L x .520 [13.20] W x .315 [8.00] H

No. of Pos.	Part Number		
	28 AWG* [0.08 mm²]	30 AWG [0.05 mm²]	SCSI 28 AEG [0.08 mm²]
14	2-175677-1	2-175750-1	*
20	2-175677-2	2-175750-2	*
26	2-175677-4	2-175750-4	*
36	2-175677-5	2-175750-5	*
50	2-175677-7	2-175750-7	2-175751-7
68	2-175677-8	2-175750-8	*
80	3-175677-0	3-175750-0	*
100	2-175677-9	2-175750-9	*

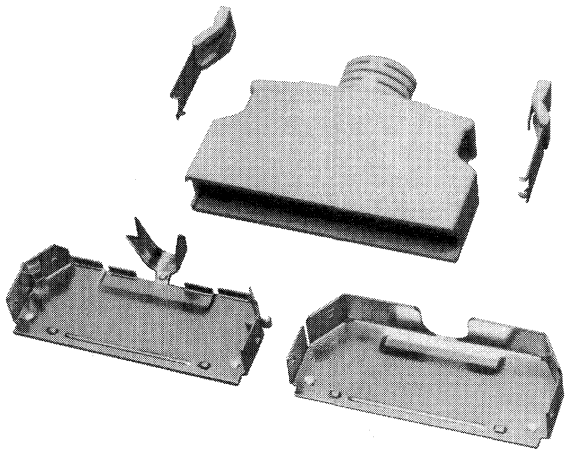
*Other connector sizes can be made available, conactt AMP.

Enclosure Kits for Series II Plugs

75° Exit

No. of Pos.	Acceptable Cable O.D.	Part Numbers
36	.283 7.20	175930-5
50	.319 8.10	175930-7
68	.346 8.80	175930-8

Straight Exit



No. of Pos.	Acceptable Cable O.D.	Part Numbers
14	.169-.240 4.3-6.1	176793-1
20	.213-.256 5.4-6.5	176793-2
26	.232-.272 5.9-6.9	176793-4
36	.252-.311 6.4-7.9	176793-5

No. of Pos.	Acceptable Cable O.D.	Part Numbers
50	.283-.335 7.2-8.5	176793-7
68	.319-.378 8.1-9.6	176793-8
80	.335-.402 8.5-10.2	1-176793-0
100	.390-.433 9.9-11.0	176793-9

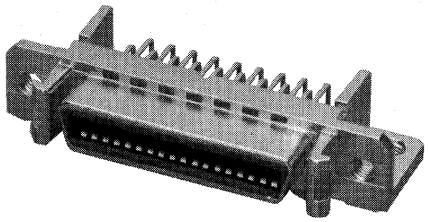
SOURCE: Catalog 82244

Specifications subject to change.
1-800-522-6752 Product Information Center/ AMP FAX Service
1-800-722-1111 Tooling/Technical Assistance Center

Wire-to-Board Applications CHAMP .050 Series II (Continued)

Right-Angle Receptacle

Mates with—Plug Cable Connectors

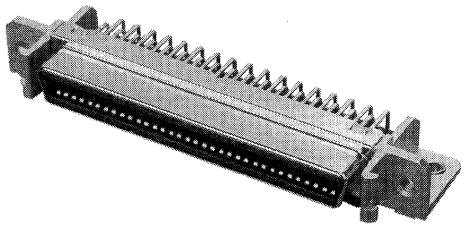


Note: 50 Pos. Housing Dim. (Typ.)—2.063 [52.40] L x .663 [16.85] W x .374 [9.50] H

No. of Pos.	Part Numbers
14	2-175671-1
20	2-175671-2
26	2-175671-4
36	2-175671-5
50	2-175671-7
68	2-175671-8
80	2-175671-9
100	3-175671-0

Right-Angle Receptacle, Board Lock

Mates with—Plug Cable Connectors

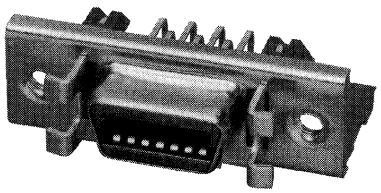


Note: 50 Pos. Housing Dim. (Typ.)—2.063 [52.40] L x .458 [11.65] W x .370 [9.40] H

No. of Pos.	Part Numbers
14	2-178238-1
20	2-178238-2
26	2-178238-4
36	2-178238-5
50	2-178238-7
68	2-178238-8
80	2-178238-9
100	3-178238-3

Right-Angle Receptacle, High Temp

Mates with—Plug Cable Connectors

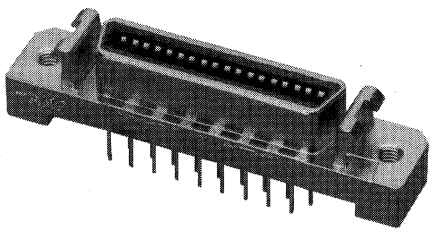


Note: 26 Pos. Housing Dim. (Typ.)—1.463 [37.16] L x .465 [11.80] W x .394 [10.00] H

No. of Pos.	Part Numbers
14	557153-3
26	557153-1

Vertical Receptacle

Mates with—Plug Cable Connectors



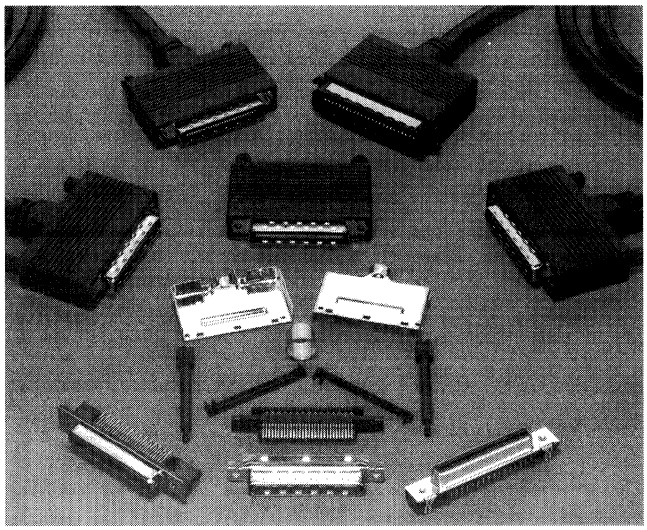
Note: 50 Pos. Housing Dim. (Typ.)—2.063 [52.40] L x .362 [9.20] W x .435 [11.05] H

No. of Pos.	Part Numbers
14	2-175925-1
20	2-175925-2
26	2-175925-4
36	2-175925-5
50	2-175925-7
68	2-175925-8
80	3-175925-0
100	2-175925-9

SOURCE: Catalog 82244

Specifications subject to change.
1-800-522-6752 Product Information Center/ AMP FAX Service
1-800-722-1111 Tooling/Technical Assistance Center

Wire-to-Board Applications
CHAMP .050 Series III



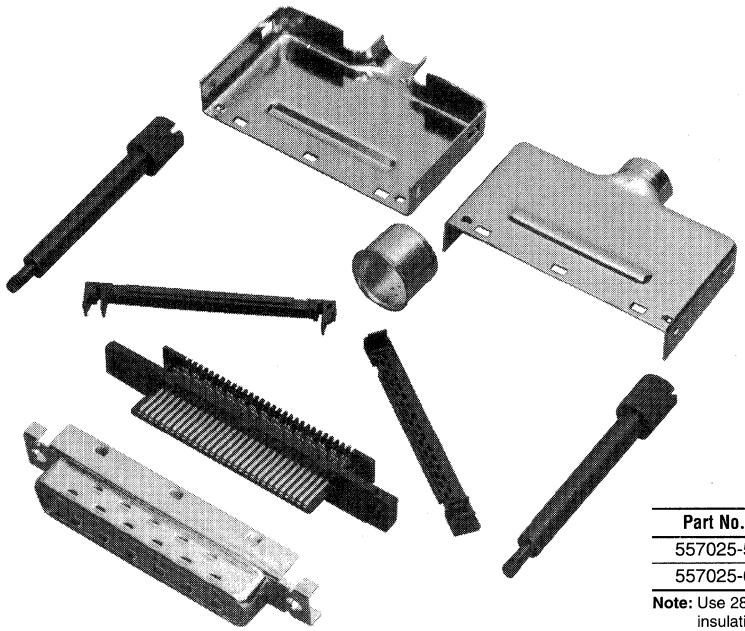
Product Facts

- Proprietary single-spring leaf contact design
- Screw-lock captivation
- 132 ohm differential impedance cable for demanding transmission requirements
- Right-angle and vertical receptacle headers
- Post molded cable assemblies with 180° exit
- Terminator
- Available in 60 position only
- Free 3D and 2D CAD images— See page 56

EADS CD-ROM

60 Position
Plug Cable Connectors

Mates with—Right-Angle and Vertical Receptacle



Part Number 557025-6

Part No.	Description
557025-5	Kit without Thumbscrews
557025-6	Kit with Thumbscrews

Note: Use 28 AWG 7 strand with .035 [.89] max. insulation diameter. Outside sheath diameter of .400 to .425 [10.16 to 10.80].

SOURCE: Catalog 82244

Specifications subject to change.
1-800-522-6752 Product Information Center/ AMP FAX Service
1-800-722-1111 Tooling/Technical Assistance Center

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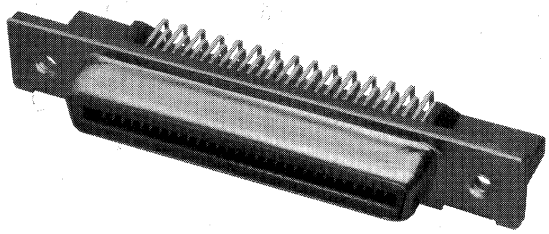
Wire-to-Board Applications CHAMP .050 Series III
(Continued)

60 Position Right-Angle Receptacle

Mates with—Plug Cable Connector

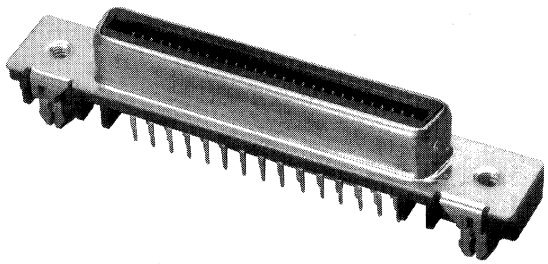


Part Number 557104-5

Note: 60 Pos. Housing Dim. (Typ.)— 2.658 [67.51] L x .837 [21.25] W x .428 [10.87] H

60 Position Vertical Receptacle

Mates with—Plug Cable Connector

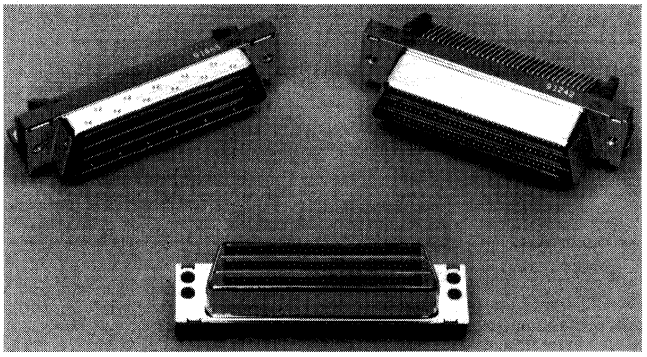


Part Number 557038-2

Note: 60 Pos. Housing Dim. (Typ.)— 2.658 [67.51] L x .428 [10.87] W x .500 [12.70] H

Specifications subject to change.
1-800-522-6752 Product Information Center/ AMP FAX Service
1-800-722-1111 Tooling/Technical Assistance Center

Box-to-Box Applications
CHAMP .050 Docking Connector



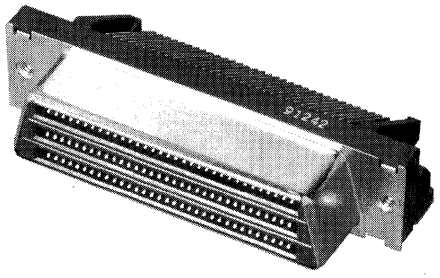
Product Facts

- Special single leaf contact design provides low mating force
- 6-row contact arrangement
- Ground wires provide ESD protection
- High temperature LCP material
- Right-angle and vertical headers
- 198 position
- Free 3D and 2D CAD images— See page 56

EADS CD-ROM

198 Position Right-Angle Receptacle

Mates with—Right-Angle Plug

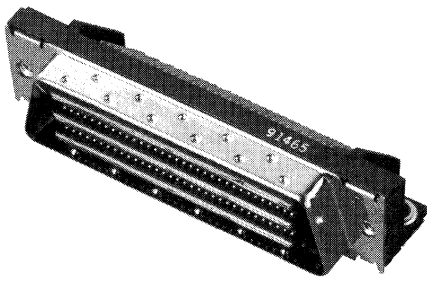


Part Number 557110-1

Note: 198 Pos. Housing Dim. (Typ.)—2.64 [66.93] L x 1.401 [35.59] W x .650 [16.51] H

198 Position Right-Angle Plug

Mates with—Right-Angle and Vertical Receptacle

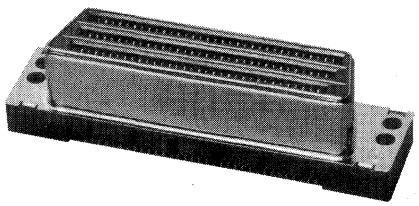


Part Number 557118-1

Note: 198 Pos. Housing Dim. (Typ.)—2.64 [66.93] L x .935 [23.75] W x .650 [16.51] H

198 Position Vertical Receptacles

Mates with—Right-Angle Plug



Part Number 557152-1

Part Number 557152-1 (With 198-Position Solder Tail Removed for Polarization) (Solder Tail Length .079 [2.00])

Part Number 557152-2 (With 198-Position Solder Tail Removed for Polarization) (Solder Tail Length .129 [3.27]

Part Number 557172-1 (Contains all 198-Positions) (Solder Tail Length .047 [1.20])

Note: 198 Pos. Housing Dim. (Typ.)—2.64 [66.93] L x .650 [16.51] W x .711 [18.06] H

198 Position Vertical Plugs

Part Number 557111-2 (With 198-Position Solder Tail Removed for Polarization)

Part Number 557171-1 (Contains all 198-Positions)

Note: Solder Tail Length .047 [1.20]

SOURCE: Catalog 82244

Specifications subject to change.
1-800-522-6752 Product Information Center/ AMP FAX Service
1-800-722-1111 Tooling/Technical Assistance Center

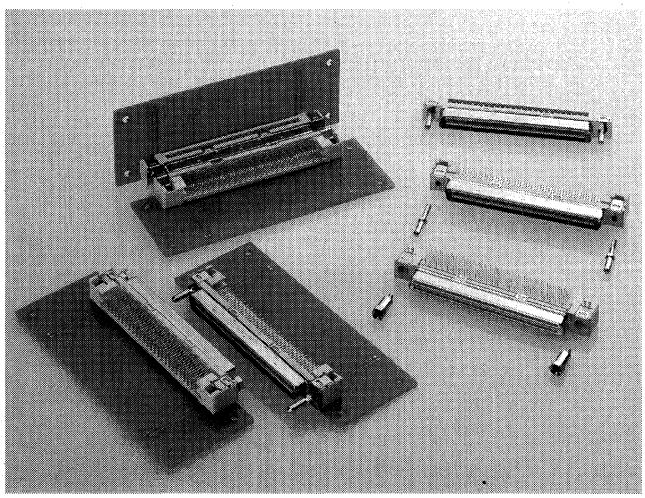
CHAMP .050 Series, Low-Profile Docking Connectors

(Box-to-Box Applications)

Product Facts

- Contacts on .050 [1.27] centerlines
- Single leaf contact design provides low mating force
- 4-row high density contact arrangement
- Low-profile, only .374 [9.50] high
- Choice of .000008 [0.00020] min. or .000030 [0.00076] min. selective gold plated in mating area; tin-lead plated on solder end, all over nickel underplating
- Designed for blind mating
- ESD protection
- Housings made of high temperature LCP material, SMT compatible
- Choice of right-angle or vertical mount headers
- Available in 72, 160, 200 and 240 positions, right-angle receptacle and plug assemblies, and 240 and 200 position, vertical mount plug assemblies
- Boardlocks provide stability prior to soldering
- UL and CSA approvals pending
- Free 3D and 2D CAD images— see page 56

EADS CD-ROM



The CHAMP .050 Series, low-profile connectors provide a shielded I/O system for box-to-box interconnection. These headers offer four-row contact configuration, minimizing total pc board real estate requirements, coupled with a low profile, only .374 [9.50] high. In addition, they are designed to facilitate blind mating. CHAMP .050 Series connectors use the industry recognized and accepted ribbon leaf contact design to provide low mating force.

The subminiature D type interface affords positive polarization to assure proper mating. Housings made of high temperature LCP are compatible with IR reflow and other surface mount soldering techniques. These right-angle plugs and receptacles, and vertical mount plugs offer both perpendicular and horizontal dock-to-dock mating.

Right-Angle Receptacle Assembly Kits (Includes connector and hardware)

Note: 160 Pos. Housing Dim. (Typ.)– 2.937 [74.60] L x .705 [17.90] W x .374 [9.50] H

No. of Pos.	Part Numbers Without Center Ground Plate	
	.000008 [0.00020] Plating	.000030 [0.00076] Plating
72	179135-1	—
160	179135-4	4-179135-4
240	179135-3	—

Right-Angle Receptacle Assembly Kits (Includes connector and hardware)

Note: 240 Pos. Housing Dim. (Typ.)– 3.937 [100.00] L x .705 [17.90] W x .374 [9.50] H

No. of Pos.	Part Numbers With Center Ground Plate	
	.000008 [0.00020] Plating	.000030 [0.00076] Plating
200	179153-2	4-179153-2
240	179153-3	4-179153-3

Right-Angle Plug Assembly Kits (Includes connector and hardware)

Note: 160 Pos. Housing Dim. (Typ.)– 2.258 [57.35] L x .698 [17.80] W x .374 [9.50] H

No. of Pos.	Part Numbers Without Center Ground Plate	
	.000008 [0.00020] Plating	.000030 [0.00076] Plating
72	179139-1	—
160	179139-4	4-179139-4

Right-Angle Plug Assembly Kits (Includes connector and hardware)

Note: 240 Pos. Housing Dim. (Typ.)– 3.937 [100.00] L x .705 [17.90] W x .374 [9.50] H

No. of Pos.	Part Numbers With Center Ground Plate	
	.000008 [0.00020] Plating	.000030 [0.00076] Plating
200	179155-2	4-179155-2
240	179155-3	4-179155-3

Vertical Mount Plug Assembly Kits (Includes connector and hardware)

Note: 240 Pos. Housing Dim. (Typ.)– 3.937 [100.00] L x .543 [13.80] W x .374 [9.50] H

No. of Pos.	Part Numbers	
	.000008 [0.00020] Plating	.000030 [0.00076] Plating
200	179157-2*	4-179157-2*
240	179140-3**	—

*with center ground plate.
**without center ground plate.

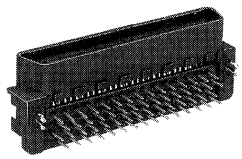
SOURCE: Catalog 124008

CHAMP .050 [1.27] Series I Connectors for Video Electronics Standards Association (VESA) Applications

Product Facts

- Meets VESA Media Bus Standards for Desktop Video Systems
- Receptacles accept .025 [0.64] centerline ribbon cable
- 80-position VESA Advanced Feature Connector (VAFC) interfaces between video and graphics subsystems that operate at 8, 16, or 32 bits
- 68-position VESA Media Channel (VMC) connector interconnects the graphic subsystem to the video expansion cards
- All-plastic pcb right-angle or vertical mount plugs
- All-plastic ribbon cable receptacles
- Parallel, perpendicular, and in-line interconnections
- Single-spring contact design for high tolerance to mating depth variations
- Contacts selectively gold plated in mating area, tin-lead on solder tail
- Housing made of LCP, rated 94V-0 for high-temperature applications
- Housings feature end boardlocks and keying post
- Receptacles will mate with .062 [1.57] pc board card edge connector
- UL and CSA approvals pending

Plug Assembly, Right-Angle

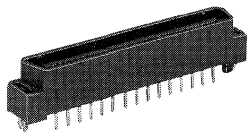


Note: 100 Pos. Housing Dim. (Typ.)—2.891 [73.43] L x .693 [17.61] W x .301 [7.65] H

No. of Positions	Part Numbers
30	557100-1
40	557100-5
50	557100-9
60	1-557100-3
68*	1-557100-7
80**	2-557100-1
100	2-557100-5
120	2-557100-9
130	3-557100-3
140	4-557100-9
160	3-557100-7
200	4-557100-1

* 68-Position Connector for VMC Standard
**80-Position Connector for VAFC Standard

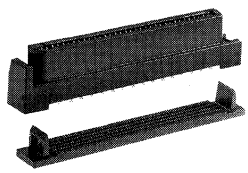
Plug Assembly, Vertical



Note: 100 Pos. Housing Dim. (Typ.)—2.947 [74.85] L x .280 [7.10] W x .388 [9.85] H

No. of Positions	Part Numbers
30	557102-1
40	557102-5
60	1-557102-3
68*	1-557102-7
80**	2-557102-1
100	2-557102-5
120	2-557102-9
130	3-557102-3
140	4-557102-9
160	3-557102-7
180	5-557102-3
200	4-557102-1

Receptacle Assemblies for .025 [0.64] Ribbon Cable



Note: 100 Pos. Housing Dim. (Typ.)—2.947 [74.85] L x .283 [7.20] W x .543 [13.79] H

No. of Positions	Part Numbers with Polarization Post
50	1-557089-1
60	1-557089-4
68*	1-557089-2
80**	1-557089-3
100	1-557089-5

Note: Manual or pneumatic application tooling available.

Note: Pc board thickness—.031-.063 [0.79-1.60] nom.

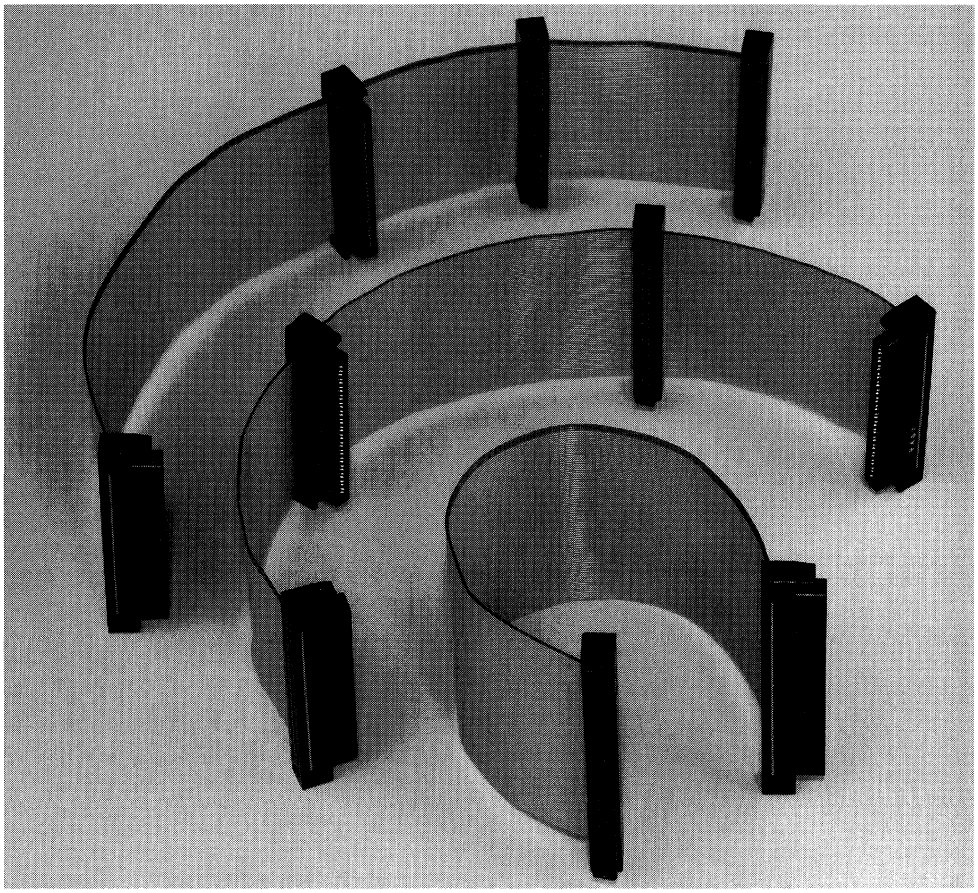
SOURCE: Catalog 65973

Specifications subject to change.

1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

CHAMP .050 [1.27] Ribbon Cable Assemblies for VESA Applications



Product Facts

- Meets VESA Media Bus Standards for Desktop Video Systems
- 68-position VMC cable assembly configurations interconnect the graphics subsystem to the video expansion cards
- 80-position VAFC cable assemblies to interface video and graphics subsystems that operate at 8, 16 or 32 bits
- .025 centerline standard ribbon cable–UL Cable Style 2678
- All plastic ribbon cable connectors
- Connector single spring contact design for high tolerance to mating depth variations
- Connector contacts phosphor bronze, .000030 [.00076] min. gold plated in mating area
- Connector housing and stuffer UL 94V-O rated LCP, black
- Keying post feature on connectors
- Custom length and connector count configurations available
- Additional position sizes available for non-VESA applications
- Full line of standard mating pc board connectors available
- Produced under a Quality Management System Certified to ISO 9001

A copy of the certificate is available upon request

The VESA (Video Electronics Standards Association) Standards are rapidly proliferating throughout the Multimedia Industry. The manufacturers of Desktop Personal Computer Systems, Multimedia Graphics Adapters, and Multimedia Video Devices require standard interface cables for their products. AMP standard VESA cable assemblies meet the VESA Media Channel and the VAFC interconnect requirements.

The 80-position CHAMP .050 cable assemblies provide a reliable, cost-effective interconnection solution for video and graphics subsystem VAFC applications. The 68- position CHAMP .050 standard daisy chain cable assemblies provide the bus for VM Channel applications interconnecting a graphics adapter to up to three video expansion cards.

Three standard cable assembly configurations are available for VAFC and VM Channel applications. Custom assemblies in any length, connector count, and connector spacing can also be provided to meet special requirements. Other position sizes are available for non-VESA applications. AMP also carries a full line of mating pc board connector products.

SOURCE: Catalog 124231

Specifications subject to change.

1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

.025 Centerline Ribbon Cable Assemblies for VESA Media Channel Applications

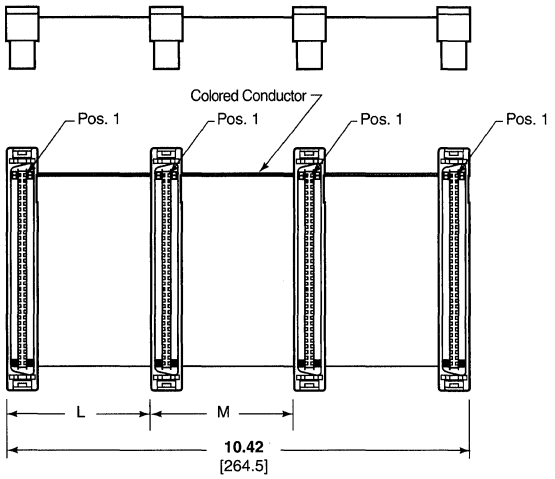
Material and Finish

Connector Housing and Covers—UL 94V-0 rated LCP, black

Contacts—Phosphor bronze, plated .000030 [.00076] min. gold in mating area, and .000150 [0.00381] min. tin-lead on terminating end, all over .000050 [0.00127] min. nickel

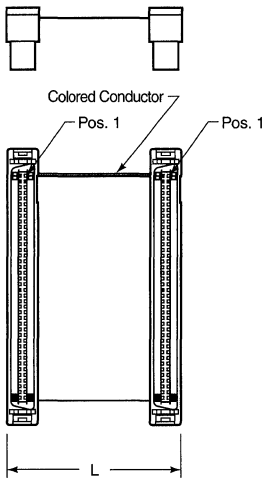
Cable—.025 centerline 30 AWG, solid UL Style 2678

Insulation—Gray flame retardant flexible PVC



No. of Positions	Dimensions		Part Number
	L	M	
68	3.30 [84.0]	3.30 [84.0]	158257-1
	6.00 [152.5]	2.00 [51.0]	158257-2

.025 Centerline Ribbon Cable Assemblies for VAFC Applications



No. of Positions	Dimension	Part Number
	L	
80	7.42 [188.5]	158256-1
	3.42 [87.0]	158256-2
	4.56 [115.8]	158256-3

AMP offers a wide variety of cable assembly products to meet your interconnection requirements:

- IPI
- HIPPI
- VESA
- SCSI
- QuickRing
- Scalable Coherent Interface (SCI)
- IEEE P1394
- IEEE P1284
- Serial Storage Architecture (SSA)
- ATM
- Fibre Channel

SOURCE: Catalog 124231

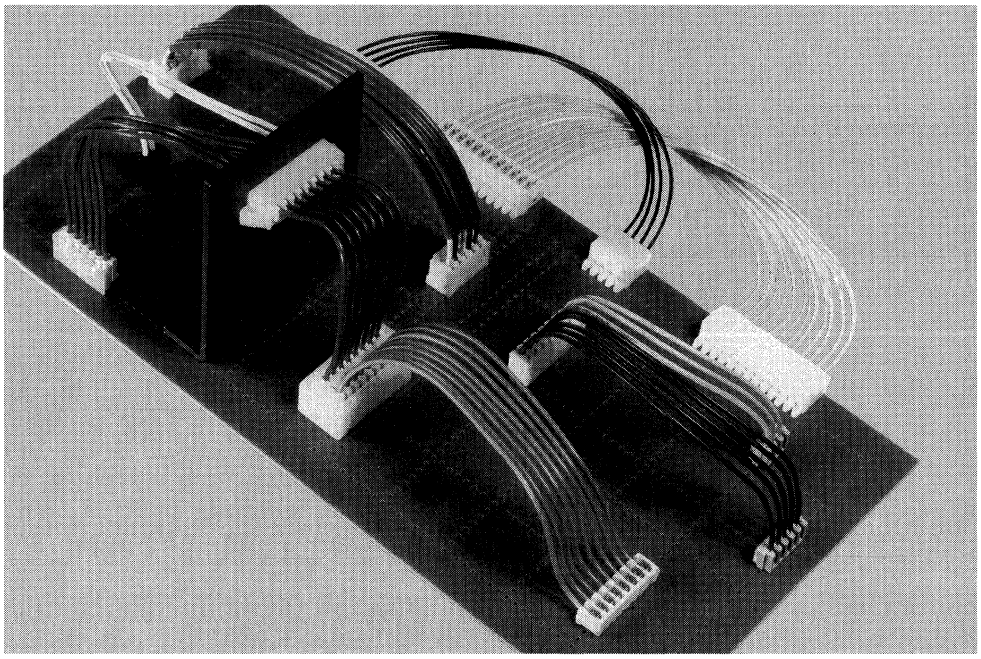
Specifications subject to change.

1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

AMP CT (Common Termination) Connector System 2.0 mm [.079] Centerlines

METRIC



Product Facts

- A harness-making system allowing assembly of multiple, mass termination connectors to both ends of wire simultaneously
- AMP high-speed automatic crimping machines provide substantial labor-savings as well as improved quality
- Assembly machines can be easily adapted to virtually all harness configurations
- Connectors for harnesses include two-piece MT connectors and one-piece MT AMP-IN header assemblies (vertical and horizontal types) that can be mounted directly to the board
- Crimp-type receptacle connectors are also available
- Board-mount post headers are available in two styles: standard and box-type. A feed-through post header for panel mounting is also available
- Both MT receptacle connectors for wire termination and crimp-type receptacle connectors mate with common post headers
- MT AMP-IN header assemblies are inserted directly into the board holes and secured by soldering. Connectors available in sizes 2 through 12 and 15 positions
- Both MT receptacles and MT AMP-IN connectors can accommodate either 28 AWG or 26 AWG wire size
- Both post headers and MT AMP-IN headers have a self-retaining mechanism
- Recognized under the Component Program of Underwriters Laboratories Inc., File No. E28476
- Certified by Canadian Standards Association, File No. LR7189-133

The AMP CT Connector System is a harness-making system providing a range of harness styles produced by AMP high-speed automatic crimping machines, using three types of 2 mm centerline connectors: MT Connectors, MT AMP-IN Vertical Connectors and MT AMP-IN Horizontal Connectors.

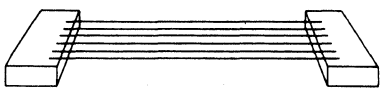
Contacts are on 2 mm centerlines for all connectors and the spacing between the housing end and the centerline of the contact cavity at either end is also 2 mm.

Harnesses can be assembled in any of the six configurations shown below. A variety of harness-making machines are available ranging from hand tools for low-volume production to high-speed automatic crimping machines for medium- to high-volume production.

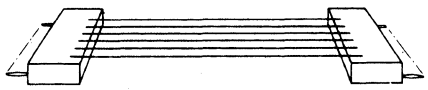
Both discrete wire and flat shielded cable can be used for this system and a new generation of high-speed automatic crimping machines is now available which allows these two types of cable to be used singly or mixed in one connector.

Connector Combinations/ Harness Types

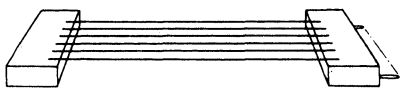
MT Receptacle — MT Receptacle



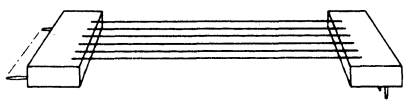
MT AMP-IN Header (Vertical Type) — MT AMP-IN Header (Vertical Type)



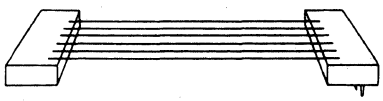
MT Receptacle — MT AMP-IN Header (Vertical Type)



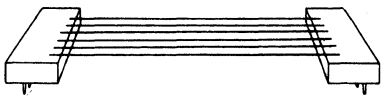
MT AMP-IN Header (Vertical Type) — MT AMP-IN Header (Horizontal Type)



MT Receptacle — MT AMP-IN Header (Horizontal Type)



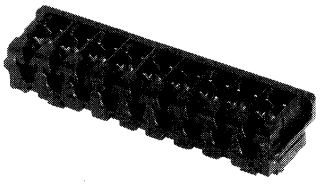
MT AMP-IN Header (Horizontal Type) — MT AMP-IN Header (Horizontal Type)



SOURCE: Catalog 82183

METRIC

MT Receptacle Assemblies (Preloaded with Insulation Displacement Receptacle Contacts)



Wire Size—28-26 AWG [0.08-0.15 mm²]

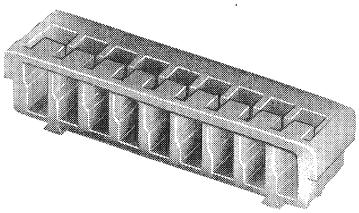
Insulation Dia.—0.85-1.05 [.034-.041]

Mate with—Post Headers (Single Row and Double Row), and Mini-Drawer Connectors

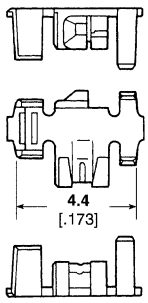
Note: 9 Pos. Housing Dim. (Typ.)—20.0 [7.87] L x 4.0 [.157] W x 5.1 [.201] H

No. of Pos.	Part Number of Receptacle Assembly Housing Color			
	White	Light Blue	Cream Yellow	Black
2	173977-2	2-173977-2	4-173977-2	6-173977-2
3	173977-3	2-173977-3	4-173977-3	6-173977-3
4	173977-4	2-173977-4	4-173977-4	6-173977-4
5	173977-5	2-173977-5	4-173977-5	6-173977-5
6	173977-6	2-173977-6	4-173977-6	6-173977-6
7	173977-7	2-173977-7	4-173977-7	6-173977-7
8	173977-8	2-173977-8	4-173977-8	6-173977-8
9	173977-9	2-173977-9	4-173977-9	6-173977-9
10	1-173977-0	3-173977-0	5-173977-0	7-173977-0
11	1-173977-1	3-173977-1	5-173977-1	7-173977-1
12	1-173977-2	3-173977-2	5-173977-2	7-173977-2
13	1-173977-3	3-173977-3	5-173977-3	7-173977-3
14	1-173977-4	3-173977-4	5-173977-4	7-173977-4
15	1-173977-5	3-173977-5	5-173977-5	7-173977-5

Crimp-Type Receptacle Housings



Receptacle Contacts



Part No. 1-175102-1 (Strip)

Part No. 175161-1 (Loose Piece)
Note: Loose piece contacts supplied in the form of a comb containing 10 contacts; each can be snapped off easily.

Wire Size—26-22 AWG [0.12-0.35 mm²]

Insulation Dia.—1.0-1.5 [.039-.059]

Mate with—Post Headers (Single Row and Double Row), and Mini-Drawer Connectors

Note: 9 Pos. Housing Dim. (Typ.)—20.0 [7.87] L x 4.0 [.157] W x 5.1 [.201] H

No. of Pos.	Part Number of Receptacle Housing			
	White	Blue	Yellow	Black
2	175778-2	2-175778-2	4-175778-2	6-175778-2
3	175778-3	2-175778-3	4-175778-3	6-175778-3
4	175778-4	2-175778-4	4-175778-4	6-175778-4
5	175778-5	2-175778-5	4-175778-5	6-175778-5
6	175778-6	2-175778-6	4-175778-6	6-175778-6
7	175778-7	2-175778-7	4-175778-7	6-175778-7
8	175778-8	2-175778-8	4-175778-8	6-175778-8
9	175778-9	2-175778-9	4-175778-9	6-175778-9
10	1-175778-0	3-175778-0	5-175778-0	7-175778-0
11	1-175778-1	3-175778-1	5-175778-1	7-175778-1
12	1-175778-2	3-175778-2	5-175778-2	7-175778-2
13	1-175778-3	3-175778-3	5-175778-3	7-175778-3
14	1-175778-4	3-175778-4	5-175778-4	7-175778-4
15	1-175778-5	3-175778-5	5-175778-5	7-175778-5

SOURCE: Catalog 82183

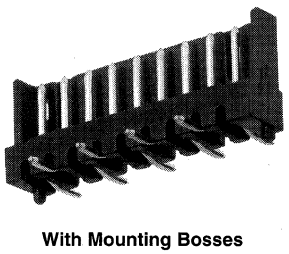
Specifications subject to change.

1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

Single Row Post Headers

METRIC



With Mounting Bosses

Standard Type—SMT Assembly

Vertical Mount Type (with or without Mounting Bosses)

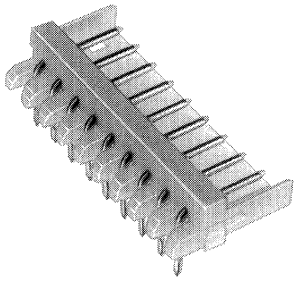
Note: 6 Pos. Housing Dim. (Typ.)—14.0 [.551] L x 4.0 [.157] W x 7.8 [.307] H

No. of Pos.	Part Number of Post Header/Tube (ea.)	
	With Mounting Bosses	Without Mounting Bosses
2	176125-2 (80)	177622-2 (80)
3	176125-3 (60)	177622-3 (60)
4	176125-4 (45)	177622-4 (45)
5	176125-5 (40)	177622-5 (40)
6	176125-6 (30)	177622-6 (30)
7	176125-7 (30)	177622-7 (30)
8	176125-8 (25)	177622-8 (25)
9	176125-9 (20)	177622-9 (20)

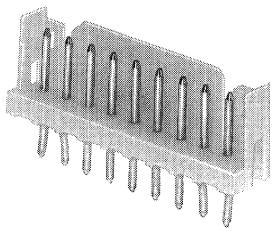
Mate with—MT Receptacles and Crimp-Type Receptacles

Standard Type

Horizontal Mount Type or Vertical Mount Type (with Self-Retaining Contact Legs)



Horizontal Mount Type



Vertical Mount Type

Pc Board Thickness—0.8-1.6 [.032-.063]

Mate with—MT Receptacles and Crimp-Type Receptacles

Note: 9 Pos. Housing Dim. (Typ.)—Horizontal Type, 19.8 [.780] L x 7.2 [.284] W x 8.8 [.346] H; Vertical Type, 19.8 [.780] L x 3.6 [.142] W x 10.0 [.394] H

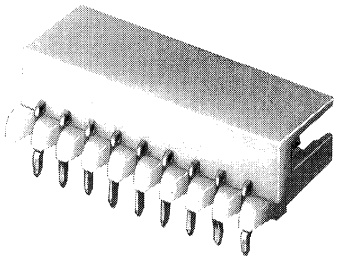
No. of Pos.	Part Number of Post Header	
	Horizontal Mount	Vertical Mount
2	173979-2	173981-2
3	173979-3	173981-3
4	173979-4	173981-4
5	173979-5	173981-5
6	173979-6	173981-6
7	173979-7	173981-7
8	173979-8	173981-8
9	173979-9	173981-9
10	1-173979-0	1-173981-0
11	1-173979-1	1-173981-1
12	1-173979-2	1-173981-2
13	1-173979-3	1-173981-3
14	1-173979-4	1-173981-4
15	1-173979-5	1-173981-5

SOURCE: Catalog 82183

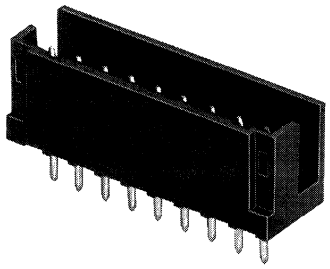
METRIC

Single Row Post Headers
(Continued)

Box Type (Shrouded)
Horizontal Mount Type or Vertical Mount Type



Horizontal Mount Type



Vertical Mount Type

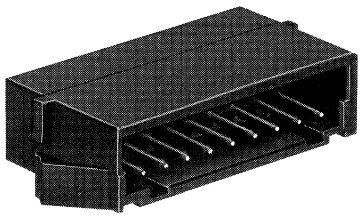
Note: 9 Pos. Housing Dim. (Typ.)—Horizontal Type, 19.8 [.780] L x 9.0 [.354] W x 8.8 [.346] H; Vertical Type, 19.8 [.780] L x 5.8 [.224] W x 10.0 [.394] H

No. of Pos.	Part Number of Post Header					
	Horizontal Mount Type		Vertical Mount Type			
	Natural*	Blue*	Natural*	Blue*	Yellow*	Black*
2	175489-2	2-175489-2	175487-2	2-175487-2	4-175487-2	6-175487-2
3	175489-3	2-175489-3	175487-3	2-175487-3	4-175487-3	6-175487-3
4	175489-4	2-175489-4	175487-4	2-175487-4	4-175487-4	6-175487-4
5	175489-5	2-175489-5	175487-5	2-175487-5	4-175487-5	6-175487-5
6	175489-6	2-175489-6	175487-6	2-175487-6	4-175487-6	6-175487-6
7	175489-7	2-175489-7	175487-7	2-175487-7	4-175487-7	6-175487-7
8	175489-8	2-175489-8	175487-8	2-175487-8	4-175487-8	6-175487-8
9	175489-9	2-175489-9	175487-9	2-175487-9	4-175487-9	6-175487-9
10	1-175489-0	3-175489-0	1-175487-0	3-175489-0	5-175487-0	7-175487-0
11	1-175489-1	3-175489-1	1-175487-1	3-175487-1	5-175487-1	7-175487-1
12	1-175489-2	3-175489-2	1-175487-2	3-175487-2	5-175487-2	7-175487-2
13	1-175489-3	3-175489-3	1-175487-3	3-175487-3	5-175487-3	7-175487-3
14	1-175489-4	3-175489-4	1-175487-4	3-175487-4	5-175487-4	7-175487-4
15	1-175489-5	3-175489-5	1-175487-5	3-175487-5	5-175487-5	7-175487-5

*The basic color of housing is natural (white) and it is in stock. For other colors, consult AMP.

Mate with—MT Receptacles and Crimp-Type Recepacles

Feed-Through Post Headers, Shrouded (Panel Mount Type)



Note: 7 Pos. Housing Dim. (Typ.)—17.8 [.701] L x 12.0 [.472] W x 6.0 [.236] H

Number of Pos.	Part Number of Post Header			
	Natural*	Blue*	Yellow*	Black*
2	175694-2	2-175694-2	4-175694-2	6-175694-2
3	175694-3	2-175694-3	4-175694-3	6-175694-3
4	175694-4	2-175694-4	4-175694-4	6-175694-4
5	175694-5	2-175694-5	4-175694-5	6-175694-5
6	175694-6	2-175694-6	4-175694-6	6-175694-6
7	175694-7	2-175694-7	4-175694-7	6-175694-7
8	175694-8	2-175694-8	4-175694-8	6-175694-8
9	175694-9	2-175694-9	4-175694-9	6-175694-9
10	1-175694-0	3-175694-0	5-175694-0	7-175694-0
11	1-175694-1	3-175694-1	5-175694-1	7-175694-1
12	1-175694-2	3-175694-2	5-175694-2	7-175694-2

*Housing Color

Panel Thickness—0.8-1.6 [.032-.063]

Mate with—MT Receptacles and Crimp-Type Receptacles

SOURCE: Catalog 82183

Specifications subject to change.

1-800-522-6752
Product Information Center/ AMP FAX Service

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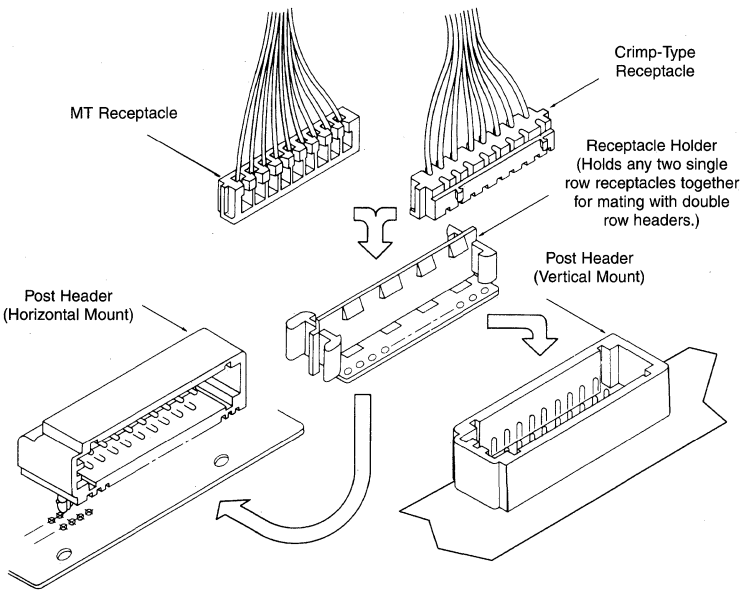
Tooling/Technical Assistance Center

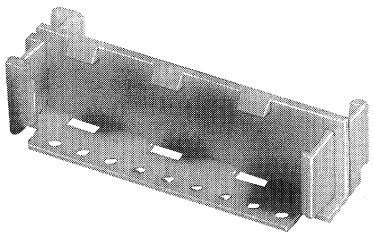
METRIC

Double Row Arrangement

Mating Configurations



Receptacle Holder



Note: 18 Pos. Housing Dim. (Typ.)—22.30 [.874] L x 7.55 [.297] W x 6.65 [.262] H

Mates with—Double Row Post Headers (when holding two, single row receptacles)

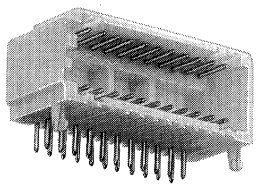
No. of Pos.	Part No. of Holder			
	Natural	Blue	Yellow	Black
16	1-175133-6	1-176236-6	1-176239-6	1-176233-6
18	1-175133-8	1-176236-8	1-176239-8	1-176233-8
20	2-175133-0	2-176236-0	2-176239-0	2-176233-0
22	2-175133-2	2-176236-2	2-176239-2	2-176233-2
24	2-175133-4	2-176236-4	2-176239-4	2-176233-4
26	2-175133-6	2-176236-6	2-176239-6	2-176233-6
28	2-175133-8	2-176236-8	2-176239-8	2-176233-8
30	3-175133-0	3-176236-0	3-176239-0	3-176233-0

* Housing color is natural (white); see page 3225 for other colors.
**Part No. of Housing only.

No. of Pos.	Part No. of Applicable Connectors	
	MT Receptacle*	Crimp-Type** Housing
8	173977-8	175778-8
9	173977-9	175778-9
10	1-173977-0	1-175778-0
11	1-173977-1	1-175778-1
12	1-173977-2	1-175778-2
13	1-173977-3	1-175778-3
14	1-173977-4	1-175778-4
15	1-173977-5	1-175778-5

Double Row Post Headers

Horizontal Mount Type



Mate with—Receptacle Holder (holding two single row receptacles)

Note: 22 Pos. Housing Dim. (Typ.)—27.9 [1.098] L x 11.0 [.433] W x 11.1 [.437] H

No. of Pos.	Part Number of Post Header	No. of Pos.	Part Number of Post Header
16	1-176421-6	24	2-176421-4
18	1-176421-8	26	2-176421-6
20	2-176421-0	28	2-176421-8
22	2-176421-2	30	3-176421-0

SOURCE: Catalog 82183

Specifications subject to change.

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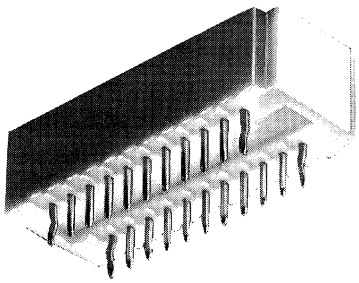
1-800-722-1111
Tooling/Technical Assistance Center

METRIC

Double Row Arrangement
(Continued)



Double Row Post Headers
(Continued)

Vertical Mount Type (with Self-Retaining Contact Legs)

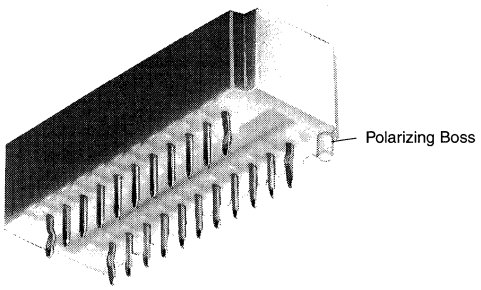
Mate with—Receptacle Holder (holding two single row receptacles)

Note: 22 Pos. Housing Dim. (Typ.)—27.9 [1.098] L x 10.7 [.421] W x 7.5 [.295] H

No. of Pos.	Part Number of Post Header			
	Natural*	Blue*	Yellow*	Black*
16	1-175132-6	1-176235-6	1-176238-6	1-176232-6
18	1-175132-8	1-176235-8	1-176238-8	1-176232-8
20	2-175132-0	2-176235-0	2-176238-0	2-176232-0
22	2-175132-2	2-176235-2	2-176238-2	2-176232-2
24	2-175132-4	2-176235-4	2-176238-4	2-176232-4
26	2-175132-6	2-176235-6	2-176238-6	2-176232-6
28	2-175132-8	2-176235-8	2-176238-8	2-176232-8
30	3-175132-0	3-176235-0	3-176238-0	3-176232-0

*Housing Color

Vertical Mount Type with Polarizing Boss (with Self-Retaining Contact Legs)



Mate with—Receptacle Holder (holding two single row receptacles)

Note: 22 Pos. Housing Dim. (Typ.)—27.9 [1.098] L x 10.7 [.421] W x 7.5 [.295] H

No. of Pos.	Part Number of Post Header			
	Natural*	Blue*	Yellow*	Black*
16	1-178342-6	1-178344-6	1-178345-6	1-178343-6
18	1-178342-8	1-178344-8	1-178345-8	1-178343-8
20	2-178342-0	2-178344-0	2-178345-0	2-178343-0
22	2-178342-2	2-178344-2	2-178345-2	2-178343-2
24	2-178342-4	2-178344-4	2-178345-4	2-178343-4
26	2-178342-6	2-178344-6	2-178345-6	2-178343-6
28	2-178342-8	2-178344-8	2-178345-8	2-178343-8
30	3-178342-0	3-178344-0	3-178345-0	3-178343-0

*Housing Color

SOURCE: Catalog 82183

Specifications subject to change.

1-800-522-6752
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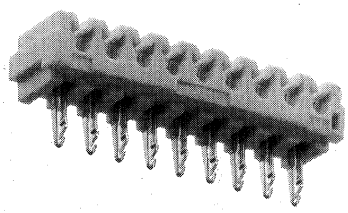
1-800-722-1111
Tooling/Technical Assistance Center

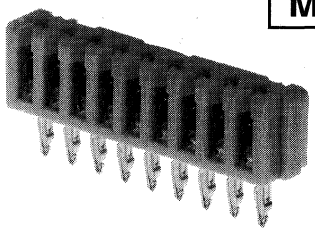
MT AMP-IN Headers

Horizontal and Vertical Mount Type (with Self-Retaining Contact Legs)

METRIC



Horizontal Mount Type



Vertical Mount Type

Wire Size—28-26 AWG [0.08-.15 mm²]

Insulation Dia.—0.85-1.05 [.034-.041]

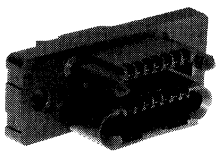
Pc Board Thickness—0.8-1.6 [.032-.063]

Note: 9 Pos. Housing Dim. (Typ.)—20.0 [.787] L x 5.1 [.201] W x 4.0 [.158] H

No. of Pos.	Part Number of AMP-IN Header	
	Horizontal Mount*	Vertical Mount**
2	2-173983-2	2-173985-2
3	2-173983-3	2-173985-3
4	2-173983-4	2-173985-4
5	2-173983-5	2-173985-5
6	2-173983-6	2-173985-6
7	2-173983-7	2-173985-7
8	2-173983-8	2-173985-8
9	2-173983-9	2-173985-9
10	3-173983-0	3-173985-0
11	3-173983-1	3-173985-1
12	3-173983-2	3-173985-2
13	3-173983-3	3-173985-3
14	3-173983-4	3-173985-4
15	3-173983-5	3-173985-5

*Housing color—Cream Yellow
**Housing color— Light Blue

Mini-Drawer Connectors



Mate with—Mini-Drawer Connectors (front), and MT and Crimp-Type Receptacles (rear)

Note: 14 Pos. Housing Dim. (Typ.)— 41.0 [1.614] L x 23.2 [.513] W x 15.0 [.591] H

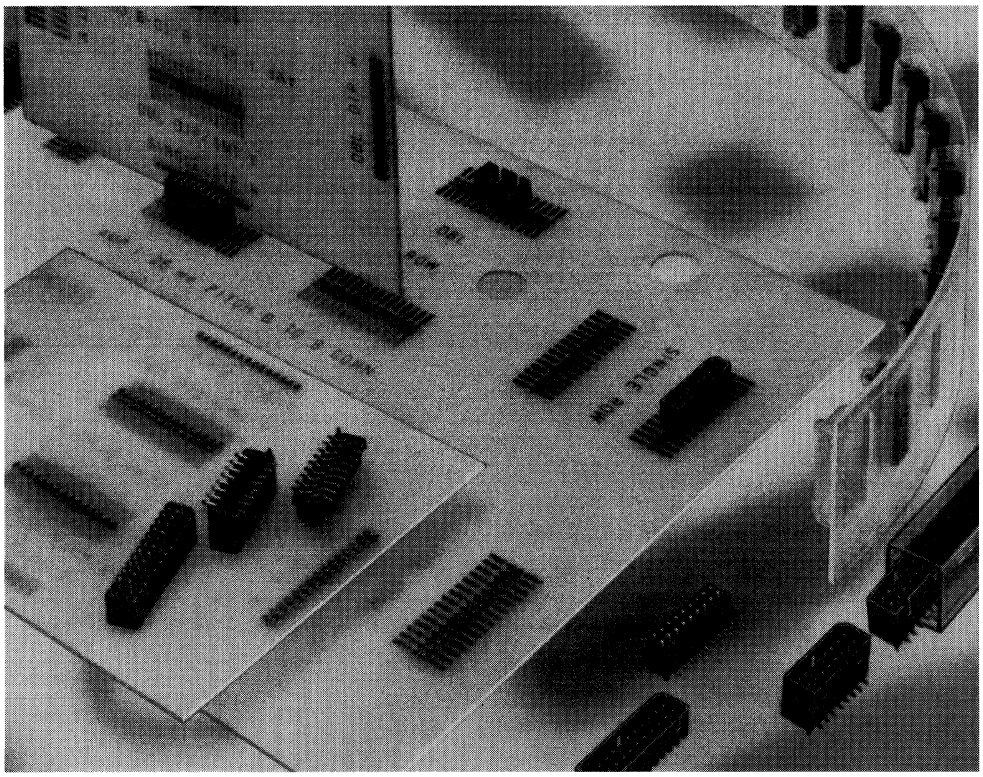
No. of Pos.	Type of Housing	Part Number of Mini-Drawer Connector*	Number of Rear-Mated Receptacle's** Positions (per row)
14 (2 rows)	Plug	176496-1	7
	Jack	5-176496-1	
22 (2 rows)	Plug	176445-1	11, 8+2, 2+5+2
	Jack	5-176445-1	

*Housing color—Black
Receptacle/Receptacle Housing Extraction Tools: **Part No. 915144-1 (14 Pos.), **Part No. 915143-1** (22 Pos.)

SOURCE: Catalog 82183

METRIC

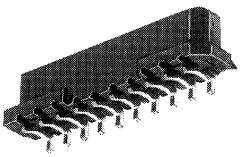
AMP 1.25 mm [.049] FP Board-to-Board Surface Mount Connectors



Product Facts

- Surface mount post and receptacle headers
- Recommended pc board thickness—0.60 [.024] min.
- Economical board-to-board interconnection connector of ultra-lightweight and ultra-thin construction
- Single-row and dual-row versions available, both enabling either parallel or right-angle interconnection of boards using vertical post header and either vertical or horizontal receptacle header
- Tube and reel-mounted products for automatic board packaging; loose-piece connectors also available

1.25 mm Single-Row Receptacle Headers, Horizontal Mounting for Right-Angle Board Connection



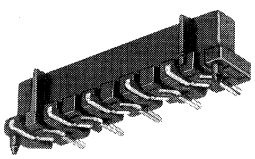
Mates with—Post Headers

Note: 10 Pos. Housing Dim. (Typ.)—13.95 [.549] L x 3.40 [.134] W x 3.00 [.118] H

No. of Pos.	Part Numbers			
	With Mounting Bosses		Without Mounting Bosses	
	Loose Piece	Reel Mounted[1]	Loose Piece	Reel Mounted[1]
4	3-174638-4	3-175637-4	—	—
5	—	3-175637-5	—	3-175629-5
6	3-174638-6	3-175637-6	—	3-175629-6
8	—	3-175637-8	—	—
10	4-174638-0	4-175637-0	—	—
17	4-174638-7	—	4-174903-7	—
20	5-174638-0	—	—	—

[1] Packaging Quantities—1,500 per reel for Positions 4 thru 7, 1,000 per reel for Positions 8 and 10.

1.25 mm Single-Row Receptacle Headers, Vertical Mounting for Parallel Board Connection



Mates with—Post Headers

Note: 10 Pos. Housing Dim. (Typ.)—13.95 [.549] L x 2.80 [.110] W x 3.40 [.134] H

No. of Pos.	Part Numbers			
	With Mounting Bosses		Without Mounting Bosses	
	Loose Piece	Reel Mounted[1]	Loose Piece	Reel Mounted[1]
4	3-174637-4	3-175636-4	—	3-175628-4
5	—	3-175636-5	—	3-175628-5
6	3-174637-6	3-175636-6	—	3-175628-6
7	—	—	—	3-175628-7
8	3-174637-8	3-175636-8	—	3-175628-8
10	4-174637-0	—	—	4-175628-0
17	4-174637-7	—	4-174902-7	—
20	5-174637-0	—	—	—

[1] Packaging Quantities—1,500 per reel for Positions 4 thru 7, 1,000 per reel for Positions 8 and 10.

SOURCE: Catalog 82252

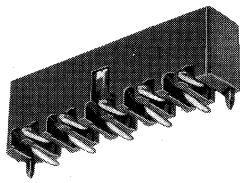
Specifications subject to change.

1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

1.25 mm Single-Row Post Headers, Vertical Mounting

METRIC

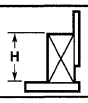


Mates with—Receptacle Headers

Note: 10 Pos. Housing Dim. (Typ.)—13.95 [.549] L x 2.80 [.110] W x 3.95 [.156] C (Header Housing Height)

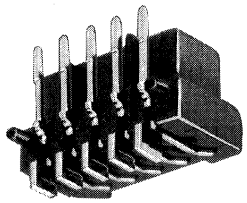
No. of Pos.	Header Housing Height (C)	Part Numbers					
		With Mounting Bosses			Without Mounting Bosses		
		Loose Piece	Tube	(Pcs./Tube)	Loose Piece	Tube	(Pcs./Tube)
4	**3.95** [.156]	3-174820-4	3-175642-4	(75)	—	3-175634-4	(75)
5	**3.95** [.156]	—	3-175642-5	(60)	—	3-175634-5	(60)
6	**3.95** [.156]	3-174820-6	3-175642-6	(50)	—	3-175634-6	(50)
7	**3.95** [.156]	3-174820-7	3-175642-7	(45)	—	3-175634-7	(45)
8	**3.95** [.156]	3-174820-8	3-175642-8	(40)	3-174644-8	3-175634-8	(40)
	5.95 [.234]	—	6-175642-8	(40)	6-174644-8	6-175634-8	(40)
10	**3.95** [.156]	4-174820-0	4-175642-0	(30)	—	4-175634-0	(30)
17	**5.95** [.234]	7-174820-7	—	—	7-174644-7	—	—
20	**5.95** [.234]	8-174820-0	8-175642-0	(15)	—	—	—

Board-to-Board Connection Configurations

Board Connection Configuration			
Right-Angle		C = **3.95** .156	H = **5.80** .228
		C = **5.95** .234	H = **7.80** .307

Board Connection Configuration			
Parallel Stack Height		C = **3.95** .156	H = **5.00** .197
		C = **5.95** .234	H = **7.00** .275

1.25 mm Dual-Row Receptacle Headers, Horizontal Mounting for Right-Angle Board Connection



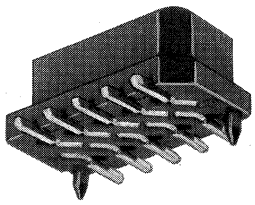
Mates with—Post Headers

Note: 10 Pos. Housing Dim. (Typ.)—7.70 [.303] L x 4.20 [.165] W x 4.20 [.165] H

No. of Pos.	Part Numbers					
	With Mounting Bosses			Without Mounting Bosses		
	Tube[1,3]	(Pcs./Tube)	Reel Mounted[2]	Tube[1,4]	(Pcs./Tube)	Reel Mounted[2]
6	3-176910-6	(90)	3-175639-6	3-176912-6	(90)	3-175631-6
10	4-176910-0	(60)	4-175639-0	—	—	4-175631-0
12	—	—	4-175639-2	—	—	4-175631-2
14	—	—	4-175639-4	—	—	4-175631-4
16	—	—	4-175639-6	—	—	4-175631-6
18	4-176910-8	(35)	4-175639-8	—	—	4-175631-8
20	—	—	5-175639-0	—	—	5-175631-0
22	5-176910-2	(30)	5-175639-2	—	—	5-175631-2
24	5-176910-4	(25)	5-175639-4	—	—	5-175631-4

[1] Packaging Quantities, Tube—See chart.
[2] Packaging Quantities—1,500 per reel for Positions 6 thru 14, 1,000 per reel for Positions 16 thru 24.
[3] Reference Loose Piece **Part No. 174640** when ordering Customer drawing.
[4] Reference Loose Piece **Part No. 174905** when ordering Customer drawing.

1.25 mm Dual-Row Receptacle Headers, Vertical Mounting for Parallel Board Connection



Mates with—Post Headers

Note: 10 Pos. Housing Dim. (Typ.)—7.70 [.303] L x 4.00 [.158] W x 3.40 [.134] H

No. of Pos.	Part Numbers			
	With Mounting Bosses		Without Mounting Bosses	
	Loose Piece	Reel Mounted[1]	Loose Piece	Reel Mounted[1]
6	3-174639-6	3-175638-6	—	3-175630-6
10	4-174639-0	4-175638-0	—	4-175630-0
12	4-174639-2	4-175638-2	4-174904-2	4-175630-2
14	4-174639-4	4-175638-4	4-174904-4	4-175630-4
16	4-174639-6	4-175638-6	4-174904-6	4-175630-6
18	4-174639-8	4-175638-8	4-174904-8	4-175630-8
20	5-174639-0	5-175638-0	5-174904-0	5-175630-0

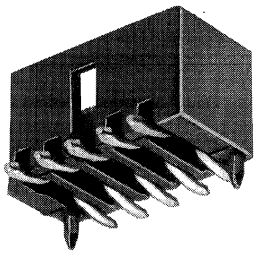
[1] Packaging Quantities—1,500 per reel for Positions 6 thru 14, 1,000 per reel for Positions 16 thru 20.

SOURCE: Catalog 82252

METRIC

1.25 mm Dual-Row Post Headers, Vertical Mounting

Mates with—Receptacle Headers



Board-to-Board Connection Configurations

Board Connection Configuration		Dim. H Rt.-Angle	Dim. H Parallel
Right-Angle	C = **3.95** .156	**6.90** .271	**5.00** .197
	C = **5.45** .215	**8.40** .330	**6.50** .256
	C = **5.95** .234	**8.90** .350	**7.00** .276
Parallel Stack Height	C = **6.85** .270	**9.80** .386	**7.90** .311
	C = **9.35** .368	**12.40** .488	**10.50** .413

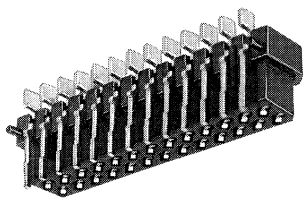
Note: 10 Pos. Housing Dim. (Typ.)—7.70 [.303] L x 4.00 [.158] W x 3.95 [.156] C (Header Housing Height)

No. of Pos.	Header Housing Height (C)	Part Numbers: With Mounting Bosses: Loose Piece	Tube[1]	(Pcs./Tube)	Tape	Without Mounting Bosses: Loose Piece	Tube[1]	(Pcs./Tube)	Tape
6	**3.95** [.156]	3-174821-6	3-175643-6	(90)	3-176890-6	—	3-175635-6	(90)	3-176891-6
10	**3.95** [.156]	4-174821-0	4-175643-0	(60)	4-176890-0	4-174645-0	4-175635-0	(60)	4-176891-0
12	**3.95** [.156]	4-174821-2	4-175643-2	(50)	4-176890-2	—	4-175635-2	(50)	—
	5.95 [.234]	7-174821-2	7-175643-2	(50)	—	7-174645-2	—	—	—
	9.35 [.368]	4-176756-2	4-176833-2	(50)	—	—	—	—	—
14	**3.95** [.156]	4-174821-4	4-175643-4	(45)	4-176890-4	—	4-175635-4	(45)	4-176891-4
	5.45 [.215]	1-174821-4	1-175643-4	(45)	—	—	—	—	—
16	**3.95** [.156]	4-174821-6	4-175643-6	(40)	4-176890-6	4-174645-6	4-175635-6	(40)	4-176891-6
	5.45 [.215]	1-174821-6	1-175643-6	(40)	1-176890-6	—	—	—	1-176891-6
	5.95 [.234]	7-174821-6	7-175643-6	(40)	7-176890-6	7-174645-6	7-175635-6	(40)	7-176891-6
18	**3.95** [.156]	4-174821-8	4-175643-8	(35)	4-176890-8	—	4-175635-8	(35)	4-176891-8
	9.35 [.368]	4-176756-8	4-176833-8	(35)	—	4-178040-8	—	—	—
20	**3.95** [.156]	5-174821-0	5-175643-0	(30)	5-176890-0	5-174645-0	5-175635-0	(30)	5-176891-0
	5.45 [.215]	2-174821-0	2-175643-0	(30)	—	2-174645-0	—	—	—
	6.85 [.270]	—	—	—	2-177704-0	—	—	—	—
22	**3.95** [.156]	5-174821-2	5-175643-2	(30)	—	—	5-175635-2	(30)	—
24	**3.95** [.156]	5-174821-4	5-175643-4	(25)	5-176890-4	—	5-175635-4	(25)	5-176891-4

[1] Packaging Quantities, Tube—See chart above.

1.25 mm Dual-Row, Short-Rib, Receptacle Headers, Horizontal Mounting for Right-Angle Board Connection

Mates with—Short-Rib Post Headers



Note: 26 Pos. Housing Dim. (Typ.)—17.70 [.697] L x 4.20 [.165] W x 4.20 [.165] H

No. of Pos.	Part Numbers: With Mounting Bosses: Tube[1,3]	(Pcs./Tube)	Reel Mounted[2]	Without Mounting Bosses: Tube[1,4]	(Pcs./Tube)	Reel Mounted[2]
26	5-176911-6	(25)	5-176491-6	—	—	5-176894-6
30	6-176911-0	(20)	6-176491-0	6-176913-0	(20)	6-176894-0

[1] Packaging Quantities, Tube—See chart.
[2] Packaging Quantities—1,500 per reel for Positions 26 and 30.
[3] Reference Loose Piece **Part No. 176490** when ordering Customer drawing.
[4] Reference Loose Piece **Part No. 176893** when ordering Customer drawing.

SOURCE: Catalog 82252

Specifications subject to change.

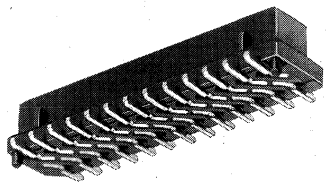
1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

METRIC

1.25 mm Dual-Row, Short-Rib, Receptacle Headers, Vertical Mounting for Parallel Board Connection

Mates with—Short-Rib Post Headers



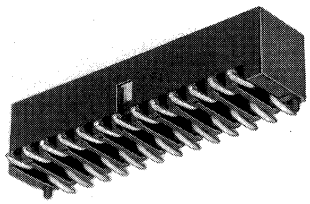
Note: 26 Pos. Housing Dim. (Typ.)—17.70 [.697] L x 4.00 [.158] W x 3.40 [.134] H

No. of Pos.	Part Numbers			
	With Mounting Bosses		Without Mounting Bosses	
	Loose Piece	Reel Mounted[1]	Loose Piece	Reel Mounted[1]
16	4-176311-6	4-176313-6	—	—
22	5-176311-2	5-176313-2	5-176768-2	5-176770-2
24	5-176311-4	5-176313-4	5-176768-4	5-176770-4
26	—	5-176313-6	—	5-176770-6
30	6-176311-0	6-176313-0	6-176768-0	6-176770-0

[1] Packaging Quantities—1,000 per reel for Positions 16 thru 30.

1.25 mm Dual-Row, Short-Rib, Post Headers for Vertical Mounting

Mates with—Short-Rib Receptacle Headers



Note: 26 Pos. Housing Dim. (Typ.)—17.70 [.697] L x 4.00 [.158] W x 3.95 [.156] C (Header Housing Height)

No. of Pos.	Header Housing Height (C)	Part Numbers							
		With Mounting Bosses				Without Mounting Bosses			
		Loose Piece	Tube[1]	(Pcs./Tube)	Tape	Loose Piece	Tube[1]	(Pcs./Tube)	Tape
16	**5.45** [.215]	—	4-176314-6	(40)	—	—	—	—	—
22	**8.85** [.348]	2-176140-2	2-176314-2	(30)	—	—	2-176771-2	(30)	—
24	**6.85** [.270]	—	2-176834-4	(25)	—	—	—	—	—
	8.85 [.348]	—	2-176314-4	(25)	—	—	—	—	—
26	**3.95** [.156]	8-176140-6	8-176314-6	(25)	—	8-176769-6	—	—	—
30	**3.95** [.156]	9-176140-0*	9-176314-0	(20)	—	—	—	—	—
	8.85 [.348]	3-176140-0*	3-176314-0	(20)	3-177530-0	—	—	—	3-177531-0

[1]Packaging Quantities, Tube—See chart.
*Standard Receptacles cannot mate with Short-Rib Post Headers.

Board-to-Board Connection Configurations

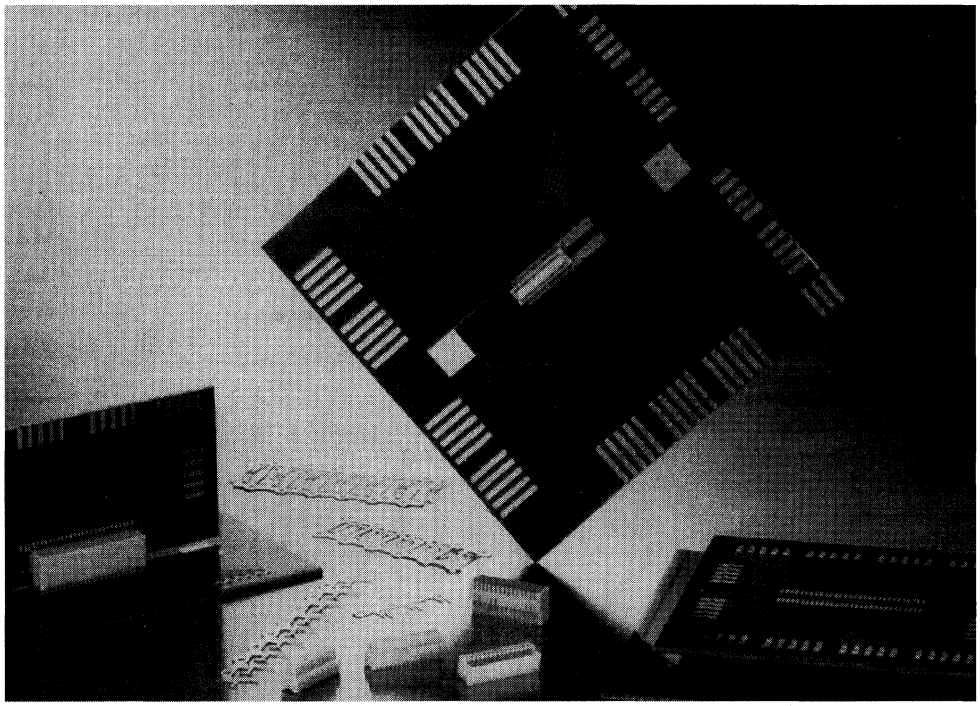
Board Connection Configuration			
Right-Angle (H)	C = **3.95** .156	H = **6.90** .271
	C = **8.85** .348	H = **11.90** .469
	C = **9.85** .388	H = **12.90** .508

Board Connection Configuration		
Parallel Stack Height (H)	C = **3.95** .156	H = **5.00** .197
	C = **5.45** .215	H = **6.50** .256
	C = **6.85** .270	H = **8.00** .315
	C = **8.85** .348	H = **10.00** .394
	C = **9.35** .368	H = **10.50** .413
	C = **9.85** .388	H = **11.00** .433

SOURCE: Catalog 82252

METRIC

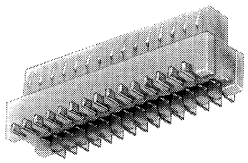
AMP 0.8 mm [.031] FP Board-to-Board Surface Mount Connectors



Product Facts

- Subminiature board-to-board interconnection connector with contacts on 0.8 mm [.031] centerline
- Provides parallel board interconnection (Stack height—5.0 mm [.197]), as well as right-angle board interconnection
- High reliability mounting (high accuracy ensured for tine position)
- High reliability contact construction
- High mating reliability
- Requires minimal PCB real estate
- Compatible with automated application using EIAJ-specified embossed tape
- Guide slot prevents scooping of contacts at mating/unmating

0.8 mm Vertical Board-Mount Plug Assemblies—SMT Type

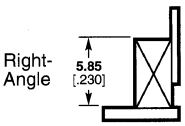


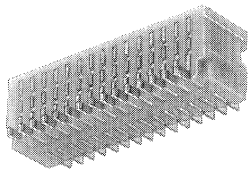
Note: 30 Pos. Housing Dim. (Typ.)—13.40 [.528] L x 3.20 [.126] W x 4.15 [.163] H

No. of Pos.	Part Number Reel Mounted*
16	1-178749-6
18	1-178749-8
20	2-178749-0
30	3-178749-0
34	3-178749-4
36	3-178749-6
48	4-178749-8

* Packaging Quantities—1,500 per reel

0.8 mm Horizontal Board-Mount Cap Assemblies—SMT Type



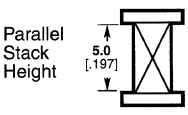


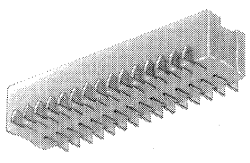
Note: 30 Pos. Housing Dim. (Typ.)—13.40 [.528] L x 3.65 [.144] W x 4.00 [.157] H

No. of Pos.	Part Number Reel Mounted*
16	1-178750-6
18	1-178750-8
30	3-178750-0
34	3-178750-4
36	3-178750-6
48	4-178750-8

* Packaging Quantities—2,000 per reel

0.8 mm Vertical Board-Mount Cap Assemblies—SMT Type





Note: 30 Pos. Housing Dim. (Typ.)—13.40 [.528] L x 3.20 [.126] W x 2.70 [.106] H

No. of Pos.	Part Number Reel Mounted*
16	1-175341-6
18	1-175341-8
20	2-175341-0
30	3-175341-0
48	4-175341-8

* Packaging Quantities—2,000 per reel

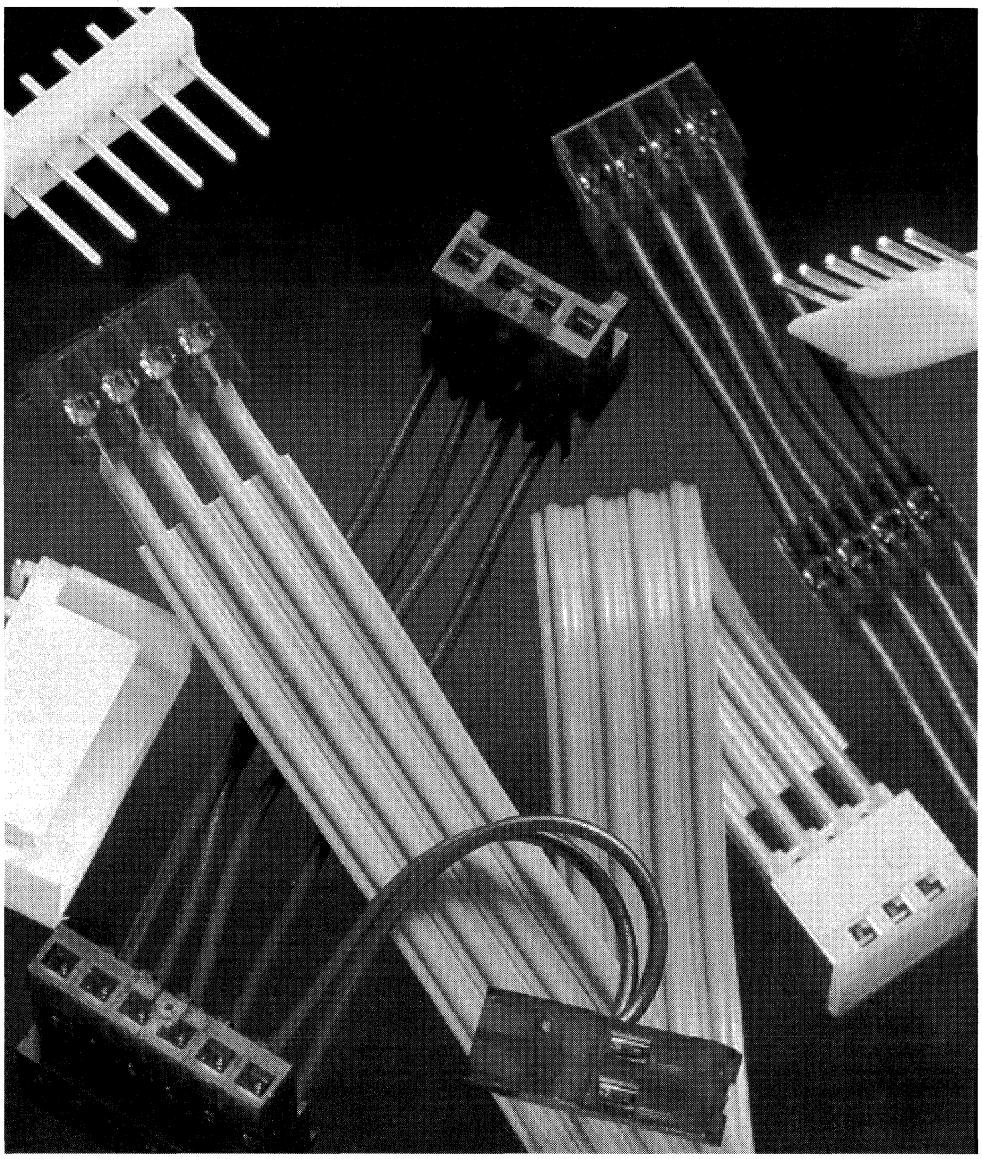
SOURCE: Catalog 82252

Specifications subject to change.

1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

.100 [2.54] Centerline MTA-100 IDC Connectors and Headers



Product Facts

- Connectors and headers for 2 through 28 positions
- Connectors and headers are end-to-end stackable
- Styles include both closed end and feed-thru connectors with locking ramps, with and without polarizing tabs
- All contacts are slotted for insulation displacement (IDC) terminal technique
- Contacts are lubricated to prevent fretting corrosion
- Increased quality and ease of handling—
  - One step assembly
  - No wire stripping
  - No contact damage
  - Reduced wiring errors
  - Preloaded contacts
  - Simpler tooling
  - Simple maintenance and repair
- Meets the material requirements of Table 23.1 of UL 1410 Standards for Television Receiver and Video Products (wire-to-post connectors only)
- Recognized under the Component Program of Underwriters Laboratories Inc., File No. E28476
- Certified by Canadian Standards Association, File No. LR7189

MTA-100 connectors accept discrete and ribbon cable wire sizes ranging from 22–28 AWG [0.4–0.08 mm²] with maximum insulation outside diameter of .060 [1.52] for terminating single wire and .050 [1.27] for mass termination of wires. Tin plated solid, fused stranded, or stranded (7 and 19 strands) wire with PVC insulation can be used on 22–24 AWG [0.4–0.2 mm²] on MTA-100 connectors and 7 stranded wire on 28–26 [0.09–0.15 mm²] MTA-100 connectors.

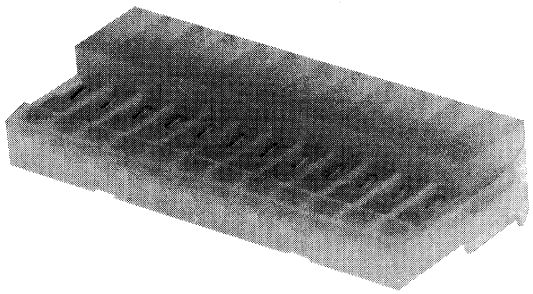
The wire-to-post connector housing material is flame retardant thermoplastic, either UL 94V-2 or UL 94V-0 rated.

A full line of .100 [2.54] centerline headers completes the system. Headers are available with straight or right-angle posts, in flat, polarized or friction lock styles. Headers are available in 2 through 28 positions.

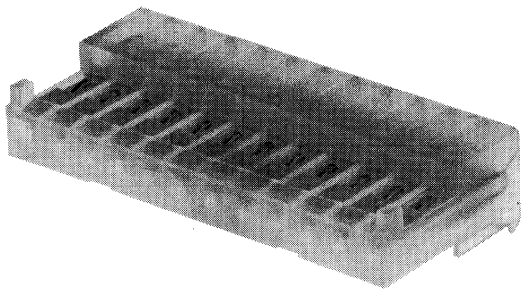
SOURCE: Catalog 82056

MTA-100 IDC Connectors—Closed End and Feed-Thru

Closed End Connectors



Without Polarizing Tabs



With Polarizing Tabs

Note: 12 Pos. Housing Dim. (Typ.)—1.200 [30.48] L x .520 [13.21] W x .275 [6.99] H

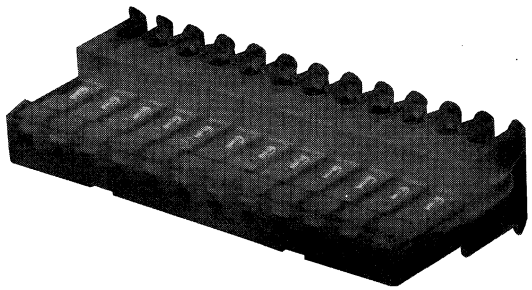
UL 94V-2 Color Coding by Wire Size

28 AWG—Green
26 AWG—Blue
24 AWG—Natural
22 AWG—Red

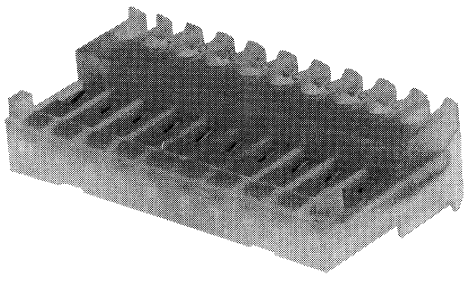
UL 94V-0—Black

Mates with—MTA-100 Headers, Pages 3241-3243

Feed-Thru Connectors



Without Polarizing Tabs



With Polarizing Tabs

Note: 12 Pos. Housing Dim. (Typ.)—1.200 [27.94] L x .520 [13.21] W x .305 [7.75] H

SOURCE: Catalog 82056

Specifications subject to change.
1-800-522-6752 Product Information Center/ AMP FAX Service
1-800-722-1111 Tooling/Technical Assistance Center

MTA-100 IDC Connectors—Closed End and Feed-Thru (Continued)

Connector Ordering Information

The "Base Part Numbers" Chart at right shows the base part number and number of circuits available for the described connectors.

Prefixes and suffixes are determined by the number of circuit positions in the connector. For example, the complete part number for a 10-position closed end connector without polarizing tabs for 22 AWG wire would be:

Base number **640440** plus prefix-and-suffix

1- — -0

The correct ordering number is

1-640440-0

Notes:
1. Connector circuits can be molded closed for keying purposes. Minimums may apply.
2. Connectors with contacts .000015 [0.00038] post gold plated over nickel, available upon request. Minimums may apply.
3. Contact AMP for available circuit sizes.
4. Other circuit sizes are available upon request. Minimums may apply.

UL 94V-2 Color Coding by Wire Size

28 AWG—Green
26 AWG—Blue
24 AWG—Natural
22 AWG—Red
UL 94V-0—Black

Base Part Numbers and Connector Availability

Connector Type and Wire Size	Closed End				Feed-Thru			
	Without Tabs		With Tabs		Without Tabs		With Tabs	
	Connector Part Nos.	No. of Circuits	Connector Part Nos.	No. of Circuits	Connector Part Nos.	No. of Circuits	Connector Part Nos.	No. of Circuits
Standard UL 94V-2, Tin Plated								
22 AWG 0.3-0.4 mm²	640440	2–28	643813	2–28	640620	2–28	644540[4]	2–15
24 AWG 0.2 mm²	640441	2–28	643814	2–28	640621	2–28	644563[4]	2–15
26 AWG 0.12-0.15 mm²	640442	2–28	643815	2–28	640622[4]	2–14	644564[4]	2–15
28 AWG 0.08-0.09 mm²	640443[4]	2–14	643816[4]	2–14	640623[4]	2–14	644565[4]	2–15
Tape Mounted on Reel UL 94V-2, Tin Plated								
22 AWG 0.3-0.4 mm²	640468	2–10	644511	See Note 3	—	—	—	—
24 AWG 0.2 mm²	640469	2–10	644512	See Note 3	—	—	—	—
26 AWG 0.12-0.15 mm²	640470	2–6	644513	See Note 3	—	—	—	—
28 AWG 0.08-0.09 mm²	640471	2–5	644514	See Note 3	—	—	—	—
Standard UL 94V-2, .000030 [0.00076] Gold Plated								
22 AWG 0.3-0.4 mm²	641237	2–28	644042	2-28	641241[4]	2–14	—	—
24 AWG 0.2 mm²	641238	2–28	644020	2-28	641242[4]	2–14	—	—
26 AWG 0.12-0.15 mm²	641239[4]	2–14	644043[4]	2-14	—	—	—	—
LED*, UL 94V-2, Tin Plated (See Note 4)								
22 AWG 0.3-0.4 mm²	641534	2–3	—	—	641653	2–3	—	—
24 AWG 0.2 mm²	641535	2–3	—	—	641654	2–3	—	—
26 AWG 0.12-0.15 mm²	641536	2–3	—	—	641655	2–3	—	—
28 AWG 0.08-0.09 mm²	641537	2–3	—	—	641656	2–3	—	—
Standard UL 94V-0, Tin Plated (Gold is available, minimums may apply.)								
22 AWG 0.3-0.4 mm²	643498	2–15	644083	2–15	644575	2–15	644578	2–15
24 AWG 0.2 mm²	644574	2–15	644312	2–15	644576	2–15	644579	2–15
26 AWG 0.12-0.15 mm²	643828	2–15	644313	2–15	644577	2–15	644497	2–15

*LED connectors are designed to mate with .014–.020 [0.36–0.51] diameter posts or square leads.

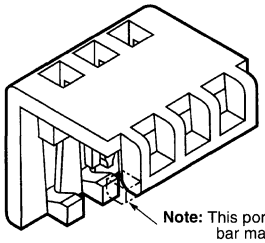
Prefix/Suffix Chart

No. of Circuits	Prefix/ Suffix	No. of Circuits	Prefix/ Suffix	No. of Circuits	Prefix/ Suffix
2	-2	11	1- -1	20	2- -0
3	-3	12	1- -2	21	2- -1
4	-4	13	1- -3	22	2- -2
5	-5	14	1- -4	23	2- -3
6	-6	15	1- -5	24	2- -4
7	-7	16	1- -6	25	2- -5
8	-8	17	1- -7	26	2- -6
9	-9	18	1- -8	27	2- -7
10	1- -0	19	1- -9	28	2- -8

MTA-100 IDC Connector Accessories

Covers

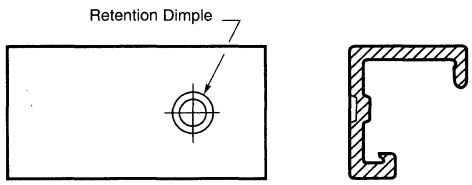
Closed End Strain Relief Covers



Note: This portion of the front locking bar may or may not be present.

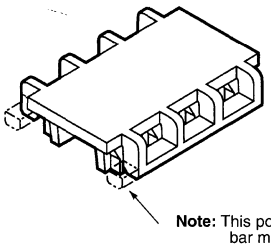
Note: 15 Pos. Housing Dim. (Typ.)—
1.500 [38.10] L x .345 [8.76] W x .340 [8.64] H

Closed End Dust Covers



Note: 15 Pos. Housing Dim. (Typ.)—
1.500 [38.10] L x .335 [8.51] W x .360 [9.14] H

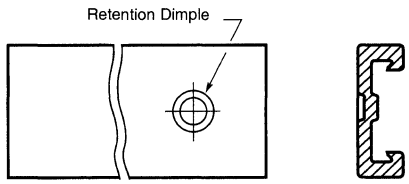
Feed-Thru Strain Relief Covers



Note: This portion of the front locking bar may or may not be present.

Note: 15 Pos. Housing Dim. (Typ.)—
1.500 [38.10] L x .360 [9.14] W x .127 [3.23] H

Feed-Thru Dust Covers



Note: 15 Pos. Housing Dim. (Typ.)—
1.500 [38.10] L x .395 [10.03] W x .130 [3.30] H

No. of Circuits	Closed End		Feed-Thru	
	Strain Relief Covers	Dust Covers	Strain Relief Covers	Dust Covers
2	643075-2	640550-2	643077-2	—
3	643075-3	640550-3	643077-3	640642-3
4	643075-4	640550-4	643077-4	640642-4
5	643075-5	640550-5	643077-5	640642-5
6	643075-6	640550-6	643077-6	640642-6
7	643075-7	640550-7	643077-7	640642-7
8	643075-8	640550-8	643077-8	640642-8
9	643075-9	640550-9	643077-9	640642-9
10	1-643075-0	1-640550-0	1-643077-0	1-640642-0
11	1-643075-1	1-640550-1	1-643077-1	1-640642-1
12	1-643075-2	1-640550-2	1-643077-2	1-640642-2
13	1-643075-3	1-640550-3	1-643077-3	1-640642-3
14	1-643075-4	1-640550-4	1-643077-4	1-640642-4
15	1-643075-5	1-640550-5	1-643077-5	1-640642-5

No. of Circuits	Closed End		Feed-Thru	
	Strain Relief Covers	Dust Covers	Strain Relief Covers	Dust Covers
16	1-643075-6	1-640550-6	1-643077-6	1-640642-6
17	1-643075-7	1-640550-7	1-643077-7	1-640642-7
18	1-643075-8	1-640550-8	1-643077-8	1-640642-8
19	1-643075-9	1-640550-9	1-643077-9	1-640642-9
20	2-643075-0	2-640550-0	2-643077-0	2-640642-0
21	2-643075-1	2-640550-1	2-643077-1	2-640642-1
22	2-643075-2	2-640550-2	2-643077-2	2-640642-2
23	2-643075-3	2-640550-3	2-643077-3	2-640642-3
24	2-643075-4	2-640550-4	2-643077-4	2-640642-4
25	2-643075-5	2-640550-5	2-643077-5	2-640642-5
26	2-643075-6	2-640550-6	2-643077-6	2-640642-6
27	2-643075-7	2-640550-7	2-643077-7	2-640642-7
28	2-643075-8	2-640550-8	2-643077-8	2-640642-8

SOURCE: Catalog 82056

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

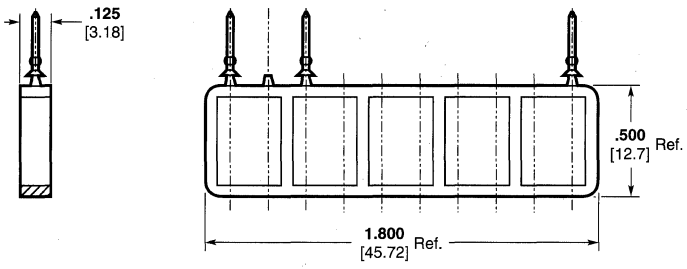
MTA-100 IDC Connector Accessories

(Continued)

Keying Plug with Carrier Strip (10 plugs per strip)

Part No. 641994-1

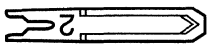
Note: Removal of contact is not necessary when using keying plug.

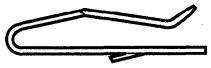


Replacement IDC Contacts

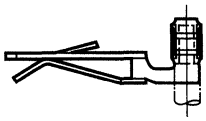
Notes:
1. AMP does not recommend terminating an MTA contact more than one time. Use replacement contacts when required for field repairs or wire changes.
2. Post gold plated contacts .000015 [0.00038] over nickel, available upon request. Minimums may apply.

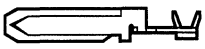
Wire Size		Part Numbers		
AWG	mm²	Standard Tin Plated	.000030 [0.00076] Gold Plated	LED Tin Plated
22	0.3-0.4	640636-1	641186-2	641643-1
24	0.2	640637-1	641187-2	641644-1
26	0.12-0.15	640638-2	641188-2	641645-1
28	0.08-0.09	640639-1	641189-2	641646-1





Crimp Snap-In Contacts





Wire Size		Part Nos.	
AWG	mm²	Loose Piece*	Strip**
26-22	0.12-0.4	640709-1	640708-1

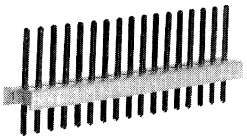
*Hand Tool **Part No. 59836-1**
**Requires applicator. For part number, call the Tooling/Technical Assistance Center.

Special applications for crimp snap-in contacts are:
1. Double wire per contact
2. Coax or shielded wire
3. Mixed wire size in same connector

Note: Only one crimp snap-in contact per connector.

MTA-100 Flat Headers—Straight and Right-Angle

Mates with—MTA-100 IDC Connectors, Page 3237 and 3238; and CST-100 Housings, Page 3243



Straight Post (.025 [0.64] Square)

Right-Angle Post (.025 [0.64] Square)

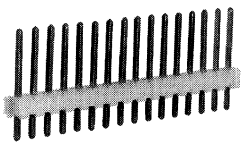
Note: 15 Pos. Housing Dim. (Typ.)— 1.500 [38.1] L; Post Length—.295 [7.49], Solder Tail Length— .140 [3.56]

No. of Pos.	Part Numbers			
	Straight Post		Right-Angle Post	
	Tin	.000030 [0.00076] Gold	Tin	.000030 [0.00076] Gold
2	640452-2	641211-2	640453-2	641212-2
3	640452-3	641211-3	640453-3	641212-3
4	640452-4	641211-4	640453-4	641212-4
5	640452-5	641211-5	640453-5	641212-5
6	640452-6	641211-6	640453-6	641212-6
7	640452-7	641211-7	640453-7	641212-7
8	640452-8	641211-8	640453-8	641212-8
9	640452-9	641211-9	640453-9	641212-9
10	1-640452-0	1-641211-0	1-640453-0	1-641212-0
11	1-640452-1	1-641211-1	1-640453-1	1-641212-1
12	1-640452-2	1-641211-2	1-640453-2	1-641212-2
13	1-640452-3	1-641211-3	1-640453-3	1-641212-3
14	1-640452-4	1-641211-4	1-640453-4	1-641212-4
15	1-640452-5	—	1-640453-5	—
16	1-640452-6	—	1-640453-6	—
17	1-640452-7	—	1-640453-7	—
18	1-640452-8	—	1-640453-8	—
19	1-640452-9	—	1-640453-9	—
20	2-640452-0	—	2-640453-0	—
21	2-640452-1	—	2-640453-1	—
22	2-640452-2	—	2-640453-2	—
23	2-640452-3	—	2-640453-3	—
24	2-640452-4	—	2-640453-4	—
25	2-640452-5	—	2-640453-5	—
26	2-640452-6	—	2-640453-6	—
27	2-640452-7	—	2-640453-7	—
28	2-640452-8	—	2-640453-8	—

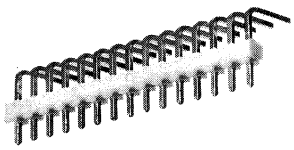
Notes:
1. Post(s) can be omitted for keying purposes. Specify the desired post(s) to be omitted.
2. Headers with .000015 [0.00038] gold plated post are available upon request. Minimums may apply.
3. Gold headers in position sizes 15 thru 28 are available upon request. Minimums may apply.

MTA-100 Narrow Flat Headers—Straight and Right-Angle

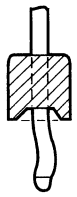
Mates with—MTA-100 IDC Connectors, Page 3237 and 3238; and CST-100 Housings, Page 3243



Straight Post (.025 [0.64] Square)



Right-Angle Post (.025 [0.64] Square)



Straight and Right-Angle Post with Retention Legs

Note: 15 Pos. Housing Dim. (Typ.)— 1.488 [37.80] L; Post Length—Straight, .295 [7.49], Right-Angle, .260 [6.6]; Solder Tail Length—.110 [2.79]

No. of Pos.	Part Numbers			
	Straight Post	Straight Post with Retentive Legs	Right-Angle Post	Right-Angle Post with Retentive Legs
2	644456-2	644695-2	644457-2	644694-2
3	644456-3	644695-3	644457-3	644694-3
4	644456-4	644695-4	644457-4	644694-4
5	644456-5	644695-5	644457-5	644694-5
6	644456-6	644695-6	644457-6	644694-6
7	644456-7	644695-7	644457-7	644694-7
8	644456-8	644695-8	644457-8	644694-8
9	644456-9	644695-9	644457-9	644694-9
10	1-644456-0	1-644695-0	1-644457-0	1-644694-0
11	1-644456-1	1-644695-1	1-644457-1	1-644694-1
12	1-644456-2	1-644695-2	1-644457-2	1-644694-2
13	1-644456-3	1-644695-3	1-644457-3	1-644694-3
14	1-644456-4	1-644695-4	1-644457-4	1-644694-4
15	1-644456-5	1-644695-5	1-644457-5	1-644694-5
16	1-644456-6	1-644695-6	1-644457-6	1-644694-6
17	1-644456-7	1-644695-7	1-644457-7	1-644694-7
18	1-644456-8	1-644695-8	1-644457-8	1-644694-8
19	1-644456-9	1-644695-9	1-644457-9	1-644694-9
20	2-644456-0	2-644695-0	2-644457-0	2-644694-0
21	2-644456-1	2-644695-1	2-644457-1	2-644694-1
22	2-644456-2	2-644695-2	2-644457-2	2-644694-2
23	2-644456-3	2-644695-3	2-644457-3	2-644694-3
24	2-644456-4	2-644695-4	2-644457-4	2-644694-4
25	2-644456-5	2-644695-5	2-644457-5	2-644694-5
26	2-644456-6	2-644695-6	2-644457-6	2-644694-6
27	2-644456-7	2-644695-7	2-644457-7	2-644694-7
28	2-644456-8	2-644695-8	2-644457-8	2-644694-8

Notes:
1. Post(s) can be omitted for keying purposes. Specify the desired post(s) to be omitted.
2. Headers without retentive legs are suitable for breakaway application.
3. 2 or 3 retentive leg(s) per header, depending upon number of positions.

SOURCE: Catalog 82056

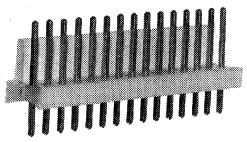
Specifications subject to change.

1-800-522-6752
Product Information Center/ AMP FAX Service

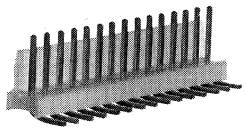
1-800-722-1111
Tooling/Technical Assistance Center

MTA-100 Polarized Headers—Straight and Right-Angle

Mates with—MTA-100 IDC Connectors, Page 3237 and 3238; and CST-100 Housings, Page 3243



Straight Post (.025 [0.64] Square)



Right-Angle Post (.025 [0.64] Square)

Note: 15 Pos. Housing Dim. (Typ.)—1.500 [38.1] L; Post Length—.295 [7.49]; Solder Tail Length—.140 [3.56]

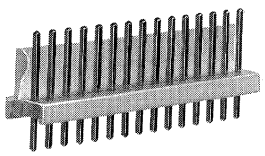
No. of Pos.	Part Numbers			
	Straight Post		Right-Angle Post	
	Tin	.000030 [0.00076] Gold	Tin	.000030 [0.00076] Gold
2	640454-2	641213-2	640455-2	641214-2
3	640454-3	641213-3	640455-3	641214-3
4	640454-4	641213-4	640455-4	641214-4
5	640454-5	641213-5	640455-5	641214-5
6	640454-6	641213-6	640455-6	641214-6
7	640454-7	641213-7	640455-7	641214-7
8	640454-8	641213-8	640455-8	641214-8
9	640454-9	641213-9	640455-9	641214-9
10	1-640454-0	1-641213-0	1-640455-0	1-641214-0
11	1-640454-1	1-641213-1	1-640455-1	1-641214-1
12	1-640454-2	1-641213-2	1-640455-2	1-641214-2
13	1-640454-3	1-641213-3	1-640455-3	1-641214-3
14	1-640454-4	1-641213-4	1-640455-4	1-641214-4
15	1-640454-5	—	1-640455-5	—

No. of Pos.	Part Numbers			
	Straight Post		Right-Angle Post	
	Tin	.000030 [0.00076] Gold	Tin	.000030 [0.00076] Gold
16	1-640454-6	—	1-640455-6	—
17	1-640454-7	—	1-640455-7	—
18	1-640454-8	—	1-640455-8	—
19	1-640454-9	—	1-640455-9	—
20	2-640454-0	—	2-640455-0	—
21	2-640454-1	—	2-640455-1	—
22	2-640454-2	—	2-640455-2	—
23	2-640454-3	—	2-640455-3	—
24	2-640454-4	—	2-640455-4	—
25	2-640454-5	—	2-640455-5	—
26	2-640454-6	—	2-640455-6	—
27	2-640454-7	—	2-640455-7	—
28	2-640454-8	—	2-640455-8	—

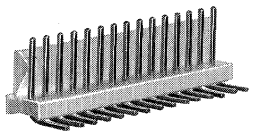
Notes:
1. Post(s) can be omitted for keying purposes. Specify the desired post(s) to be omitted.
2. Headers with .000015 [0.00038] gold plated post are available upon request. Minimums may apply.
3. Gold headers in position sizes 15 thru 28 are available upon request. Minimums may apply.

MTA-100 Friction Lock Headers—Straight and Right-Angle

Mates with—MTA-100 IDC Connectors, Page 3237 and 3238; and CST-100 Housings, Page 3243



Straight Post (.025 [0.64] Square)



Right-Angle Post (.025 [0.64] Square)

Note: 15 Pos. Housing Dim. (Typ.)—1.500 [38.1] L; Post Length—.295 [7.49]; Solder Tail Length—.140 [3.56]

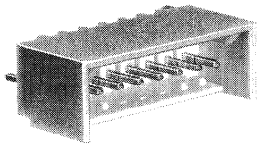
No. of Pos.	Part Numbers			
	Straight Post		Right-Angle Post	
	Tin	.000030 [0.00076] Gold	Tin	.000030 [0.00076] Gold
2	640456-2	641215-2	640457-2	641216-2
3	640456-3	641215-3	640457-3	641216-3
4	640456-4	641215-4	640457-4	641216-4
5	640456-5	641215-5	640457-5	641216-5
6	640456-6	641215-6	640457-6	641216-6
7	640456-7	641215-7	640457-7	641216-7
8	640456-8	641215-8	640457-8	641216-8
9	640456-9	641215-9	640457-9	641216-9
10	1-640456-0	1-641215-0	1-640457-0	1-641216-0
11	1-640456-1	1-641215-1	1-640457-1	1-641216-1
12	1-640456-2	1-641215-2	1-640457-2	1-641216-2
13	1-640456-3	1-641215-3	1-640457-3	1-641216-3
14	1-640456-4	1-641215-4	1-640457-4	1-641216-4
15	1-640456-5	1-641215-5	1-640457-5	1-641216-5

No. of Pos.	Part Numbers			
	Straight Post		Right-Angle Post	
	Tin	.000030 [0.00076] Gold	Tin	.000030 [0.00076] Gold
16	1-640456-6	1-641215-6	1-640457-6	1-641216-6
17	1-640456-7	1-641215-7	1-640457-7	1-641216-7
18	1-640456-8	1-641215-8	1-640457-8	1-641216-8
19	1-640456-9	1-641215-9	1-640457-9	1-641216-9
20	2-640456-0	2-641215-0	2-640457-0	2-641216-0
21	2-640456-1	2-641215-1	2-640457-1	2-641216-1
22	2-640456-2	2-641215-2	2-640457-2	2-641216-2
23	2-640456-3	2-641215-3	2-640457-3	2-641216-3
24	2-640456-4	2-641215-4	2-640457-4	2-641216-4
25	2-640456-5	2-641215-5	2-640457-5	2-641216-5
26	2-640456-6	2-641215-6	2-640457-6	2-641216-6
27	2-640456-7	2-641215-7	2-640457-7	2-641216-7
28	2-640456-8	2-641215-8	2-640457-8	2-641216-8

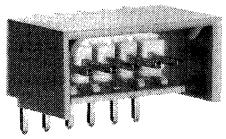
Notes:
1. Post(s) can be omitted for keying purposes. Specify the desired post(s) to be omitted.
2. Headers with .000015 [0.00038] gold plated post are available upon request. Minimums may apply.

SOURCE: Catalog 82056

MTA-100 Shrouded Headers—Straight and Right-Angle



Straight Post (.025 [0.64] Square)



Right-Angle (.025 [0.64] Square)

Mates with—MTA-100 IDC Connectors, Pages 3237 and 3238

Note: 8 Pos. Housing Dim. (Typ.)—Straight Post, .884 [22.45] L x .313 [7.95] W x .550 [13.97] H; Right-Angle Post, .884 [22.45] L x .410 [10.41] W x .313 [7.95] H

No. of Pos.	Part Numbers			
	Straight Post		Right-Angle Post	
	Tin	.000030 [0.00076] Gold	Tin	.000030 [0.00076] Gold
2	644486-2	644487-2	644488-2	644489-2
3	644486-3	644487-3	644488-3	644489-3
4	644486-4	644487-4	644488-4	644489-4
5	644486-5	644487-5	644488-5	644489-5
6	644486-6	644487-6	644488-6	644489-6
7	644486-7	644487-7	644488-7	644489-7
8	644486-8	644487-8	644488-8	644489-8
9	644486-9	644487-9	644488-9	644489-9
10	1-644486-0	1-644487-0	1-644488-0	1-644489-0
11	1-644486-1	1-644487-1	1-644488-1	1-644489-1
12	1-644486-2	1-644487-2	1-644488-2	1-644489-2
13	1-644486-3	1-644487-3	1-644488-3	1-644489-3
14	1-644486-4	1-644487-4	1-644488-4	1-644489-4

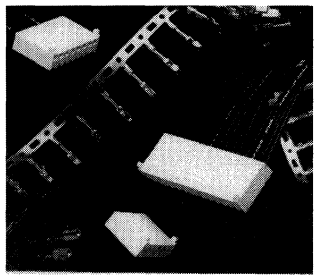
Notes:
1. Post(s) can be omitted for keying purposes. Specify the desired post(s) to be omitted.
2. Headers with .000015 [0.00038] gold plated posts are available upon request. Minimums may apply.
3. Straight post header style without polarized retention peg available upon request. Minimums may apply.

.100 [2.54] Centerline CST-100 Crimp Contacts and Housings

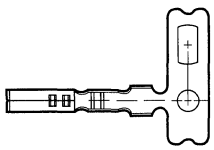
Mates with—MTA-100 Flat, Narrow Flat, Polarized and Friction Lock Headers, Pages 3241 and 3242

Product Facts

- Low cost wire-to-board interconnections
- High current rating
- Wide wire range for single contact
- Tin and gold plated contacts
- Mates with MTA and similar competitive notched headers
- Anti-overstress feature prevents damage to contact
- Metal-to-metal contact ensures low mating resistance and no damage to housing
- Locking ramps and polarizing tabs are standard
- Recognized under the Component Program of Underwriters Laboratories Inc., File No. E28476
- Certified by Canadian Standards Association, File No. LR7189



Crimp Contacts



Part Numbers	
Tin Plated	Gold Plated
770601-1 (Strip)	770601-2 (Strip)
770666-1 (Loose Piece)	770666-2 (Loose Piece)

Wire Range—22-26 AWG [0.4-0.12 mm²]
Max. Ins. Dia.—.065 [1.65]

Housings

Note: 15 Pos. Housing Dim. (Typ.)—1.520 [38.61] L x .510 [12.95] W x .260 [6.6] H

No. of Pos.	Part Numbers	No. of Pos.	Part Numbers	No. of Pos.	Part Numbers
2	770602-2	11	1-770602-1	20	2-770602-0
3	770602-3	12	1-770602-2	21	2-770602-1
4	770602-4	13	1-770602-3	22	2-770602-2
5	770602-5	14	1-770602-4	23	2-770602-3
6	770602-6	15	1-770602-5	24	2-770602-4
7	770602-7	16	1-770602-6	25	2-770602-5
8	770602-8	17	1-770602-7	26	2-770602-6
9	770602-9	18	1-770602-8	27	2-770602-7
10	1-770602-0	19	1-770602-9	28	2-770602-8

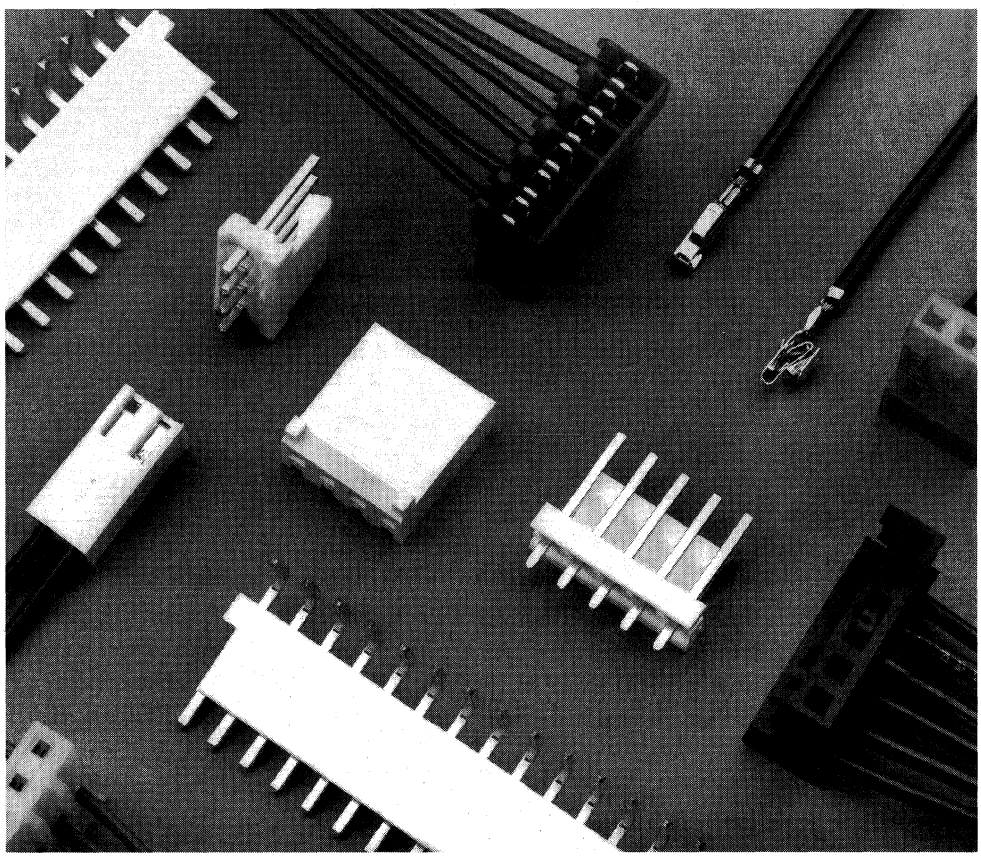
SOURCE: Catalog 82056

Specifications subject to change.

1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

.156 [3.96] Centerline MTA-156 IDC Connectors and Headers



Product Facts

- **Connectors and headers for 2 through 24 positions; wire sizes of 18, 20, 22 and 24 AWG [0.9–0.2 mm²]**
- **Wire-to-post connectors preloaded with dual beam contacts**
- **Quad Connectors for higher current rating**
- **Posted connectors for 2, 3, 4, 6, 9, 12, 15 and 24 positions**
- **Card edge connectors for 3, 6, 9, 12, 15, 18 and 20 through 24 positions**
- **Card edge connectors preloaded with leaf contacts**
- **All contacts are slotted for insulation displacement (IDC) termination technique**
- **Connectors and headers are end-to-end stackable**
- **Connector styles include both closed end and feed-thru, with and without locking ramps and polarizing tabs**
- **Contacts are lubricated to prevent fretting corrosion**
- **Meets the material requirements of Table 23.1 of UL 1410 Standards for Television Receiver and Video Products (wire-to-post connectors only)**
- **Recognized under the Component Program of Underwriters Laboratories Inc., File No. E28476**
- **Certified by Canadian Standards Association, File No. LR 7189**

MTA-156 connectors accept discrete and ribbon cable wire sizes ranging from 18–24 AWG [0.9–0.2 mm²] with maximum insulation outside diameter .095 [2.41] for single wire and .070 [1.78] for mass termination of wires. Tin plated solid, fused stranded or stranded (7, 16, and 19 strands) wire with PVC insulation can be used on 18 AWG [0.8–0.9 mm²] MTA-156 connectors; 7, 10, and 19 stranded wire on 20 AWG [0.5–0.6 mm²] MTA-156 connectors; and 7 and 19 stranded wire on 22–24 AWG [0.4 –0.2 mm²] MTA-156 connectors.

Mass termination of wire provides the lowest applied cost because it drastically reduces the labor content of virtually any cable or harness assembly required.

The wire-to-post connector housing material is flame retardant thermoplastic, either UL 94V-2 or UL 94V-0 rated.

A full line of .156 [3.96] centerline headers completes the system. Headers are available with straight or right-angle posts, in flat or friction lock styles. Headers are available in 2 through 24 positions.

Other benefits derived from the MTA-156 system include increased quality and ease of handling features such as:

- One-step assembly
- No wire stripping
- No contact damage
- Reduced wiring errors
- Preloaded contacts
- Simple tooling
- Simple maintenance and repair

SOURCE: Catalog 82056

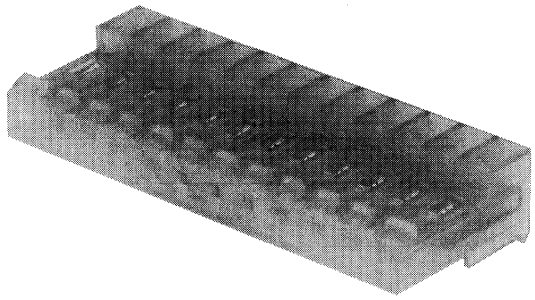
MTA-156 IDC Connectors—Closed End

Closed End with Locking Ramp

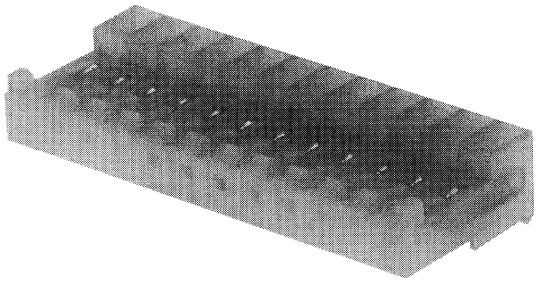
Mates with—MTA-156 Flat, Straight Friction Lock, and Straight Polarized Lock Headers, Pages 3251-3253; MTA-156 Right-Angle Friction Lock and Polarized Lock Headers (Front Bend only), Pages 3253 and 3254

UL 94V-2 Color Coding by Wire Size

24 AWG—Natural
22 AWG—Red
20 AWG—Yellow
18 AWG—Orange
UL 94V-0—Black



Without Polarizing Tabs

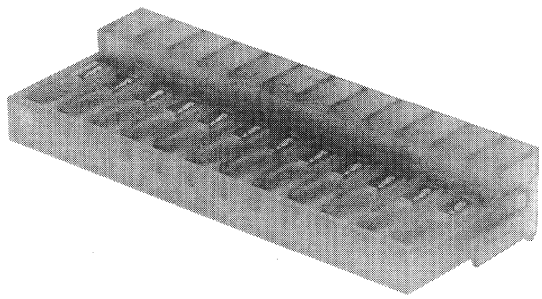


With Polarizing Tabs

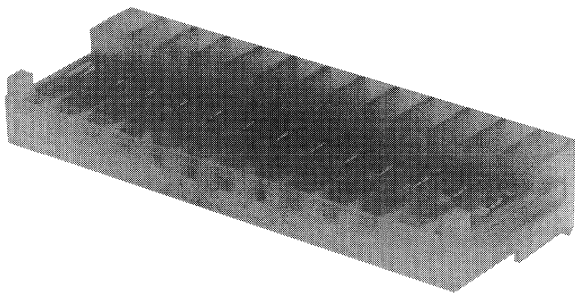
Note: 12 Pos. Housing Dim. (Typ.)—1.872 [47.55] L x .725 [18.42] W x .355 [9.02] H

Closed End without Locking Ramp

Mates with—MTA-156 Headers, Pages 3252-3254



Without Polarizing Tabs



With Polarizing Tabs

Note: 12 Pos. Housing Dim. (Typ.)—1.872 [47.55] L x .725 [18.42] W x .355 [9.02] H

SOURCE: Catalog 82056

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

MTA-156 IDC Connectors—Closed End
(Continued)

Connector Ordering Information

The "Base Part Numbers" Chart at right shows the base part number and number of circuits available for the described connectors.

Prefixes and suffixes are determined by the number of circuit positions in the connector. For example, the complete part number for a 10-position closed end connector with locking ramp and without polarizing tabs for 18 AWG wire would be:

Base number **640426** plus prefix-and-suffix

1- — -0

The correct ordering number is

1-640426-0

Notes:
1. Only connectors with locking ramp and without polarizing tabs mate with posted connectors on Page 3256.
2. Connectors with contacts .000015 [0.00038] post gold plated over nickel, available upon request. Minimums may apply.
3. Connector circuits can be molded closed for keying purposes. Minimums may apply.
4. Other circuit sizes are available upon request. Minimums may apply.

UL 94V-2 Color Coding by Wire Size

24 AWG—Natural
22 AWG—Red
20 AWG—Yellow
18 AWG—Orange
UL 94V-0—Black

Base Part Numbers and Connector Availability

Connector Type and Wire Size	Closed End with Locking Ramp				Closed End without Locking Ramp			
	Without Tabs		With Tabs		Without Tab		With Tabs	
	Connector Part Nos.	No. of Circuits	Connector Part Nos.	No. of Circuits	Connector Part Nos.	No. of Circuits	Connector Part No.	No. of Circuits
Standard UL 94V-2, Tin Plated								
18 AWG 0.8-0.9 mm²	640426	2–24	643817	2–24	640431	2–24	644461[4]	2–14
20 AWG 0.5-0.6 mm²	640427	2–24	643818	2–24	640432	2–24	644462[4]	2–14
22 AWG 0.3-0.4 mm²	640428	2–24	643819	2–24	640433[4]	2–12	644463[4]	2–14
24 AWG 0.2 mm²	640429[4]	2–12	643820[4]	2–12	640434[4]	2–12	644464[4]	2–14
Tape Mounted on Reel UL 94V-2, Tin Plated								
18 AWG 0.8-0.9 mm²	640472[4]	2–12	—	—	—	—	—	—
20 AWG 0.5-0.6 mm²	640473[4]	2–12	—	—	—	—	—	—
22 AWG 0.3-0.4 mm²	640474[4]	2–12	—	—	—	—	—	—
[2]Standard UL 94V-2, .000030 [0.00076] Gold Plated								
18 AWG 0.8-0.9 mm²	641217[4]	2–12	644460[4]	2-12	641222[4]	2–12	—	—
20 AWG 0.5-0.6 mm²	641218[4]	2–12	644663[4]	2-12	641223[4]	2–12	—	—
22 AWG 0.3-0.4 mm²	641219[4]	2–12	644662[4]	2-12	641224[4]	2-12	—	—
Standard UL 94V-0, Tin Plated								
18 AWG 0.8-0.9 mm²	—	—	—	—	644502	2–12	644082	2–12
22 AWG 0.3-0.4 mm²	—	—	—	—	644501	2–12	644566	2–12

Prefix/Suffix Chart

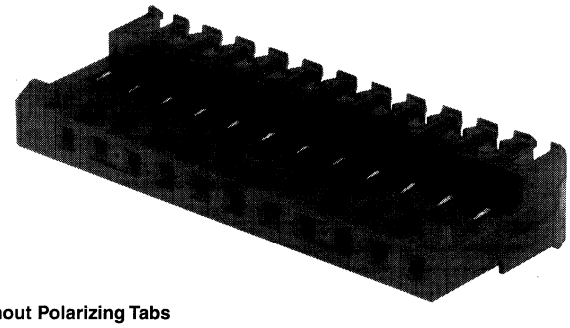
No. of Circuits	Prefix/ Suffix
2	-2
3	-3
4	-4
5	-5
6	-6
7	-7
8	-8
9	-9
10	1- -0
11	1- -1
12	1- -2
13	1- -3

No. of Circuits	Prefix/ Suffix
14	1- -4
15	1- -5
16	1- -6
17	1- -7
18	1- -8
19	1- -9
20	2- -0
21	2- -1
22	2- -2
23	2- -3
24	2- -4

MTA-156 IDC Connectors—Feed-Thru

Feed-Thru with Locking Ramp

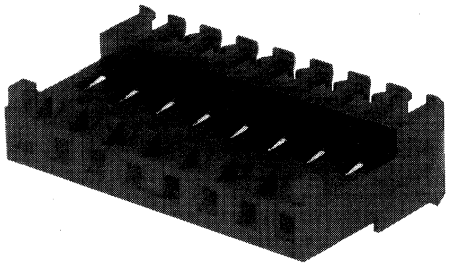
Mates with—MTA-156 Flat and Straight Friction Lock Headers, Pages 3251 and 3252; MTA-156 Right-Angle Friction Lock and Polarized Lock Headers (Front Bend only), Pages 3253 and 3254



Without Polarizing Tabs

UL 94V-2 Color Coding by Wire Size

24 AWG—Natural
22 AWG—Red
20 AWG—Yellow
18 AWG—Orange
UL 94V-0—Black

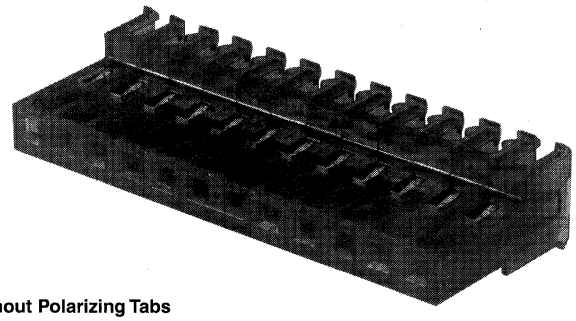


With Polarizing Tabs

Note: 12 Pos. Housing Dim. (Typ.)—1.872 [47.55] L x .725 [18.42] W x .385 [9.78] H

Feed-Thru without Locking Ramp (With or Without Polarizing Tabs)

Mates with—MTA-156 Headers, Pages 3251-3254



Without Polarizing Tabs

Note: 12 Pos. Housing Dim. (Typ.)—1.872 [47.55] L x .725 [18.42] W x .385 [9.78] H

SOURCE: Catalog 82056

Specifications subject to change.

1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

MTA-156 IDC Connectors—Feed-Thru

(Continued)

Connector Ordering Information

The "Base Part Numbers" Chart at right shows the base part number and number of circuits available for the described connectors.

Prefixes and suffixes are determined by the number of circuit positions in the connector. For example, the complete part number for a 10-position feed-thru connector with locking ramp and without polarizing tabs for 18 AWG wire would be:

Base number **640599** plus

prefix-and-suffix

1- — -0

The correct ordering number is

1-640599-0

Notes:
1. Only connectors with locking ramps and without polarizing tabs mate with posted connectors on Page 3256
2. Connectors with .000030 [0.00076] or .000015 [0.00038], post gold plating over nickel are available upon request. Minimums may apply.
3. Connector circuits can be molded closed for keying purposes. Minimums may apply.
4. Other circuit sizes are available upon request. Minimums may apply.
5. Tape mounted product on reel is available upon request. Minimums may apply.

UL 94 V-2 Color Coding by Wire Size

24 AWG—Natural
22 AWG—Red
20 AWG—Yellow
18 AWG—Orange
UL 94 V-0—Black

Base Part Numbers and Connector Availability

Connector Type and Wire Size	Feed-Thru with Locking Ramp				Feed-Thru without Locking Ramp			
	Without Tabs		With Tabs		Without Tabs		With Tabs	
	Connector Part Nos.	No. of Circuits	Connector Part Nos.	No. of Circuits	Connector Part Nos.	No. of Circuits	Connector Part Nos.	No. of Circuits
Standard UL 94V-2, Tin Plated (See Note 4)								
18 AWG 0.8-0.9 mm²	640599	2–14	644465	2–14	640604	2–14	644469	2–14
20 AWG 0.5-0.6 mm²	640600	2–14	644466	2–14	640605	2–14	644470	2–14
22 AWG 0.3-0.4 mm²	640601	2–14	644467	2–14	640606	2–14	644471	2–14
24 AWG 0.2 mm²	640602	2–14	644468	2–14	640607	2–14	644472	2–14
Standard UL 94V-0, Tin Plated								
18 AWG 0.8-0.9 mm²	—	—	—	—	644567	2–12	644570	2–12
22 AWG 0.3-0.4 mm²	—	—	—	—	644569	2–12	644572	2–12

Prefix/Suffix Chart

No. of Circuits	Prefix/ Suffix
2	-2
3	-3
4	-4
5	-5
6	-6
7	-7
8	-8
9	-9
10	1- -0
11	1- -1
12	1- -2
13	1- -3

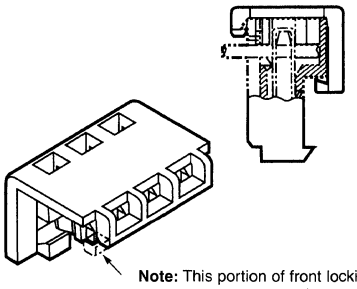
No. of Circuits	Prefix/ Suffix
14	1- -4
15	1- -5
16	1- -6
17	1- -7
18	1- -8
19	1- -9
20	2- -0
21	2- -1
22	2- -2
23	2- -3
24	2- -4

SOURCE: Catalog 82056

MTA-156 Connector Accessories

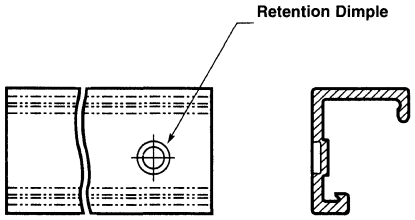
Closed End Covers

Strain Relief Covers



Note: This portion of front locking bar may or may not be present

Dust Covers

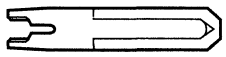


Note: 13 Pos. Housing Dim. (Typ.)—Strain Relief Cover, 2.028 [51.51] L x .440 [11.18] W x .335 [8.51] H; Dust Cover, 2.028 [51.51] L x .335 [8.51] W x .440 [11.18] H

No. of Circuits	Strain Relief Covers .065 [1.65] Max. O.D.*	Strain Relief Covers .095 [2.41] Max. O.D.**	Dust Covers
2	643069-2	643067-2	640551-2
3	643069-3	643067-3	640551-3
4	643069-4	643067-4	640551-4
5	643069-5	643067-5	640551-5
6	643069-6	643067-6	640551-6
7	643069-7	643067-7	640551-7
8	643069-8	643067-8	640551-8
9	643069-9	643067-9	640551-9
10	1-643069-0	1-643067-0	1-640551-0
11	1-643069-1	1-643067-1	1-640551-1
12	1-643069-2	1-643067-2	1-640551-2
13	—	1-643067-3	1-640551-3
14	—	1-643067-4	1-640551-4
15	—	1-643067-5	1-640551-5
16	—	1-643067-6	1-640551-6
17	—	1-643067-7	1-640551-7
18	—	1-643067-8	1-640551-8
19	—	1-643067-9	1-640551-9
20	—	2-643067-0	2-640551-0
21	—	2-643067-1	2-640551-1
22	—	2-643067-2	2-640551-2
23	—	2-643067-3	2-640551-3
24	2-643069-4	2-643067-4	2-640551-4

*Black
**Natural

Replacement IDC Contacts



Wire Size AWG	Wire Size mm²	Part Numbers Tin Plated	Part Numbers .000030 [0.00076] Gold Plated
18	0.8-0.9	640631-2	641143-2
20	0.5-0.6	640632-2	641144-2
22	0.3-0.4	640633-2	641145-2
24	0.2	640634-2	641146-2

Notes:
1. AMP does not recommend terminating an MTA contact more than one time. Use replacement contacts when required for field repairs or wire changes.
2. Post gold plated contacts .000015 [0.00038] over nickel, available upon request. Minimums may apply.

SOURCE: Catalog 82056

Specifications subject to change.

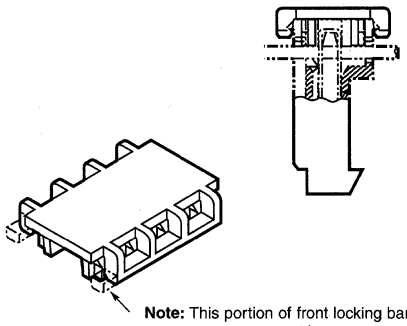
1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

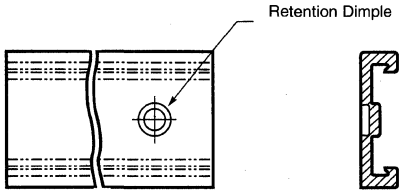
MTA-156 Connector Accessories
(Continued)

Feed-Thru Covers

Strain Relief Covers



Dust Covers

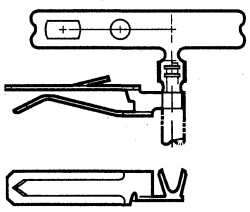


Note: 13 Pos. Housing Dim. (Typ.)—Strain Relief Covers, 2.028 [51.51] L x .470 [11.94] W x .127 [3.23] H; Dust Covers, 2.028 [51.51] L x .475 [12.07] W x .130 [3.3] H

No. of Circuits	Strain Relief Covers .065 [1.65] Max. O.D.*	Strain Relief Covers .095 [2.41] Max. O.D.**	Dust Covers
2	643072-2	643071-2	—
3	643072-3	643071-3	640643-3
4	643072-4	643071-4	640643-4
5	643072-5	643071-5	640643-5
6	643072-6	643071-6	640643-6
7	643072-7	643071-7	640643-7
8	643072-8	643071-8	640643-8
9	643072-9	643071-9	640643-9
10	1-643072-0	1-643071-0	1-640643-0
11	1-643072-1	1-643071-1	1-640643-1
12	1-643072-2	1-643071-2	1-640643-2
13	—	1-643071-3	—
14	—	1-643071-4	—
15	—	1-643071-5	—
16	—	1-643071-6	—
17	—	1-643071-7	—
18	—	1-643071-8	—
19	—	1-643071-9	—
20	—	2-643071-0	—
21	—	2-643071-1	—
22	—	2-643071-2	—
23	—	2-643071-3	—
24	2-643072-4	2-643071-4	2-640643-4

*Black
**Natural

Crimp Snap-in Contacts



Wire Size AWG	Wire Size mm²	Part Nos. Loose Piece*	Part Nos. Strip**
22-18	0.3-0.9	640559-1	640558-1

*Hand Tool **Part No. 59837-1**
**AMP-O-LECTRIC Model "G" Termination Machine (Request Catalog 65828)
Note: Requires applicator. For part number, call the Tooling/Technical Assistance Center.

SOURCE: Catalog 82056

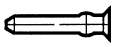
MTA-156 Connector Accessories (Continued)

Keying Plugs

Note: Removal of contact is not necessary when using keying plug.

Loose Piece

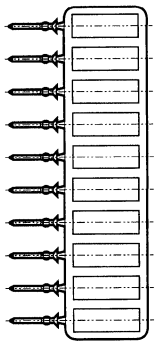
Part No. 640629-1 (Flush)
Used with keyed headers



Part No. 640630-1 (Long Nose)
Used with staked post

On Carrier Strip

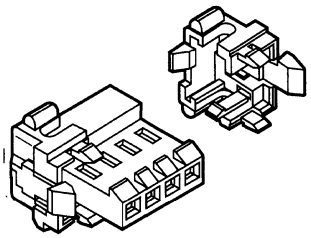
Part No. 641623-1 (Flush)
(10 per strip)



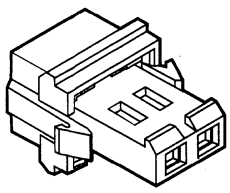
Panel Mount End Caps

Part No. 641440-1
Part No. 641533-1
(2-position only)

Notes:
1. Both left-hand and right-hand end caps are attached by a connecting tab. This tab must be broken off prior to installing on connector.
2. For best results attach panel mount end caps to the MTA-156 (IDC) connectors shown on Pages 3245-3248. While not preferred, panel mount end caps can be attached to MTA-156 (IDC) posted connectors on Page 3256



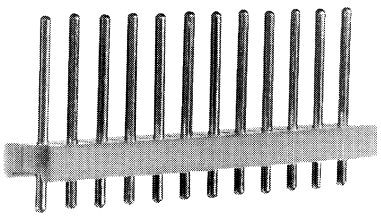
3- thru 24-Position
Part No. 641440-1
See Note 1



Two-Position Only
Part No. 641533-1

MTA-156 Flat Headers—Straight

Mates with—MTA-156 IDC Connectors, Pages 3245-3248; MTA-156 IDC Quad Connectors, Page 3255; and SL-156 Housings, Page 3259



Note: 13 Pos. Housing Dim. (Typ.)—2.028 [51.51] L; Post Length—.450 [11.43]; Solder Tail Length—.125 [3.18]

No. of Pos.	Part Numbers		
	Tin		.000030 [0.00076] Gold
	Sq. Posts	Round Posts	Sq. Posts
2	640383-2	640384-2	641202-2
3	640383-3	640384-3	641202-3
4	640383-4	640384-4	641202-4
5	640383-5	640384-5	641202-5
6	640383-6	640384-6	641202-6
7	640383-7	640384-7	641202-7
8	640383-8	640384-8	641202-8
9	640383-9	640384-9	641202-9
10	1-640383-0	1-640384-0	1-641202-0
11	1-640383-1	1-640384-1	1-641202-1
12	1-640383-2	1-640384-2	1-641202-2
13	1-640383-3	1-640384-3	—

No. of Pos.	Part Numbers		
	Tin		.000030 [0.00076] Gold
	Sq. Posts	Round Posts	Sq. Posts
14	1-640383-4	1-640384-4	—
15	1-640383-5	1-640384-5	—
16	1-640383-6	1-640384-6	—
17	1-640383-7	—	—
18	1-640383-8	—	—
19	1-640383-9	—	—
20	2-640383-0	—	—
21	2-640383-1	—	—
22	2-640383-2	—	—
23	2-640383-3	—	—
24	2-640383-4	—	—

Notes: 1. Post(s) can be omitted for keying purposes. Specify the desired post(s) to be omitted
2. Headers with .000015 [0.00038] gold plated post are available upon request. Minimum may apply.
3. Other circuit sizes are available upon request. Minimums may apply.

SOURCE: Catalog 82056

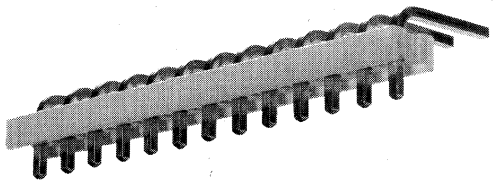
Specifications subject to change.

1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

MTA-156 Flat Headers—Right-Angle

Mates with—MTA-156 IDC Connectors, Pages 3245-3248; MTA-156 IDC Quad Connectors, Page 3255; and SL-156 Housings, Page 3259



Note: 13 Pos. Housing Dim. (Typ.)—2.028 [51.51] L; Post Length—.390 [9.91]; Solder Tail Length—.125 [3.18]

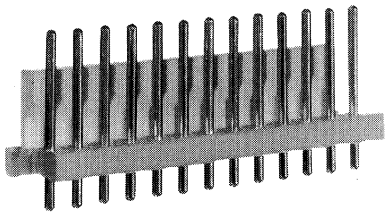
No. of Pos.	Part Numbers	
	Tin Sq. Posts	.000030 [0.00076] Gold Sq. Posts
2	640385-2	641204-2
3	640385-3	641204-3
4	640385-4	641204-4
5	640385-5	641204-5
6	640385-6	641204-6
7	640385-7	641204-7
8	640385-8	641204-8
9	640385-9	641204-9
10	1-640385-0	1-641204-0
11	1-640385-1	1-641204-1
12	1-640385-2	1-641204-2
13	1-640385-3	—

No. of Pos.	Part Numbers	
	Tin Sq. Posts	.000030 [0.00076] Gold Sq. Posts
14	1-640385-4	—
15	1-640385-5	—
16	1-640385-6	—
17	1-640385-7	—
18	1-640385-8	—
19	1-640385-9	—
20	2-640385-0	—
21	2-640385-1	—
22	2-640385-2	—
23	2-640385-3	—
24	2-640385-4	—

Notes:
1. Post(s) can be omitted for keying purposes. Specify the desired post(s) to be omitted.
2. Headers with .000015 [0.00038] gold plated post are available upon request. Minimums may apply.
3. Other circuit sizes are available upon request. Minimums may apply.

MTA-156 Friction Lock Headers—Straight

Mates with—For retention purposes use MTA-156 IDC Connectors with Locking Ramps, Pages 3245-3248; MTA-156 IDC Quad Connectors, Page 3255; and SL-156 Housings with Locking Ramps, Page 3259. For polarization purposes use MTA-156 IDC Connectors without Locking Ramps, Pages 3245-3248; and SL-156 Housings without Locking Ramps, Page 3259



Note: 13 Pos. Housing Dim. (Typ.)—2.028 [51.51] L; Post Length—.450 [11.43]; Solder Tail Length—.125 [3.18]

No. of Pos.	Part Numbers			
	Tin		.000030 [0.00076] Gold	
	Sq. Posts	Rd. Posts	Sq. Posts	Rd. Posts
2	640445-2	640388-2	641208-2	641209-2
3	640445-3	640388-3	641208-3	641209-3
4	640445-4	640388-4	641208-4	641209-4
5	640445-5	640388-5	641208-5	641209-5
6	640445-6	640388-6	641208-6	641209-6
7	640445-7	640388-7	641208-7	641209-7
8	640445-8	640388-8	641208-8	641209-8
9	640445-9	640388-9	641208-9	641209-9
10	1-640445-0	1-640388-0	1-641208-0	1-641209-0
11	1-640445-1	1-640388-1	1-641208-1	1-641209-1
12	1-640445-2	1-640388-2	1-641208-2	1-641209-2
13	1-640445-3	1-640388-3	1-641208-3	—

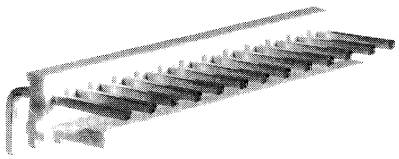
No. of Pos.	Part Numbers			
	Tin		.000030 [0.00076] Gold	
	Sq. Posts	Rd. Posts	Sq. Posts	Rd. Posts
14	1-640445-4	1-640388-4	1-641208-4	—
15	1-640445-5	1-640388-5	1-641208-5	—
16	1-640445-6	1-640388-6	1-641208-6	—
17	1-640445-7	1-640388-7	1-641208-7	—
18	1-640445-8	1-640388-8	1-641208-8	—
19	1-640445-9	1-640388-9	1-641208-9	—
20	2-640445-0	2-640388-0	2-641208-0	—
21	2-640445-1	2-640388-1	2-641208-1	—
22	2-640445-2	2-640388-2	2-641208-2	—
23	2-640445-3	2-640388-3	2-641208-3	—
24	2-640445-4	2-640388-4	2-641208-4	—

Notes:
1. Post(s) can be omitted for keying purposes. Specify the desired post(s) to be omitted.
2. Headers with .000015 [0.00038] gold plated post are available upon request. Minimums may apply.
3. Other circuit sizes are available upon request. Minimums may apply.

SOURCE: Catalog 82056

MTA-156 Friction Lock Headers—Right-Angle

Mates with—For retention purposes Front Bend Header use MTA-156 IDC Connectors with Locking Ramps, Pages 3245-3248; MTA-156 IDC Quad Connectors, Page 3255; and SL-156 Housing with Locking Ramps, Page 3259. Rear Bend Headers use MTA-156 IDC Connectors without Locking Ramps, Pages 3245-3248 and SL-156 Housings without Locking Ramps, Page 3259



Note: 13 Pos. Housing Dim. (Typ.)—2.028 [51.51] L; Post Length—.450 [11.43]; Solder Tail Length—.125 [3.18]

No. of Pos.	Square Post Part Numbers			
	Front Bend		Rear Bend	
	Tin	.000030 [0.00076] Gold	Tin	.000030 [0.00076] Gold
2	640389-2	641210-2	640387-2	641207-2
3	640389-3	641210-3	640387-3	641207-3
4	640389-4	641210-4	640387-4	641207-4
5	640389-5	641210-5	640387-5	641207-5
6	640389-6	641210-6	640387-6	641207-6
7	640389-7	641210-7	640387-7	641207-7
8	640389-8	641210-8	640387-8	641207-8
9	640389-9	641210-9	640387-9	641207-9
10	1-640389-0	1-641210-0	1-640387-0	1-641207-0
11	1-640389-1	1-641210-1	1-640387-1	1-641207-1
12	1-640389-2	1-641210-2	1-640387-2	1-641207-2
13	1-640389-3	1-641210-3	1-640387-3	—
14	1-640389-4	1-641210-4	1-640387-4	—
15	1-640389-5	1-641210-5	1-640387-5	—
16	1-640389-6	1-641210-6	1-640387-6	—
17	1-640389-7	1-641210-7	1-640387-7	—
18	1-640389-8	1-641210-8	1-640387-8	—
19	1-640389-9	1-641210-9	1-640387-9	—
20	2-640389-0	2-641210-0	2-640387-0	—
21	2-640389-1	2-641210-1	2-640387-1	—
22	2-640389-2	2-641210-2	2-640387-2	—
23	2-640389-3	2-641210-3	2-640387-3	—
24	2-640389-4	2-641210-4	2-640387-4	—

Notes:
1. Post(s) can be omitted for keying purposes. Specify the desired post(s) to be omitted.
2. Headers with .000015 [0.00038] gold plated post are available upon request. Minimums may apply.
3. Other circuit sizes are available upon request. Minimums may apply.

MTA-156 Polarized Lock Headers—Straight

Mates with—For retention purposes use MTA-156 IDC Connectors with Locking Ramps, Pages 3245-3248; MTA-156 IDC Quad Connectors, Page 3255 and SL-156 Housings with Locking Ramps, Page 3259. For polarization purposes use MTA-156 IDC Connectors without Locking Ramps, Pages 3245-3248; and SL-156 Housings without Locking Ramps, Page 3259

Note: 4 Pos. Housing Dim. (Typ.)— .619 [15.72] L; Post Length—.450 [11.43]; Solder Tail Length—.125 [3.18]

No. of Circuits	.045 Square Post Part Numbers				.045 Round Post Part Numbers			
	Tin		.000030 [0.00076] Gold		Tin		.000030 [0.00076] Gold	
	With Pegs	Without Pegs	With Pegs	Without Pegs	With Pegs	Without Pegs	With Pegs	Without Pegs
2	644615-2	644611-2	644631-2	644627-2	644616-2	644612-2	644632-2	644628-2
3	644615-3	644611-3	644631-3	644627-3	644616-3	644612-3	644632-3	644628-3
4	644615-4	644611-4	644631-4	644627-4	644616-4	644612-4	644632-4	644628-4
5	644615-5	644611-5	644631-5	644627-5	644616-5	644612-5	644632-5	644628-5

Notes:
1. Post(s) can be omitted for keying purposes. Specify the desired post(s) to be omitted.
2. Peg holes are not required in Pc Board when headers without pegs are used.
3. One peg only on a 2 position header, other position sizes have two pegs.
4. Headers with .000015 [0.00038] gold plated post are available upon request. Minimums may apply.

SOURCE: Catalog 82056

Specifications subject to change.

1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

MTA-156 Polarized Lock Headers—Right-Angle

Mates with—For retention purposes use MTA-156 IDC Connectors with Locking Ramps, Pages 3245-3248; MTA-156 IDC Quad Connectors, Page 3255; and SL-156 Housings with Locking Ramps, Page 3259. For polarization purposes use MTA-156 IDC Connectors without Locking Ramps, Pages 3245-3248; and SL-156 Housings without Locking Ramps, Page 3259

Note: 5 Pos. Housing Dim. (Typ.)—.775 [19.69] L; Post Length—.450 [11.43]; Solder Tail Length—.125 [3.18]

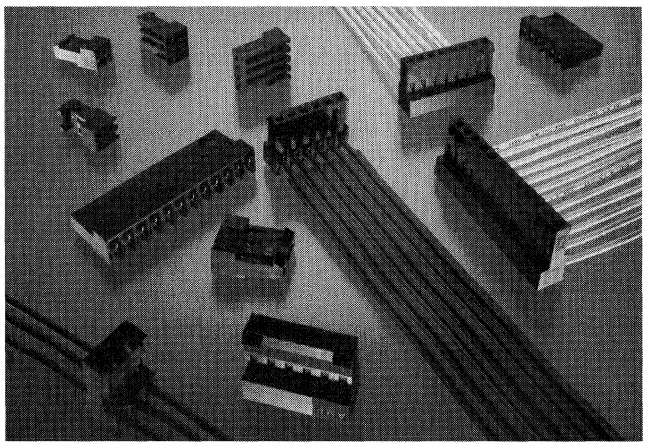
No. of Circuits	Front Bend Part Numbers				Rear Bend Part Numbers	
	Tin		.000030 [0.00076] Gold		Tin	.000030 [0.00076] Gold
	With Pegs	Without Pegs	With Pegs	Without Pegs	Without Pegs Only	Without Pegs
2	644617-2	644613-2	644633-2	644629-2	644614-2	644630-2
3	644617-3	644613-3	644633-3	644629-3	644614-3	644630-3
4	644617-4	644613-4	644633-4	644629-4	644614-4	644630-4
5	644617-5	644613-5	644633-5	644629-5	644614-5	644630-5

Notes:
1. Post(s) can be omitted for keying purposes. Specify the desired post(s) to be omitted.
2. Peg holes are not required in Pc Board when headers without pegs are used.
3. One peg only on a 2 position header, other position sizes have two pegs.
4. Headers with .000015 [0.00038] gold plated post are available upon request. Minimums may apply.

MTA-156 IDC Quad Connectors

Product Facts

- **Provides four points of contact**
- **Greater current carrying capability**
- **Connector styles include both closed end and feed-thru with locking ramp, with and without polarizing tabs in 2 through 12 positions**
- **Available for wire ranges of 18–22 AWG [0.9–0.3 mm²]**
- **Contacts are lubricated to prevent fretting corrosion**
- **Complies with AMP Specification 109-151, "Current Rating Verification"**
- **Uses existing MTA application tooling for termination**
- **Recognized under the Component Program of Underwriters Laboratories Inc., File No. E28476**
- **Certified by Canadian Standards Association, File No. LR 7189**
- **Satisfies the VDE requirements according to VDE 110, Insulation Group B, 250 vac for air and creepage paths**



The MTA-156 Quad Connector provides a connection with four points of contact. The UL 94V-0 rated connector with multi-point contacts provides greater current carrying capability. These connectors comply with AMP Specification 109-151 and satisfy the VDE requirements according to VDE 110.

The connectors are available for wire ranges of 18–22 AWG [0.9–0.3 mm²] and in a variety of styles including closed end and feed-thru with locking ramp, with and without polarizing tabs.

The MTA-156 Quad Connectors only mate with standard MTA-156 square post headers and use existing MTA application tooling for termination.

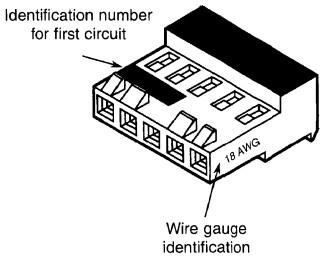
SOURCE: Catalog 82056

MTA-156 IDC Quad Connectors

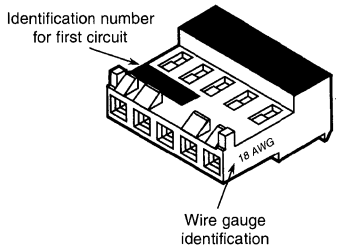
Closed End with Locking Ramp

Mates with—MTA-156 Flat, Straight Friction Lock and Straight Polarized Lock Headers, Pages 3251-3253; MTA-156 Front Bend Friction Lock and Polarized Lock Headers, Pages 3253-3254. Mates with tin-plated square posts only.

Without Polarizing Tabs



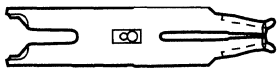
With Polarizing Tabs



Note: 7 Pos. Housing Dim. (Typ.)—1.092 [27.74] L x .730 [18.54] W x .355 [9.02] H

No. of Circuits	Without Polarizing Tabs			With Polarizing Tabs		
	18 AWG [0.8-0.9 mm²]	20 AWG [0.5-0.6 mm²]	22 AWG [0.3-0.4 mm²]	18 AWG [0.8-0.9 mm²]	20 AWG [0.5-0.6 mm²]	22 AWG [0.3-0.4 mm²]
2	644329-2	644370-2	644371-2	644381-2	644382-2	644383-2
3	644329-3	644370-3	644371-3	644381-3	644382-3	644383-3
4	644329-4	644370-4	644371-4	644381-4	644382-4	644383-4
5	644329-5	644370-5	644371-5	644381-5	644382-5	644383-5
6	644329-6	644370-6	644371-6	644381-6	644382-6	644383-6
7	644329-7	644370-7	644371-7	644381-7	644382-7	644383-7
8	644329-8	644370-8	644371-8	644381-8	644382-8	644383-8
9	644329-9	644370-9	644371-9	644381-9	644382-9	644383-9
10	1-644329-0	1-644370-0	1-644371-0	1-644381-0	1-644382-0	1-644383-0
11	1-644329-1	1-644370-1	1-644371-1	1-644381-1	1-644382-1	1-644383-1
12	1-644329-2	1-644370-2	1-644371-2	1-644381-2	1-644382-2	1-644383-2

Replacement IDC Contacts



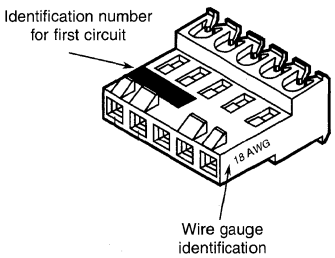
Wire Size AWG	Wire Size mm²	Part Numbers
18	0.8-0.9	644508-1
20	0.5-0.6	644509-1
22	0.3-0.4	644510-1

Note: AMP does not recommend terminating an MTA contact more than one time. Use replacement contacts when required for field repairs or wire gauge changes.

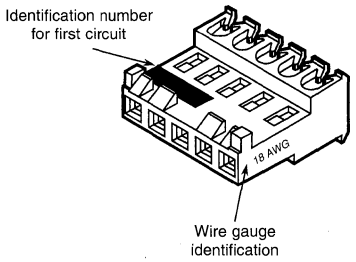
Feed-Thru with Locking Ramp

Mates with—MTA-156 Flat, Straight Friction Lock and Straight Polarized Lock Headers, Pages 3251-3253; MTA-156 Front Bend Friction Lock and Polarized Lock Headers, Pages 3253-3254. Mates with tin-plated square posts only.

Without Polarizing Tabs



With Polarizing Tabs



Note: 7 Pos. Housing Dim. (Typ.)—1.092 [27.74] L x .730 [18.54] W x .385 [9.78] H

No. of Circuits	Without Polarizing Tabs			With Polarizing Tabs		
	18 AWG [0.8-0.9 mm²]	20 AWG [0.5-0.6 mm²]	22 AWG [0.3-0.4 mm²]	18 AWG [0.8-0.9 mm²]	20 AWG [0.5-0.6 mm²]	22 AWG [0.3-0.4 mm²]
2	644375-2	644376-2	644377-2	644387-2	644388-2	644389-2
3	644375-3	644376-3	644377-3	644387-3	644388-3	644389-3
4	644375-4	644376-4	644377-4	644387-4	644388-4	644389-4
5	644375-5	644376-5	644377-5	644387-5	644388-5	644389-5
6	644375-6	644376-6	644377-6	644387-6	644388-6	644389-6
7	644375-7	644376-7	644377-7	644387-7	644388-7	644389-7
8	644375-8	644376-8	644377-8	644387-8	644388-8	644389-8
9	644375-9	644376-9	644377-9	644387-9	644388-9	644389-9
10	1-644375-0	1-644376-0	1-644377-0	1-644387-0	1-644388-0	1-644389-0
11	1-644375-1	1-644376-1	1-644377-1	1-644387-1	1-644388-1	1-644389-1
12	1-644375-2	1-644376-2	1-644377-2	1-644387-2	1-644388-2	1-644389-2

SOURCE: Catalog 82056

Specifications subject to change.

1-800-522-6752
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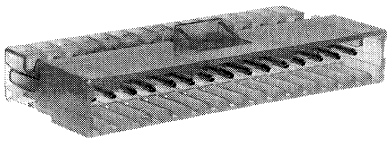
1-800-722-1111
Tooling/Technical Assistance Center

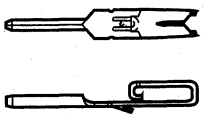
MTA-156 IDC Posted Connectors (Wire-to-Wire)

Closed End

Mates with—MTA-156 IDC Connectors with Locking Ramps without Polarizing Tabs, Pages 3245-3248



Replacement IDC Contacts



Wire Size		Part Numbers
AWG	mm²	
18	0.8-0.9	641425-1
20	0.5-0.6	641426-1
22	0.3-0.4	641427-1
24	0.2	641428-1

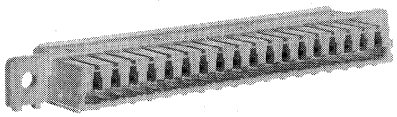
Note: 9 Pos. Housing Dim. (Typ.)—1.560 [39.62] L x 1.010 [25.65] W x .487 [12.37] H

No. of Circuits	18 AWG (Orange) [0.8-0.9 mm²]	20 AWG (Yellow) [0.5-0.6 mm²]	22 AWG (Red) [0.3-0.4 mm²]	24 AWG (Natural) [0.2 mm²]
2	641435-2	641436-2	641437-2	641438-2
3	641435-3	641436-3	641437-3	641438-3
4	641435-4	641436-4	641437-4	641438-4
6	641435-6	641436-6	641437-6	641438-6
9	641435-9	641436-9	641437-9	641438-9
12	1-641435-2	1-641436-2	1-641437-2	1-641438-2
15	1-641435-5	1-641436-5	1-641437-5	1-641438-5
24	2-641435-4	2-641436-4	2-641437-4	2-641438-4

Note: Refer to Page 3260 for approved wire listing.

MTA-156 IDC Card Edge Connectors

Closed End



With Mounting Ears

Note: 18 Pos. Housing Dim. (Typ.)— 3.588 [91.14] L x .677 [17.20] W x .440 [11.18] H

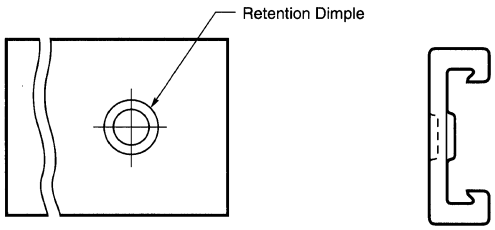
No. of Circuits	With Mounting Ears		Without Mounting Ears
	18 AWG (Orange) [0.8-0.9 mm²]	24 AWG (Natural) [0.2 mm²]	22 AWG (Red) [0.3-0.4 mm²]
3	640864-3	640867-3	640861-3
6	640864-6	640867-6	640861-6
9	640864-9	640867-9	640861-9
12	1-640864-2	1-640867-2	1-640861-2
15	1-640864-5	1-640867-5	1-640861-5
18	1-640864-8	1-640867-8	1-640861-8
20	2-640864-0	2-640867-0	2-640861-0
21	2-640864-1	2-640867-1	2-640861-1
22	2-640864-2	2-640867-2	2-640861-2
23	2-640864-3	2-640867-3	2-640861-3
24	2-640864-4	2-640867-4	2-640861-4

Note: Refer to page 3260 for approved wire listing.

SOURCE: Catalog 82056

MTA-156 Card Edge Connector Accessories

Dust Cover

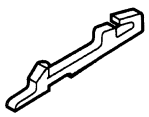


Note: 18 Pos. Housing Dim. (Typ.)— 2.844 [72.24] L x .530 [13.46] W x .130 [3.3] H

No. of Circuits	Part Numbers
3	641106-3
6	641106-6
9	641106-9
12	1-641106-2
15	1-641106-5
18	1-641106-8

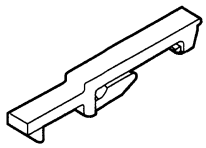
No. of Circuits	Part Numbers
20	2-641106-0
21	2-641106-1
22	2-641106-2
23	2-641106-3
24	2-641106-4

Locking and Keying Plug



Part Number 641101-1

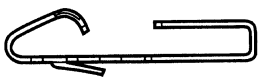
Note: Contact must be removed to install locking plug.



Part Number 641293-1

Note: Contact can remain during locking plug installation.

Replacement IDC Contacts

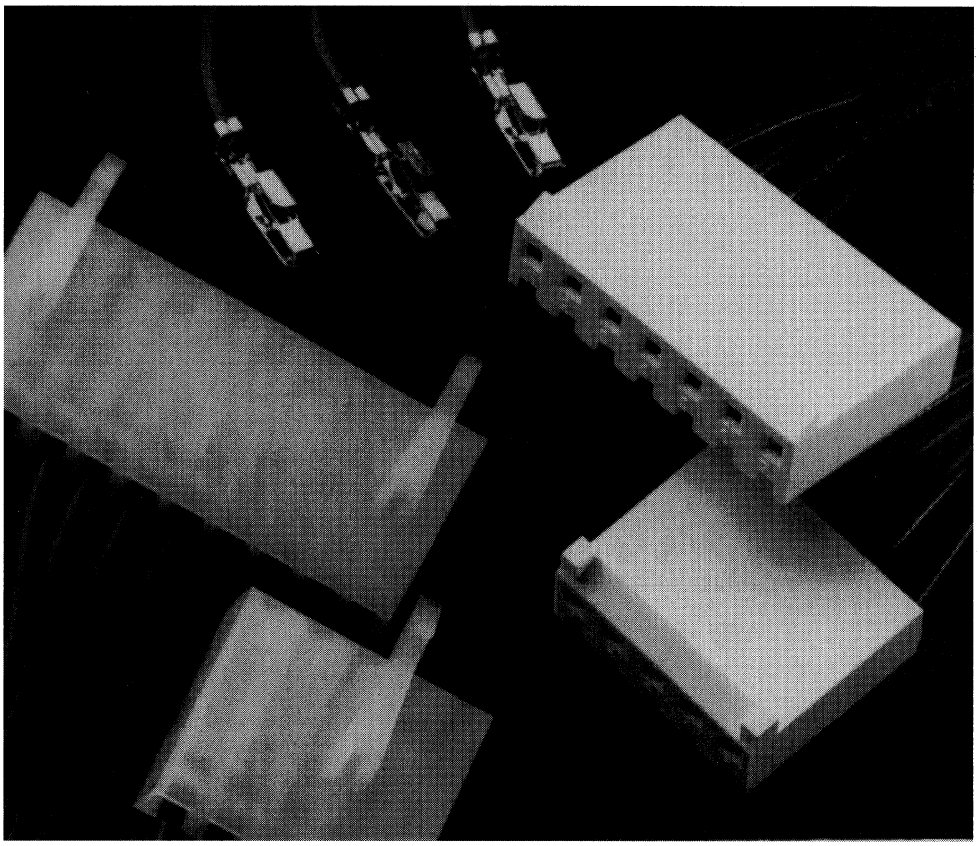


Part Number 640991-1 (18 AWG [0.8-0.9 mm²])
Part Number 640993-1 (22 AWG [0.3-0.4 mm²])
Part Number 640994-1 (24 AWG [0.2 mm²])

SOURCE: Catalog 82056

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

.156 [3.96] Centerline SL-156 Crimp Contacts and Housings



Product Facts

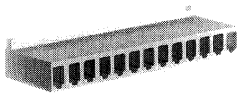
- **Rugged wire-to-board interconnection to mate with .045 [1.14] square or round post headers or staked posts on .156 [3.96] centers**
- **Connectors accept wire range of 18–24 AWG [0.9–0.2 mm²]**
- **Two-piece interconnection system (connector/header)**
- **Housing made of flame retardant 6/6 nylon**
- **Available in 1- through 24-position connector configurations**
- **Connectors are end-to-end stackable**
- **Wire-to-board system offers polarization with friction lock for positive mating**
- **Meets the material requirements of Table 23.1 of UL 1410 Standard for High-Voltage Television Receivers and Video Productions**
- **Recognized under the Component Program of Underwriters Laboratories Inc., File No. E28476**
- **Certified by Canadian Standards Association, File No. LR7189**

The AMP SL-156 connectors shown on the following pages are designed to mate with .045 [1.14] square or round post headers or staked posts on .156 [3.96] centers.

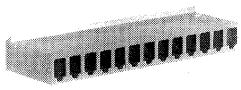
The wire-to-board connector is a two-piece connector system with the wire crimped to the contact, then inserted into the housing. This product mates with the MTA-156 flat and friction lock header, or staked posts.

SL-156 Housings—Wire-to-Board

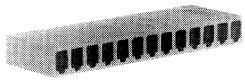
Mates with—For Housings with Locking Ramp—MTA-156 Flat, Straight Friction Lock and Straight Polarized Lock Headers, Pages 3251-3253; and MTA-156 Front Bend Friction Lock and Polarized Lock Headers, Pages 3253-3254. For Housings without Locking Ramp—MTA-156 Flat, Friction Lock and Polarized Lock Headers, Pages 3251-3254



With Locking Ramp/ With Polarizing Tabs



With Locking Ramp/ Without Polarizing Tabs



Without Locking Ramp/ Without Polarizing Tabs

Note: 13 Pos. Housing Dim. (Typ.)—2.027 [51.49] L x .660 [16.76] W x .250 [6.35] H

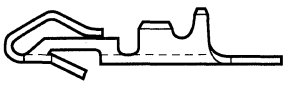
No. of Pos.	With Ramp/ With Tabs	With Ramp/ Without Tabs	Without Ramp/ Without Tabs
1	—	640250-1	640251-1
2	770849-2	640250-2	640251-2
3	770849-3	640250-3	640251-3
4	770849-4	640250-4	640251-4
5	770849-5	640250-5	640251-5
6	770849-6	640250-6	640251-6
7	770849-7	640250-7	640251-7
8	770849-8	640250-8	640251-8
9	770849-9	640250-9	640251-9
10	1-770849-0	1-640250-0	1-640251-0
11	1-770849-1	1-640250-1	1-640251-1
12	1-770849-2	1-640250-2	1-640251-2

No. of Pos.	With Ramp/ With Tabs	With Ramp/ Without Tabs	Without Ramp/ Without Tabs
13	1-770849-3	1-640250-3	1-640251-3
14	1-770849-4	1-640250-4	1-640251-4
15	1-770849-5	1-640250-5	1-640251-5
16	1-770849-6	1-640250-6	1-640251-6
17	1-770849-7	1-640250-7	1-640251-7
18	1-770849-8	1-640250-8	1-640251-8
19	1-770849-9	1-640250-9	1-640251-9
20	2-770849-0	2-640250-0	2-640251-0
21	2-770849-1	2-640250-1	2-640251-1
22	2-770849-2	2-640250-2	2-640251-2
23	2-770849-3	2-640250-3	2-640251-3
24	2-770849-4	2-640250-4	2-640251-4

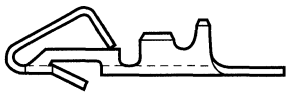
Notes:
1. Accepts either .045 [1.14] square or round posts. Housings mate with flat and friction lock headers, or staked posts on .156 [3.96] centers.
2. Housing without ramp, with polarizing tab, available upon request. Minimums may apply.
3. Recommend contact: **Part No. 640252** for 1 thru 12 positions; **Part No. 350980** for 13 thru 24 positions; **Part No. 770476** for 1 thru 24 positions.

SL-156 Crimp Contacts and Keying Plugs

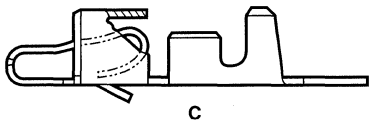
Contacts



A
High Force
(6.5 amp Max. Current Rating)



B
Low Force
(6.5 amp Max. Current Rating)



C
Hooded (Dual Wipe)
(10 amp Max. Current Rating)

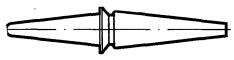
Notes:
1. All tin-plated contacts are post lubricated to resist fretting corrosion.
2. Maximum insulation diameter is .110 [2.79].
3. Wire range is 18-24 AWG [0.9-0.2 mm²].

Contact Style	Material and Finish	Part Numbers	
		Strip	Loose Piece
A	Brass, bright tin plated	640252-1	640706-1
	Brass, pre-tin plated	640252-2	640706-2
B	Brass, bright tin plated	350980-1	640707-1
	Brass, pre-tin plated	350980-2	—
	Brass, gold plated	350980-3	770258-1
C	Phosphor bronze, bright tin plated	770476-1	770522-1
	Phosphor bronze, gold plated	770476-2	770522-2

Hand Tool **Part No. 90123-2** for .060-.110 [1.52-2.79] insulation diameter range
Hand Tool **Part No. 90123-5** for .043-.075 [1.09-1.91] insulation diameter range
Extraction Tool **Part No. 90471-1**

Keying Plugs

Keying Plug
Part No. 640254-1



Keying Pin
Part No. 640255-1

SOURCE: Catalog 82056

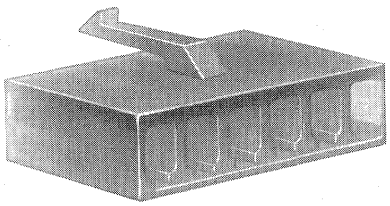
Specifications subject to change.

1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

SL-156 Housings With Through Board Latch

Mates with—.045 [1.14]
Square or Round Staked Posts Only



Note: 6 Pos. Housing Dim. (Typ.)—.936 [23.77] L x .660 [16.76] W x .250 [6.35] H

No. of Pos.	Latch Location Centered Between Pos.	Part Number
2	1 and 2	770894-2
3	1 and 2	770894-3
4	2 and 3	770894-4
5	2 and 3	770894-5
6	3 and 4	770894-6
7	3 and 4	770894-7
8	4 and 5	770894-8
9	1 and 2 & 8 and 9	770894-9
10	1 and 2 & 9 and 10	1-770894-0

Discrete Wire Selection

Critical to the success of a wire-to-board application is the proper wire selection. The chart identifies wires that have been evaluated and approved by the product engineering section. If you plan to use a wire not on the approved list, please submit a sample 12" length of wire to AMP for evaluation.

AWG Metric Equivalents

18—0.8-0.9 mm²
20—0.5-0.6 mm²
22—0.3-0.4 mm²
24—0.2 mm²
26—0.12-0.15 mm²
28—0.08-0.09 mm²

MTA Connectors Approved Wire Listing

MTA-100 Connectors	Wall Thickness	Approved Wire AWG
UL 1007 PVC Insulation	**.015** [0.381]	22, 24, 26, 28
UL 1061 Semi-Rigid PVC Insulation	**.009** [0.229]	22, 24, 26, 28
UL 1095 Semi-RIgid PVC Insulation	**.012** [0.305]	24
UL 1371 TEFLON Insulation—TFE	**.006** [0.152]	22, 26
UL 1429 Irradiated PVC—X.L.P.V.C.	**.010** [0.254]	22, 24, 26, 28
UL 1569 PVC Insulation	**.015** [0.381]	24
UL 2464 PVC	**.013** [0.330]	24
UL 3265 Irradiated Polyethylene—X.L.P.E.	**.010** [0.254]	22
UL 3266 Irradiated Polyethylene—X.L.P.E.	**.015** [0.381]	22
MIL-W-16878, Type B-PVC Insulation	**.010** [0.254]	22
UL 1213 TEFLON Insulation—T.F.E	**.010** [0.254]	22
MTA-156 Connectors		
UL 1007 PVC Insulation	**.015** [0.381]	18, 20, 22, 24
UL 1061 Semi-Rigid PVC Insulation	**.009** [0.229]	18, 20, 22, 24
UL 1180 TEFLON Insulation—T.F.E.	**.015** [0.381]	22
UL 1213 TEFLON Insulation—T.F.E.	**.010** [0.254]	18, 22
UL 1316 PVC/Nylon Wall	**.015** [0.381]	18
UL 1429 Irradiated PVC—X.L.P.V.C.	**.010** [0.254]	18
UL 1430 Irradiated PVC—X.L.P.V.C.	**.015** [0.381]	18, 20, 22
UL 1569 PVC	**.015** [0.381]	18
UL 3266 Irradiated Polyethylene—X.L.P.E	**.015** [0.381]	18, 20, 22

Note: When selecting approved wire styles noted on this list, the MTA Application Specifications guidelines must be followed. Also, due to wire variations in insulation wall thickness, hardness and wire stranding, we would recommend evaluating the wire selection before final application approval.

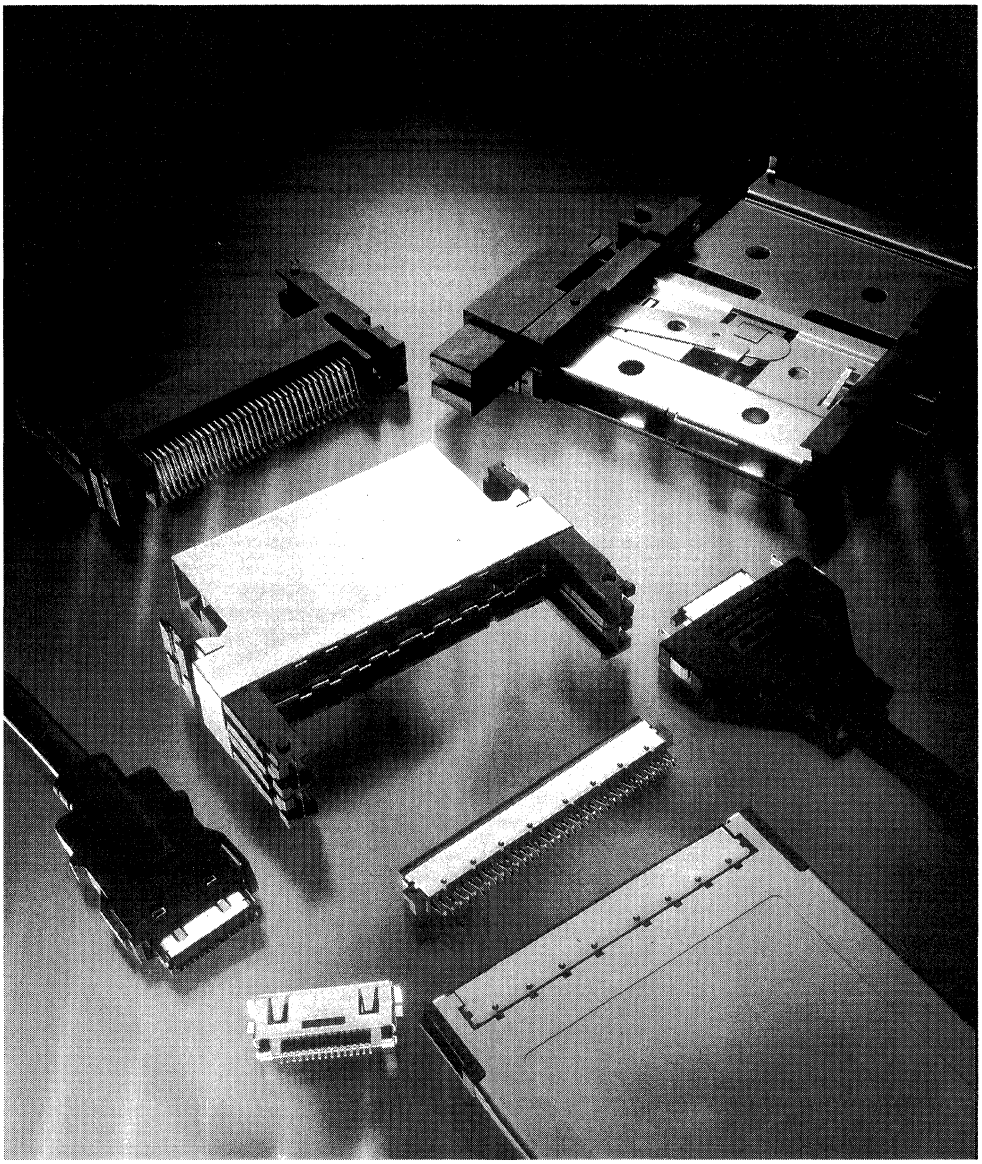
SOURCE: Catalog 82056

PC Card Connectors

METRIC

Product Facts

- Compatible with PCMCIA, Release 2.01 and JEIDA, Release 4.1 Standards
- Pin headers and ejectors accept Types I, II and III memory cards
- 68-position pin headers available in standard and raised profiles, with through-hole and surface-mount lead configurations for top or bottom attachment to host PC board
- 88-position pin headers available in standard profile, with surface-mount lead configuration
- Stacked standard and stacked raised profile pin headers (136 positions) available
- Guide rails and card guide assemblies available for standard, raised and stacked standard profile pin headers
- Ejectors may be purchased separately, or assembled to pin headers
- 68-position receptacle assemblies available with surface-mount or straddle-mount lead configurations
- 88-position receptacle assemblies available with straddle-mount lead configuration
- Surface-mount receptacle assembly leads offset 0.4 [.016] and 0.15 [.006] from connector centerline
- Standard PCMCIA polarized keying
- Type II unshielded frame kits (1.27 [.050] centerline) designed for Type II PCMCIA memory card applications
- Type I and Type II shielded frame kits (0.8 [.031] centerline) designed for PCMCIA PC card LAN applications
- Two-piece, insert molded frame kit design permits easy assembly and capability of being removed, repaired and reused
- Physical contact between top and bottom stainless steel covers of frame kit permit internal grounding to PC board
- INFOPORT Series I I/O connectors available in 9- and 15-position sizes



- INFOPORT Series II (shielded) I/O connectors available in 15- and 33-position sizes
- INFOPORT Series III (shielded) I/O connectors available in 15-position sizes
- Recognized under the Component Program of Underwriters Laboratories Inc.,* File No. E28476
- Certified by Canadian Standards Association,* File No. LR7189

*Certain products are pending or not applicable, as noted.

SOURCE: Catalog 65701

Specifications subject to change.

1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

PC Card Connectors
Introduction

METRIC

AMP Incorporated offers a versatile family of connectors that accept Type I, II and III memory cards. These connectors are compatible with PCMCIA (Personal Computer Memory Card International Association), Release 2.01 and JEIDA (Japan Electronics Industry Development Association), Release 4.1 standards.

68-Position Receptacle Assemblies

These receptacle assemblies attach to a PC card and feature high-temperature, reflow process compatibility for surface or straddle mounting. The receptacle contacts are designed with dual contact beams for reliable electrical performance. These receptacles find wide application in memory cards (SRAM, DRAM, Flash), PC cards, Modem and Lan I/O kits and Imaging Systems.

88-position receptacle assemblies are also available with a straddle-mount lead configuration.

68-Position Pin Headers

Right-angle pin headers, available in standard, raised and stacked standard profiles, provide attachment to the host equipment and feature three levels of sequencing. Both standard and raised profile pin headers offer through-hole and surface-mount lead configurations for top or bottom mounting. Stacked standard profile pin headers permit 136 circuit connections with through-hole lead configurations for top mounting. An organizer on the 68- and 136-position headers and 4-sided post lead-in aids in the placement of the headers on the PC board. The true position of the leads is held to 0.30 [.012]. This allows a small hole size, 0.84 [.033], to be used in the PC pattern, which gives the designer flexibility in routing signal paths. Guide rails facilitate the insertion and removal of the memory cards. Pin headers find wide use in such equipment as: computer, office, photographic, communications, industrial, test and medical, and pay TV/satellite.

88-position pin headers are also available in standard profile, with surface-mount lead configurations.

Ejectors

Ejectors facilitate the insertion and extraction of memory cards. They provide ESD/EMI protection and are available with eject buttons on either side. Ejectors are furnished to accommodate standard, raised and stacked standard profile pin headers and may be purchased separately, or assembled to the pin headers. They are designed to be easily added to the pin headers after PC board processing.

Frame Kits

Frame kits feature a two-piece, snap-together design that eliminates the need for adhesives and provides the capability of being removed, repaired and reused. The stainless steel top and bottom covers, when assembled, make physical contact with each other and can be internally grounded to the PC board. Frame kits are available in industry standard keying configurations. The covers may be custom silk screened, or a label may be applied in the recess area.

Unshielded frame kits are available as Type II kits with a 1.27 [.050] centerline. They will accommodate a standard 68-position PCMCIA receptacle assembly and a 9- or 15-position I/O receptacle assembly to mate with a cable connector.

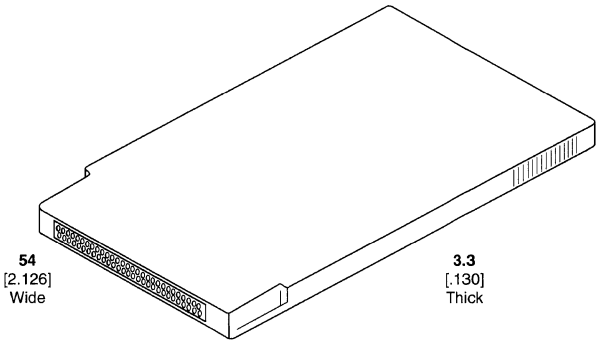
Shielded frame kits are available as Type I or Type II kits with a 0.8 [.031] centerline and are designed for I/O and LAN applications requiring shielded connectors. External shielding and a shielded header offer ESD protection. Also, the frame kits are compatible with PCMCIA grounded ejector headers.

Shielded frame kits are compatible with the standard 68-position PCMCIA receptacle assembly and will accommodate shielded I/O connectors. They will accept a 15- or 33-position right-angle, surface-mount I/O header to mate with a shielded cable connector. The single-row, all-plastic header employs doubleleaf spring contacts to provide a rugged, reliable interface. Headers are keyed for correct mating.

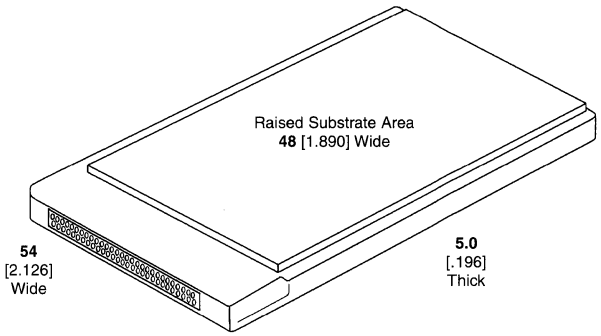
Cable connectors are capable of accommodating various conductor sizes and are available with either plastic or metal latches.

PCMCIA Card Types

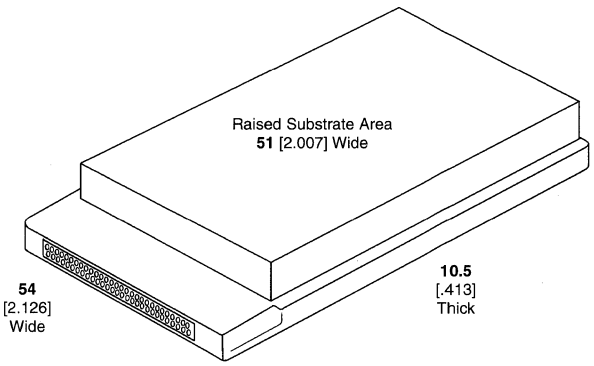
METRIC



Type I Memory Card



Type II Memory Card



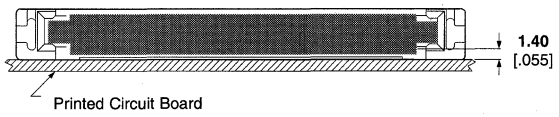
Type III Memory Card

SOURCE: Catalog 65701

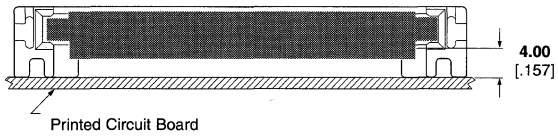
Specifications subject to change.
1-800-522-6752 Product Information Center/ AMP FAX Service
1-800-722-1111 Tooling/Technical Assistance Center

METRIC

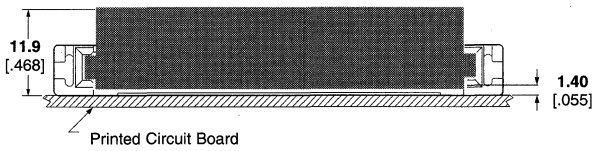
Pin Header Applications



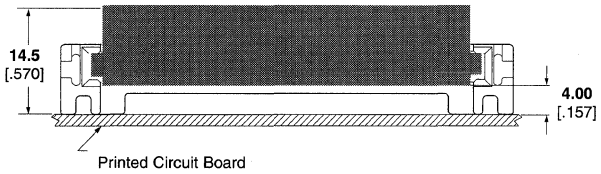
Standard Profile Pin Header with Type II Memory Card



Raised Profile Pin Header with Type II Memory Card



Standard Profile Pin Header with Type III Memory Card



Raised Profile Pin Header with Type III Memory Card

Receptacle Selection Guide, 6 mm Receptacles

Receptacle Size	Receptacle Style	Offset**	Packaging	Receptacles Part Numbers
68 Positions	Straddle-Mount*	Centered	Tube	146233-1 (Page 3267)
		0.66 [.026]	Tube	146234-1 (Page 3267)
		Centered (Enhanced)	Tube	146324-1 (Page 3267)
88 Positions	Straddle-Mount	Centered	Tube	146323-1 (Page 3267)
68 Positions	Surface-Mount**	0.4 [.016]	Tube	146229-1[1] (Page 3268)
			56 [2.205] Tape	146322-1[1] (Page 3268)
		0.15 [.006]	56 [2.205] Tape	146173-1 (Page 3268)
		0	Tube	146228-1 (Page 3268)
		0.4 [.016] (Enhanced)	Tube	146325-1 (Page 3268)

* Offset is measured from centerline of connector to centerline of PC board.
** Offset is measured from centerline of connector to top of PC board.
[1] Receptacles are identical; method of packaging is the only difference.

Specifications subject to change.
1-800-522-6752 Product Information Center/ AMP FAX Service
1-800-722-1111 Tooling/Technical Assistance Center

METRIC

Pin Header Selection Guide

Description	Board Mount	Lead Type	Pin Header Part Numbers: Without Holddowns	Pin Header Part Numbers: With Holddowns	Add Guiderails With Two Holddowns: w/Left Guiderail	Add Guiderails With Two Holddowns: w/Right Guiderail	Add Ejector Assembly With: w/Right Button	Add Ejector Assembly With: w/Left Button	Pin Header Assembly Part Numbers With Ejector Attached: w/Right Button	Pin Header Assembly Part Numbers With Ejector Attached: w/Left Button
Single Standard	Top	Thru-Hole	535653-1 (-2) LV[1] (Page 3269) 146321-1[2] (Page 3269)	—	535664-1 (Page 3271)	535664-2 (Page 3271)	146021-1 (Page 3271)	146019-1 (Page 3271)	146025-1 (Page 3272)	146023-1 (Page 3272)
		Surface-Mount	535651-1 (-2) LV[1] (Page 3269) 179034 (Page 3269)	—	535664-1 (Page 3271)	535664-2 (Page 3271)	146021-1 (Page 3271) 177961-1 (Page 3272)	146019-1 (Page 3271) 1-177964-1 (Page 3272)	—	—
	Bottom	Thru-Hole	535654-1 (-2) LV[1] (Page 3270)	—	535664-1 (Page 3271)	535664-2 (Page 3271)	146021-1 (Page 3271)	146019-1 (Page 3271)	—	—
		Surface-Mount	535652-1 (-2) LV[1] (Page 3270) 179035-1 (Page 3270) 146083-1 (-2) LV[1] (Page 3270)	—	535664-1 (Page 3271)	535664-2 (Page 3271)	146021-1 (Page 3271) 177961-1 (Page 3272) 146021-1 (Page 3271)	146019-1 (Page 3271) 1-177964-1 (Page 3272) 146019-1 (Page 3271)	—	—
Single Raised	Top	Thru-Hole	535655-1 (-2) LV[1] (Page 3273)	535659-1 (Page 3273) 535660-1 (Page 3273)	535661-1 (Page 3275)	535661-2 (Page 3275)	146022-1 (Page 3275)	146020-1 (Page 3275)	146026-1 (Page 3276)	146024-1 (Page 3276)
		Surface-Mount	535657-1 (-2) LV[1] (Page 3273) 179890-1 (Page 3274)	—	535661-1 (Page 3275)	535661-2 (Page 3275)	146022-1 (Page 3275) —	146020-1 (Page 3275) —	—	—
	Bottom	Thru-Hole	535656-1 (-2) LV[1] (Page 3274)	—	535661-1 (Page 3275)	535661-2 (Page 3275)	146022-1 (Page 3275)	146020-1 (Page 3275)	—	—
		Surface-Mount	535658-1 (-2) LV (Page 3274) 177942-1 (Page 3274)	—	535661-1 (Page 3275)	535661-2 (Page 3275)	146022-1 (Page 3275) —	146020-1 (Page 3275) —	—	—
Single Vertical	Top	Surface-Mount	—	146204-1 (Page 3276)	—	—	—	—	—	—
Stacked Standard	Top	Thru-Hole	146156-1 (Page 3277) 146320-1[2] (Page 3277)	—	—	—	146157-1 (Page 3277)	146158-1 (Page 3277)	146159-1 (Page 3278) —	146160-1 (Page 3278) —
Stacked Raised	Top	Thru-Hole	146161-1 (Page 3278)	—	—	—	146162-1 (Page 3279)	146163-1 (Page 3279)	—	—
Stacked w/ 0.8 [.031] Plug Assemblies[3]	Top	—	—	—	—	—	—	—	11409-2 (Page 3279)	179040-1 (Page 3279)

[1]Low voltage pin header
[2]Enhanced pin header
[3]For board-to-board applications. Detachable plug assembly mates with AMP FH 0.8 mm Receptacle, **Part No. 177983-6** (sold separately).

SOURCE: Catalog 65701

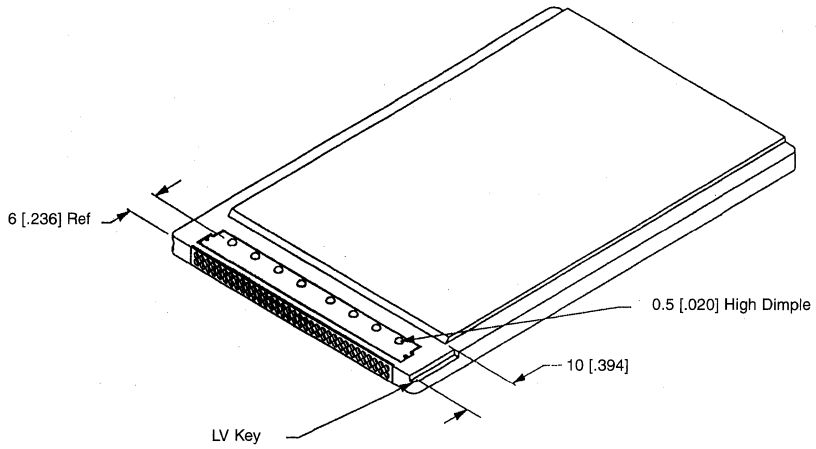
Specifications subject to change.

1-800-522-6752
Product Information Center/ AMP FAX Service

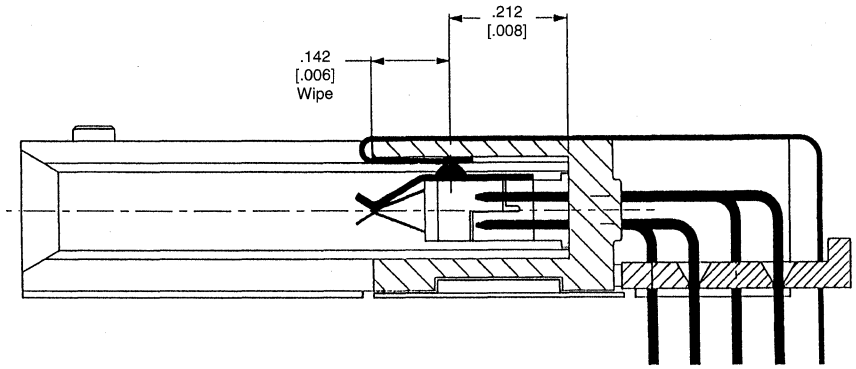
1-800-722-1111
Tooling/Technical Assistance Center

Enhanced (Shielded) Card Bus

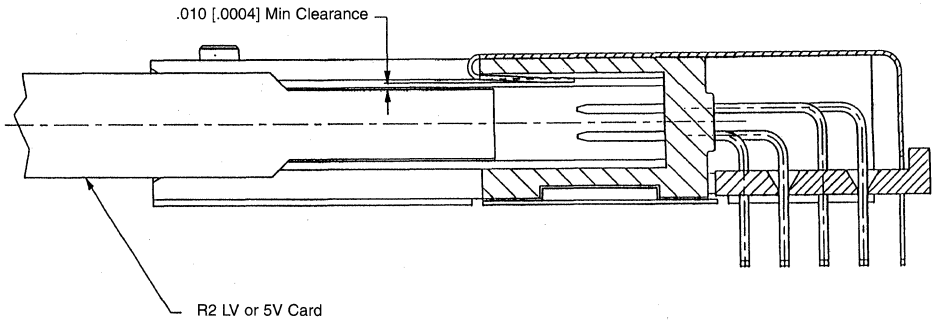
METRIC



CARD BUS



CARD BUS CONNECTOR

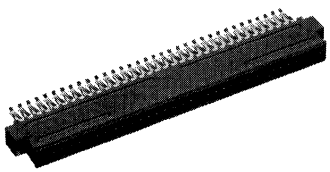


BACKWARD COMPATIBLE CROSS SECTION

SOURCE: Catalog 65701

METRIC

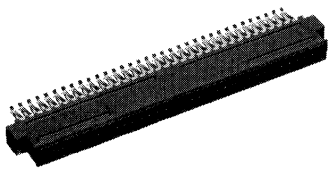
Receptacle Assembly, Straddle-Mount, Centered 68 Positions



Part Number 146233-1

Note: 68 Pos. Housing Dim. (Typ.)—47.50 [1.870] L x 3.30 [.130] W x 6.00 [.236] H

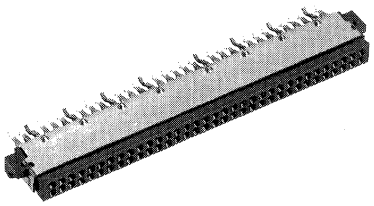
Receptacle Assembly, Straddle-Mount, 0.66 [.026] Offset* 68 Positions



Part Number 146234-1

Note: 68 Pos. Housing Dim. (Typ.)—47.50 [1.870] L x 3.30 [.130] W x 6.00 [.236] H

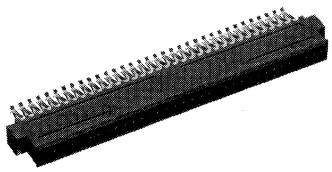
Receptacle Assembly (Enhanced), Straddle-Mount, Centered 68 Positions



Part Number 146324-1

Note: 68 Pos. Housing Dim. (Typ.)—47.50 [1.870] L x 3.30 [.130] W x 6.00 [.236] H

Receptacle Assembly, Straddle-Mount, Centered 88 Positions



Part Number 146323-1

Note: 88 Pos. Housing Dim. (Typ.)—47.50 [1.870] L x 3.30 [.130] W x 6.00 [.236] H

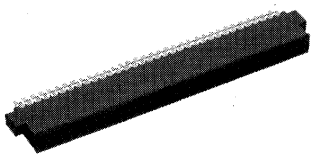
*Offset is measured from centerline of connector to centerline of PC board.

SOURCE: Catalog 65701

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

METRIC

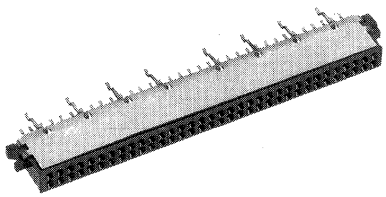
Receptacle Assembly, Surface-Mount, 0.4 [0.16] Offset** 68 Positions



Part Numbers 146229-1 (Tube) **146322-1** (Tape)

Note: 68 Pos. Housing Dim. (Typ.)—47.50 [1.870] L x 3.30 [.130] W x 6.00 [.236] H

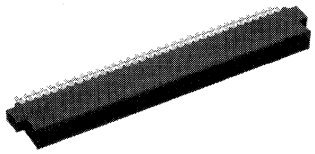
Receptacle Assembly (Enhanced), Surface-Mount, 0.4 [0.16] Offset** 68 Positions



Part Number 146325-1

Note: 68 Pos. Housing Dim. (Typ.)— 47.50 [1.870] L x 3.30 [.130] W x 6.00 [.236] H

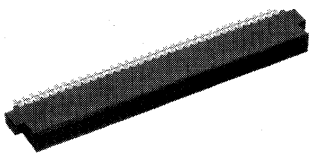
Receptacle Assembly, Surface-Mount, .15 [.0006] Offset** 68 Positions



Part Number 146173-1

Note: 68 Pos. Housing Dim. (Typ.)— 47.50 [1.870] L x 3.30 [.130] W x 6.00 [.236] H

Receptacle Assembly, Surface-Mount, .15 [.0006] Offset** 68 Positions



Part Number 146228-1

Note: 86 Pos. Housing Dim. (Typ.)—47.50 [1.870] L x 3.30 [.130] W x 6.00 [.236] H

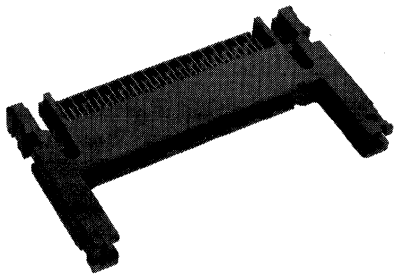
**Offset is measured from centerline of connector to top of PC board.

SOURCE: Catalog 65701

METRIC

Pin Headers, Standard Profile

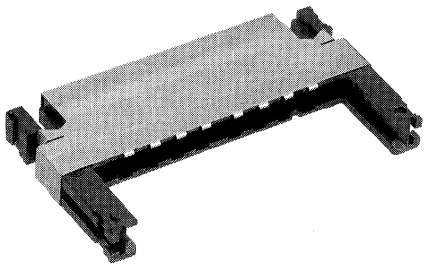
Top Board Thru-Hole Mount, Without Holddowns 68 Positions



Part Numbers 535653-1 / 535653-2 LV (Low Voltage)

Note: 68 Position Housing Dim.(Typ.)—61.98 [2.440] x 35.00 [1.738] W x 6.98 [.275] H

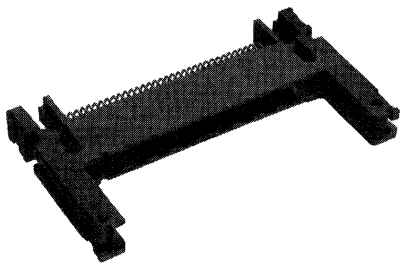
Top Board Thru-Hole Mount, Without Holddowns (Enhanced) 68 Positions



Part Number 146321-1

Note: 68 Pos. Housing Dim. (Typ.)—61.98 [2.440] L x 35.00 [1.738] x 6.98 [.275] H

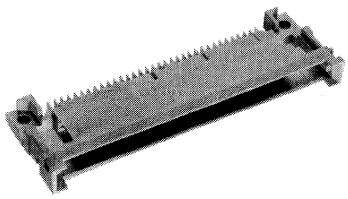
Top Board Surface-Mount, Without Holddowns 68 Positions



Part Numbers 535651-1 / 535651-2 LV (Low Voltage)

Note: 68 Position Housing Dim. (Typ.)—61.98 [2.440] L x 35.00 [1.738] W x6.98 [.275] H

Top Board Surface-Mount, Without Holddowns 68 Positions



Part Number 179034-1

Note: 68 Position Housing Dim. (Typ.)—57.00 [2.224] L x 18.50 [.728] W x 4.65 [1.83] H

SOURCE: Catalog 65701

Specifications subject to change.

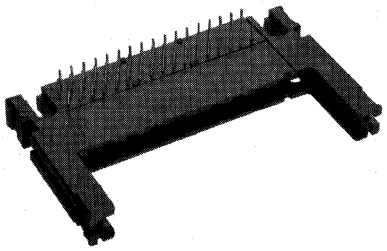
1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

METRIC

Pin Headers, Standard Profile
(Continued)

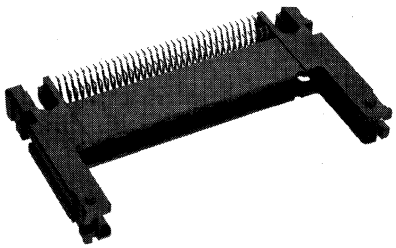
Bottom Board Thru-Hole Mount, Without Holddowns 68 Positions



Part Numbers 535654-1 / 535654-2 LV (Low Voltage)

Note: 68 Position Housing Dim. (Typ.)—61.98 [2.440] L x 35.00 [1.738] W x 6.98 [.275] H

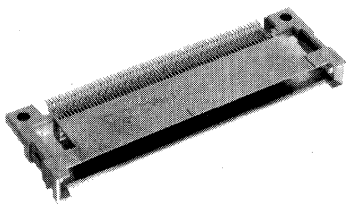
Bottom Board Surface-Mount, Without Holddowns 68 Positions



Part Numbers 535652-1 / 535652-2 LV (Low Voltage)

Note: 68 Position Housing Dim. (Typ.)— 61.98 [2.440] L x 35.00 [1.738]W x 6.98 [.275] H

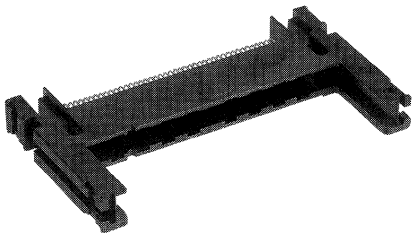
Bottom Board Surface-Mount, Without Holddowns 68 Positions



Part Number 179035-1

Note: 68 Position Housing Dim. (Typ.)—61.98 [2.440] L x 18.50 [.728] W x 4.65 [1.83] H

Bottom Board Surface-Mount, Without Holddowns 88 Positions



Part Numbers 146083-1 / 146083-2 LV (Low Voltage)

Note: 88 Position Housing Dim. (Typ.)—61.98 [2.440] L x 35.00 [1.73] W x 6.98 [.275] H

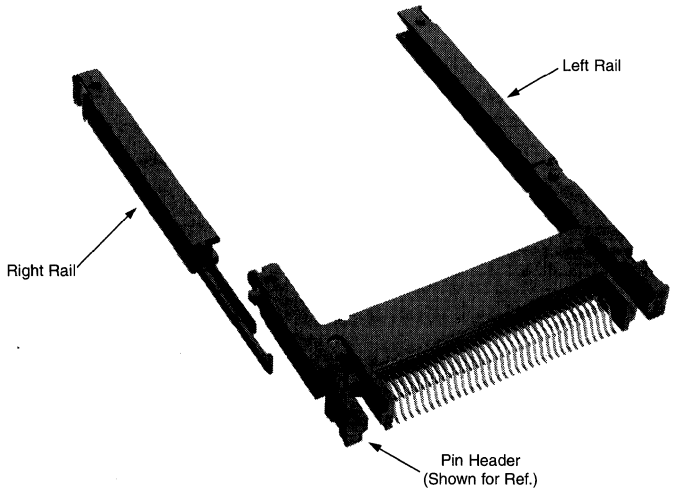
Specifications subject to change.
1-800-522-6752 Product Information Center/ AMP FAX Service
1-800-722-1111 Tooling/Technical Assistance Center

METRIC

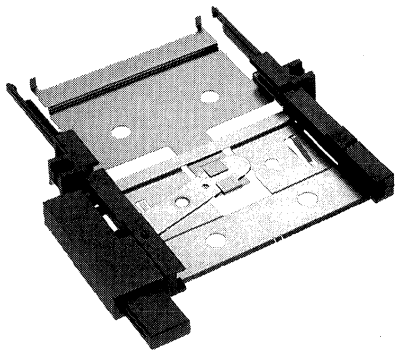
Guide Rails, with Two Holddowns for Standard Profile Pin Headers

Left Guide Rail
Part Number 535664-1

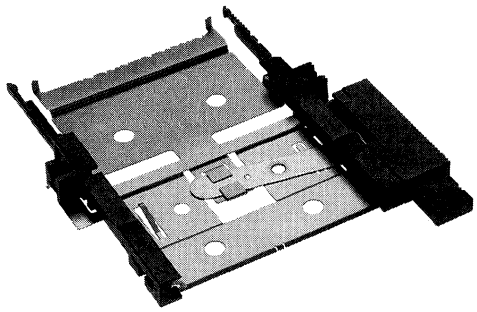
Right Guide Rail
Part Number 535664-2



Ejector Assembly for Standard Profile Pin Headers



Left Ejector Button
Part Number 146019-1



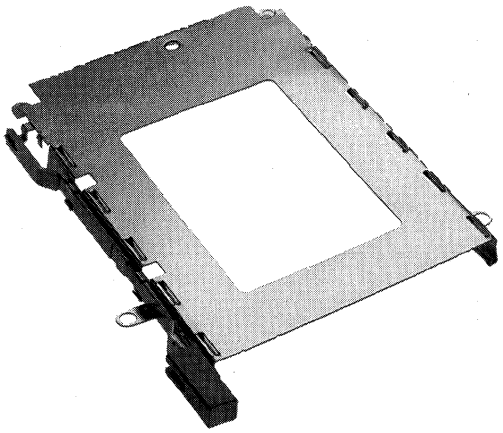
Right Ejector Button
Part Number 146021-1

SOURCE: Catalog 65701

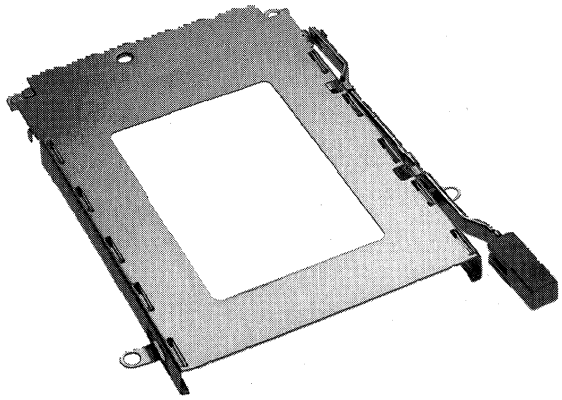
Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

METRIC

Ejector Assembly for Standard Profile Pin Headers, Top Board Surface-Mount

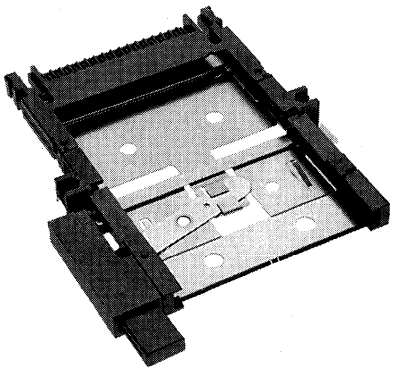


Left Ejector Button
Part Number 1-177964-1

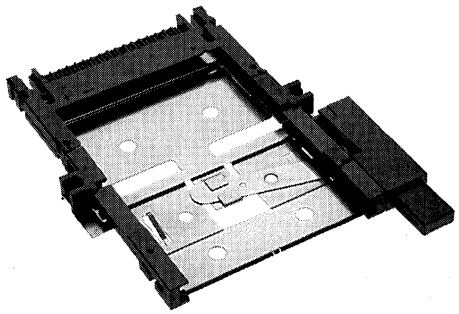


Right Ejector Button
Part Number 177961-1

Pin Header Assembly, Standard Profile with Ejector Assembly Attached



Left Ejector Button
Part Number 146023-1



Right Ejector Button
Part Number 146025-1

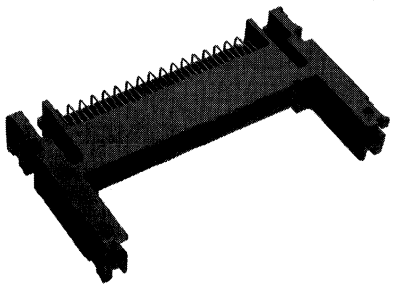
Note: 68 Position Housing Dim. (Typ.)—61.98 [2.4440] L x 90.78 [3.574] W x 6.98 [.275] H

Specifications subject to change.
1-800-522-6752 Product Information Center/ AMP FAX Service
1-800-722-1111 Tooling/Technical Assistance Center

Pin Headers, Raised Profile

METRIC

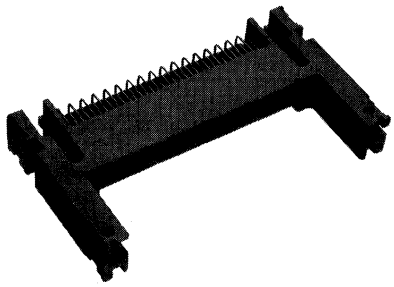
Top Board Thru-Hole Mount, Without Holddowns 68 Positions



Part Numbers 535655-1 / 535655-2 LV (Low Voltage)

Note: 68 Pos. Housing Dim. (Typ.)—61.98 [2.440] L x 35.00 [1.738] W x 9.60 [.378] H

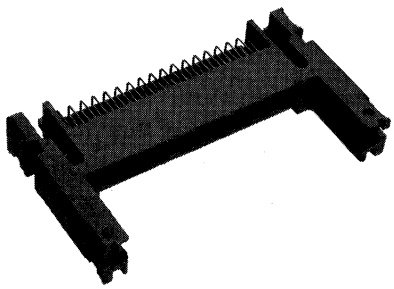
Top Board Thru-Hole Mount, With Holddowns 68 Positions



Part Numbers 535659-1

Note: 68 Pos. Housing Dim. (Typ.)—61.98 [2.440] L x 35.00 [1.738] W x 9.60 [.378] W

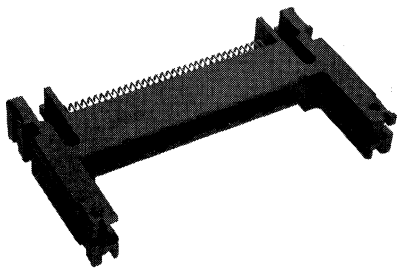
Top Board Thru-Hole Mount, With Holddowns 68 Positions



Part Number 535660-1

Note: 68 Pos. Housing Dim. (Typ.)—61.98 [2.440] L x 35.00 [1.738] W x 9.60 [.378] H

Top Board Surface-Mount, Without Holddowns 68 Positions



Part Numbers 535657-1 / 535657-2 LV (Low Voltage)

Note: 68 Pos. Housing Dim. (Typ.)—61.98 [2.440] L x 35.00 [1.738] W x 9.60 [.378] H

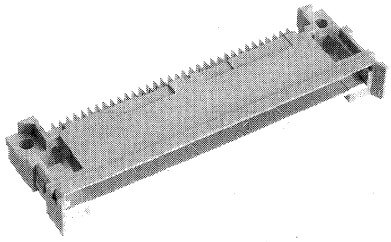
SOURCE: Catalog 65701

Specifications subject to change.
1-800-522-6752 Product Information Center/ AMP FAX Service
1-800-722-1111 Tooling/Technical Assistance Center

METRIC

Pin Headers, Raised Profile
(Continued)

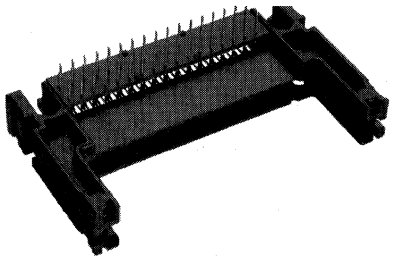
Top Board Surface-Mount, Without Holddowns 68 Positions



Part Number 179890-1

Note: 68 Pos. Housing Dim. (Typ.)—57.00 [2.224] L x 18.50 [.728] W x 4.65 [1.83] H

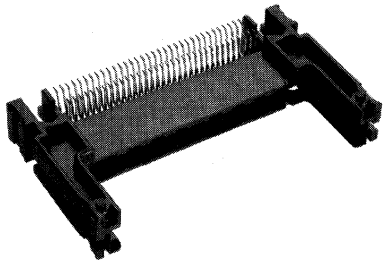
Bottom Board Thru-Hole Mount, Without Holddowns 68 Positions



Part Numbers 535656-1 / 535656-2 LV (Low Voltage)

Note: 68 Pos. Housing Dim. (Typ.)—61.98 [2.440] L x 35.00 [1.738] W x 9.60 [.378] H

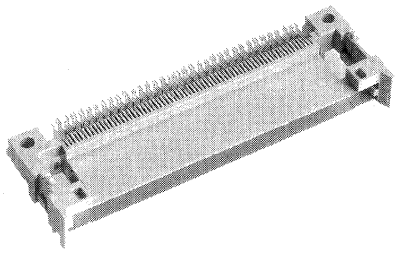
Bottom Board Surface-Mount, Without Holddowns 68 Positions



Part Numbers 535658-1 / 535658-2 LV (Low Voltage)

Note: 68 Pos. Housing Dim. (Typ.)—61.98 [2.440] L x 35.00 [1.738] W x 9.60 [.378] H

Bottom Board Surface-Mount, Without Holddowns 68 Positions



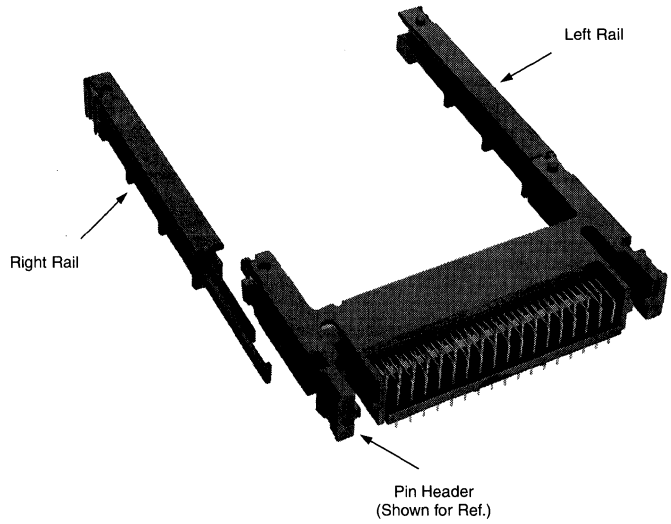
Part Number 177942-1

Note: 68 Pos. Housing Dim. (Typ.)—61.98 [2.440] L x 35.00 [1.738] W x 9.60 [.378] H

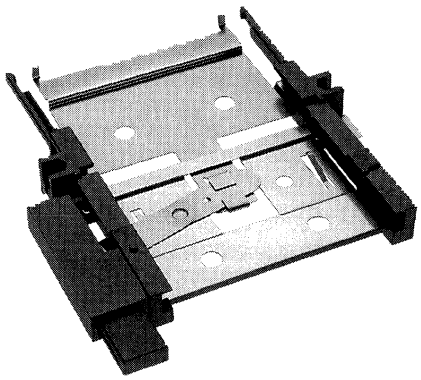
Guide Rails With Two Holddowns, for Raised Profile Pin Headers

Left Guide Rail
Part Number 535661-1

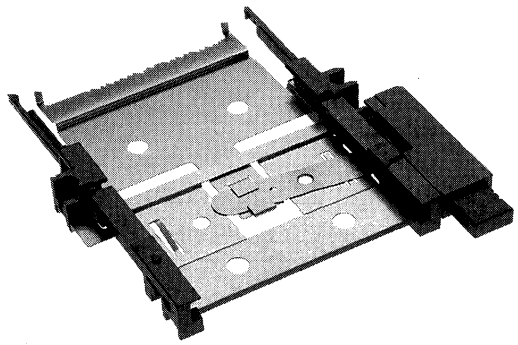
Right Guide Rail
Part Number 535661-2



Ejector Assembly for Raised Profile Pin Headers



Left Ejector Button
Part Number 146020-1

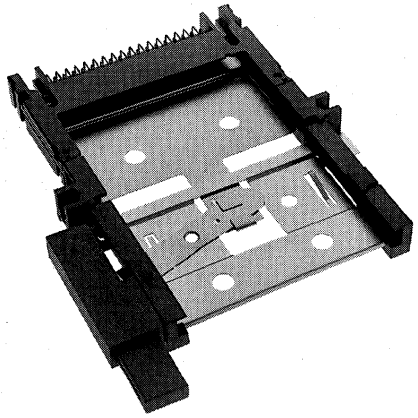


Right Ejector Button
Part Number 146022-1

SOURCE: Catalog 65701

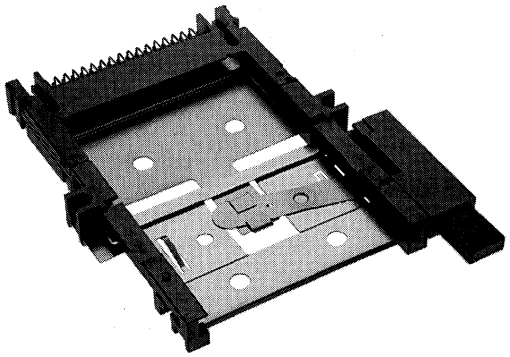
Specifications subject to change.
1-800-522-6752 Product Information Center/ AMP FAX Service
1-800-722-1111 Tooling/Technical Assistance Center

Pin Header Assembly, Raised Profile with Ejector Assembly Attached



Top Board
Thru-Hole Mount
68 Positions

Left Ejector Button
Part Number 146024-1

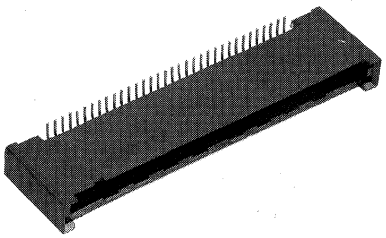


Top Board
Thru-Hole Mount
68 Positions

Right Ejector Button
Part Number 146026-1

Pin Header, Vertical

Top Board
Surface-Mount with
Holddowns
68 Positions



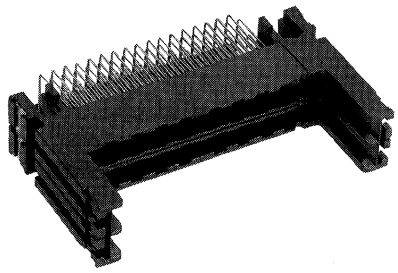
Part Number 146204-1

Note: 68 Pos. Housing Dim. (Typ.)—56.20 [2.213] L x 5.50 [2.17] W x 14.00 [.551] H

Specifications subject to change.
1-800-522-6752 Product Information Center/ AMP FAX Service
1-800-722-1111 Tooling/Technical Assistance Center

Stacked Pin Header, Standard Profile

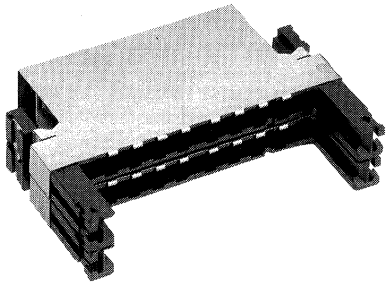
Top Board Thru-Hole Mount, Without Holddowns 136 Positions



Part Number 146156-1

Note: 136 Pos. Housing Dim. (Typ.)—61.98 [2.440] L x 35.00 [1.738] W x 13.97 [.550] H

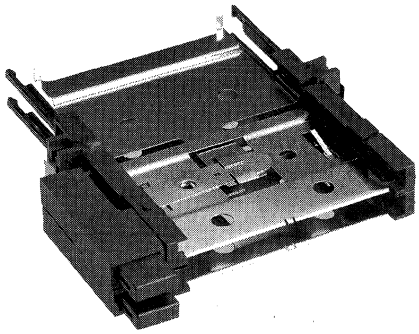
Top Board Thru-Hole Mount, Without Holddowns (Enhanced) 136 Positions



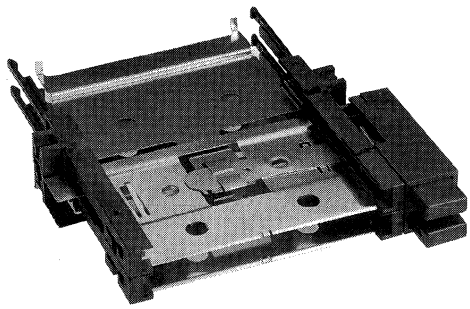
Part Number 146320-1 / 146320-2 LV (Low Voltage)

Note: 136 Pos. Housing Dim. (Typ).—61.98 [2.440] L x 35.00 [1.738] W x 9.60 [.378] H

Ejector Assembly for Standard Profile, Stacked Pin Headers

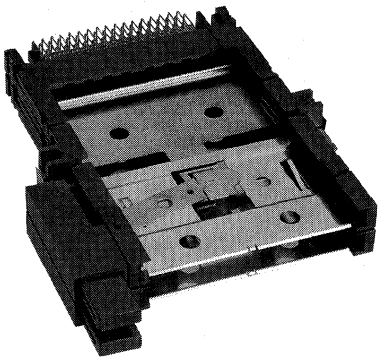


Left Ejector Button
Part Number 146158-1



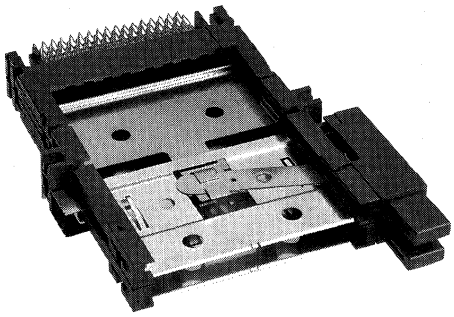
Right Ejector Button
Part Number 146157-1

Stacked Pin Header Assembly, Standard Profile with Ejector Assembly Attached



Top Board
Thru-Hole Mount
136 Positions

Left Ejector Button
Part Number 146160-1

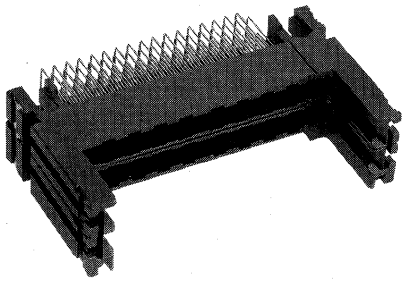


Top Board
Thru-Hole Mount
136 Positions

Right Ejector Button
Part Number 146159-1

Stacked Pin Headers, Raised Profile

Top Board
Thru-Hole Mount
136 Positions

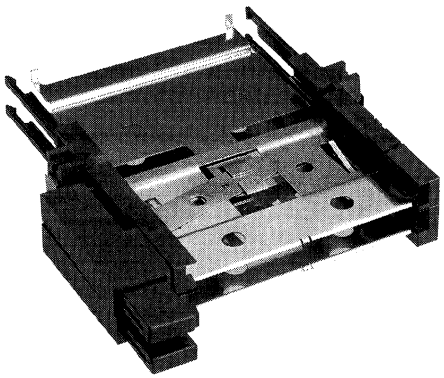


Part Number 146161-1

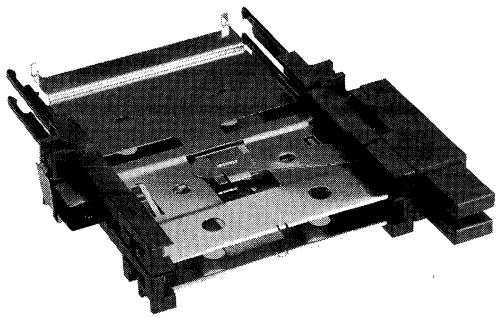
Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

METRIC

Ejector Assembly for Raised Profile, Stacked Pin Header



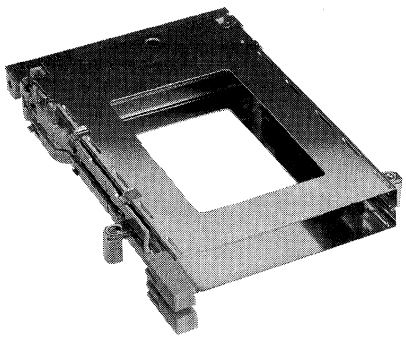
Left Ejector Button
Part Number 146163-1



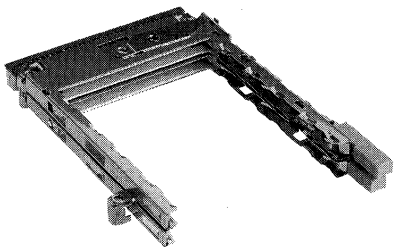
Right Ejector Button
Part Number 146162-1

Stacked Pin Header, with Detachable 0.8 [.031] Plug Assembly* (Board-to-Board) 140 Positions

*Mates with AMP FH 0.8 mm Receptacle, **Part No. 177983-6** (sold separately).



Left Ejector Buttom
Part Number 179040-1



Right Ejector Buttom
Part Number 11409-2

SOURCE: Catalog 65701

Specifications subject to change.

1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

I/O Connector and Frame Kit Selection Guide

Frame Kit Configuration		Frame Kit Part Nos.		68-Position Receptacle Assembly Part Nos.	INFOPORT I/O Pin Header Part Nos.	Cable Connector Kits	
Style	No. of Positions	with Label Recess	without Label Recess			Part Nos.	Description
Series I							
Type II Unshielded, 0.4 [.016] Offset PCB	9	557920-1[1] 557920-5[1,2] (Page 3282)	557920-3[1] (Page 3282)	146233-1 146324-1 (Page 3267)	557908-1 (Page 3282)	558314-1 (Page 3282)	Plug Assembly, Keyed
	15	557920-2[1] 557920-6[2] (Page 3282)	557920-4 (Page 3282)	146233-1 146324-1 (Page 3267)	557908-2 (Page 3282)	557715-2 (Page 3282)	Plug Assembly, Keyed
Series II							
Type II, Shielded, 0.8 [.031] Offset PCB	15	558133-1[1] 558133-2[1,3] (Page 3283)	558133-4 558133-6 (Page 3283)	146233-1 146324-1 (Page 3267)	558134-1 Keyed 1, 558134-3 Keyed 2, 558134-4 Keyed 3 (Page 3284)	558127-1 (Page 3285)	w/Plastic Latch Keyed 2
						558127-2 (Page 3285)	w/Plastic Latch, Keyed 1
						558127-3 (Page 3285)	w/Plastic Latch, Keyed 3
						558126-1 (Page 3285)	w/Metal Latch, Keyed 2
						558126-2 (Page 3285)	w/Metal Latch Keyed 1
						558126-3 (Page 3285)	w/Metal Latch, Keyed 3
	33	558133-3[1] 1-558133-0[2] (Page 3283)	558133-5[1] 1-558133-1[2] (Page 3283)	146233-1 146324-1 (Page 3267)	558134-5 Keyed 1, 558134-2 Keyed 2, 558134-6 Keyed 3 (Page 3284)	558277-1 (Page 3285)	w/Metal Latch, Keyed 1
						558277-2 (Page 3285)	w/Metal Latch, Keyed 3
						558126-4 (Page 3285)	w/ Metal Latch Keyed 2
Type I, Shielded 0.8 [.031] Offset PCB (for I/O Applications)	15	558135-3 558135-4[1,3] (Page 3283)	558135-1[1] 558135-2[1] (Page 3283)	146233-1 (Page 3267)	558289-1 Keyed 1, 558289-2 Keyed 2 (Page 3285)	558127-1 (Page 3285)	w/Plastic Latch, Keyed 2
						558127-2 (Page 3285)	w/Plastic Latch, Keyed 1
						558126-1 (Page 3285)	w/Metal Latch, Keyed 2
						558126-2 (Page 3285)	w/Metal Latch, Keyed 1

[1]For 5 Volt applications, contact AMP product engineering for "LV" keyed frames
[2]Label recess on bottom
[3]Frame kit with LED

SOURCE: Catalog 65701

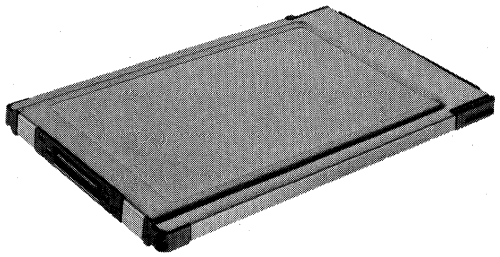
I/O Connector and Frame Kit Selection Guide
(Continued)

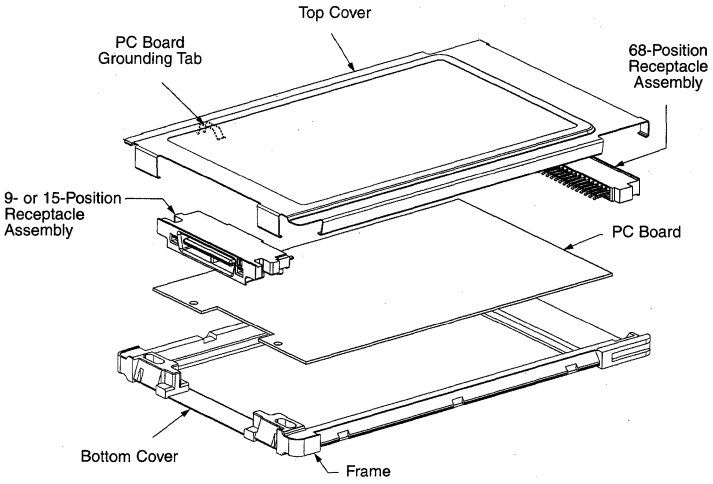
Frame Kit Configuration		Frame Kit Part Nos.		68-Position Receptacle Assembly Part Nos.	INFOPORT I/O Pin Header Part Nos.	Cable Connector Kits	
Style	No. of Positions	with Label Recess	without Label Recess			Part Nos.	Description
Series III							
Type II, Shielded, 0.4 [.016] Offset PCB	15	558877-1 Frame, 558879-1 Cover (Page 3286)	558877-2 Frame, 558879-2 Cover (Page 3286)	146233-1 146324-1 (Page 3267)	5-558556-1 Keyed 1, 5-558556-2 Keyed 2, 5-558556-3 Keyed 3, 5-558556-4 Keyed 4 (Page 3288)	558880-1 (Page 3286)	8-pin partially loaded, Keyed 1
						558880-2 (Page 3286)	8-pin partially loaded, Keyed 2
						558880-3 (Page 3286)	8-pin partially loaded, Keyed 3
						558880-4 (Page 3286)	8-pin partially loaded, Keyed 4
						558666-1 (Page 3286)	15-pin fully loaded, Keyed 1
						558666-2 (Page 3286)	15-pin fully loaded, Keyed 2
						558666-3 (Page 3286)	15-pin fully loaded, Keyed 3
						558666-4 (Page 3286)	15-pin fully loaded, Keyed 4
						Shield Kits	
						558807-1 (Page 3287)	Pull-to-Release, Small
						558807-2 (Page 3287)	Pull-to-Release, Large
						558790-1 (Page 3287)	Squeeze-to-Release, Small
						558790-2 (Page 3287)	Squeeze-to-Release, Large
						Cover Kits	
						558809-1 (Page 3287)	Pull-to-Release, w/AMP Logo
						558809-2 (Page 3287)	Pull-to-Release, w/o AMP Logo
						Slip-On Boots	
						558665-1 (Page 3287)	Squeeze-to-Release, w/AMP Logo
						558665-2 (Page 3287)	Squeeze-to-Release, w/o AMP Logo
						558875-1 (Page 3287)	Squeeze-to-Release, w/o AMP Logo, w/Post-Molded Boot
Memory Card Frame Kits							
Type I Centered PCB	—	558361-1 (Page 3289)	558361-2 (Page 3289)	146233-1 (Page 3267)	—	—	—
Type I, 0.8 [.031] Offset PCB	—	558138-1 (Page 3289)	558138-2 (Page 3289)	146233-1 (Page 3267)	—	—	—
Type II, Centered PCB	—	558894-2 Frame, 558895-1 Cover (Page 3288)	—	146233-1 (Page 3267)	—	—	—
Type II, 0.8 [.031] Offset PCB	—	558894-1 Frame, 558895-1 Cover (Page 3288)	—	146233-1 (Page 3267)	—	—	—

SOURCE: Catalog 65701

Specifications subject to change.
1-800-522-6752 Product Information Center/ AMP FAX Service
1-800-722-1111 Tooling/Technical Assistance Center

Series I Frame Kits, Type II, Unshielded



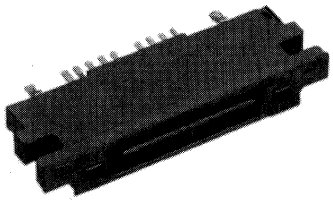


No. of Positions	Recessed* Area	Part Numbers
9	Top/Bottom	557920-1
	No	557920-3
	Bottom	557920-5
15	Top/Bottom	557920-2
	No	557920-4
	Bottom	557920-6

*Recessed area accommodates label size of 38.00 [1.528] X 64.0 [2.52]

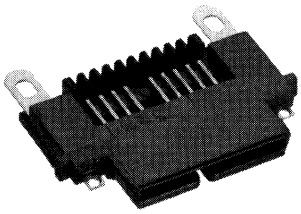
Note: Receptacle Assemblies and PC Board Not Included in Kit

INFOPORT Series I, I/O Receptacle Assemblies Type II, Keyed



No. of Positions	Packaged	Part Numbers
9	Tray	557908-1
	Tape & Reel	5-557908-1
15	Tray	557908-2
	Tape & Reel	5-557908-2

INFOPORT Series I Plug Assemblies, Keyed



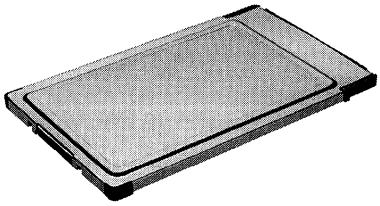
9 Positions
Part Number 558314-1

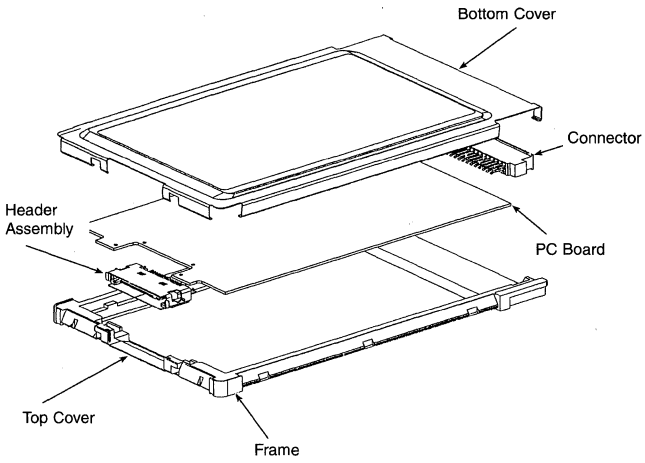
15 Positions
Part Number 557715-2

SOURCE: Catalog 65701

METRIC

Series II Frame Kits, Type II, Shielded, 0.8 [.031] Offset



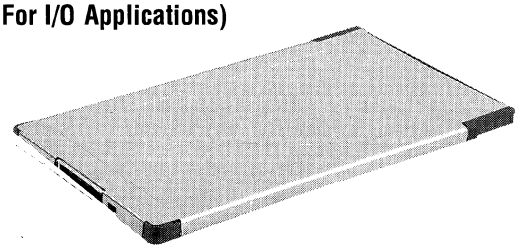


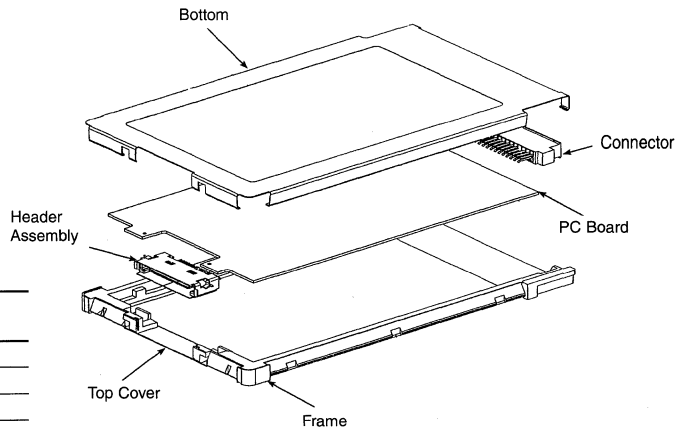
No. of Positions	Recessed Areas[1]	Frame Kit Part Nos.[2]
15	Yes	558133-1[3]
		558133-2[3,4]
		558133-7[5]
		558133-8[4,5]
	No	558133-4[3]
		558133-6[3,4]
		558133-9[5]
		1-558133-2[4,5]
33	Yes	558133-3[3]
		1-558133-0[5]
	No	558133-5[3]
		1-558133-1[5]

[1] Recess areas located on the top and bottom covers. Accommodate a label size of 38.80 [1.528] x 64.0 [2.52].
[2] UL recognition and CSA certification not applicable
[3] 5 Volt applications under existing notes table
[4] Frame kits with LED light pipes
[5] Less than 5 Volt applications under existing notes under table

Note: Receptacle Assemblies and PC Board Not Included in Kit

Series II Frame Kits Type I, Shielded, 0.8 [.031] Offset (For I/O Applications)





No. of Positions	Recessed Areas[1]	Frame Kit Part Numbers
15	Yes	558135-3
		558135-4
		558135-7
		558135-8
	No	558135-1
		558135-2
		558135-5
		558135-6

[1] Recess areas located on the top and bottom covers. Accommodate a label size of 38.80 [1.528] x 64.0 [2.52]
[2] UL recognition and CSA certification not applicable
[3] 5 Volt applications under existing notes under table
[4] Frame kit with LED light pipes
[5] Less than 5 Volt applications under existing notes under table

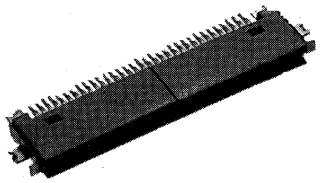
Note: Receptacle Assemblies and PC Board Not Included in Kit

SOURCE: Catalog 65701

Specifications subject to change.
1-800-522-6752 Product Information Center/ AMP FAX Service
1-800-722-1111 Tooling/Technical Assistance Center

METRIC

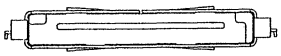
INFOPORT Series II Pin Headers, Type II, Shielded, 0.8 [.031] Centerline



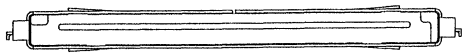
No. of Positions	Keying Option (See Below)	Header Assembly Part Numbers*
15	1	558134-1
	2	558134-3
	3	558134-4
33	1	558134-5
	2	558134-2
	3	558134-6

* UL recognition and CSA certification pending.

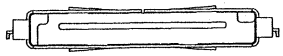
Keying Options



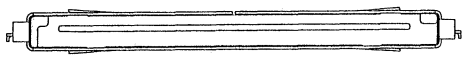
Key 1-15



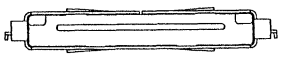
Key 1-33



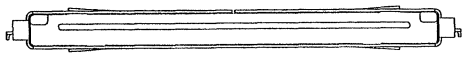
Key 2-15



Key 2-33



Key 3-15

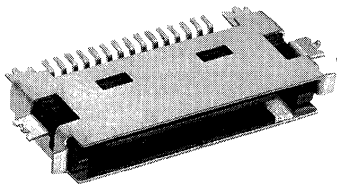


Key 3-33

Specifications subject to change.
1-800-522-6752 Product Information Center/ AMP FAX Service
1-800-722-1111 Tooling/Technical Assistance Center

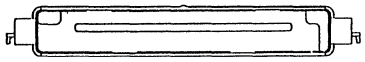
METRIC

INFOPORT Series II Pin Headers, Type I, Shielded, 0.8 [.031] Centerline

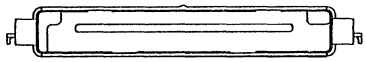


No. of Positions	Keying Option (See Below)	Header Assembly Part Number
15	1	558289-1
	2	558289-2

Keying Options



Keying Option 1



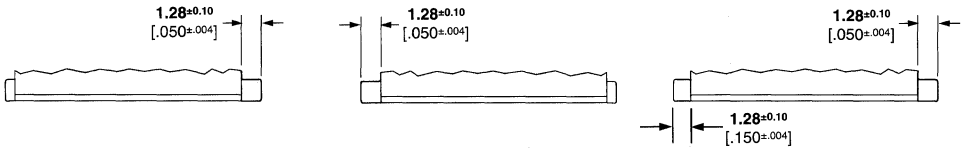
Keying Option 2

INFOPORT Series II Cable Connectors, Shielded, 0.8 [.031] Centerline

No. of Positions	Keying (See Below)	Latch Material	Cable Connector Part Numbers
15	1	Plastic	558127-2
		Metal	558126-2
	2	Plastic	558127-1
		Metal	558126-1
	3	Plastic	558127-3
		Metal	558126-3
33	1	Metal	588277-1
	2	Metal	558126-4
	3	Metal	558277-2

JL recognitions and CSA certification pending

Keying Options



Keyed 1 Keyed 2 Keyed 3

SOURCE: Catalog 65701

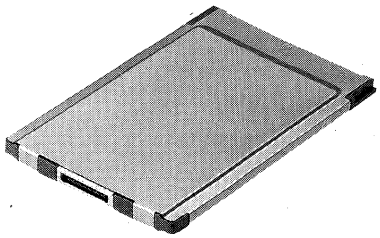
Specifications subject to change.

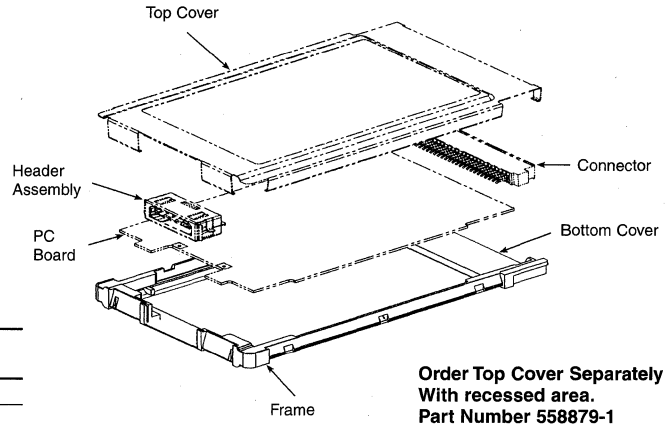
1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

METRIC

Series III Frame Kits, Type II





Description	Recessed Area	Part Numbers
Frame/ Cover	Yes	558877-1
	No	558877-2

[1] Recess areas located on the bottom covers. Accommodate a label size of 38.80 [1.528] x 62.0 [2.44]

Order Top Cover Separately
With recessed area.
Part Number 558879-1

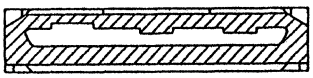
Without recessed areas
Part Number 558879-2

Note: Receptacle Assemblies and PC Board Not Included in Kit

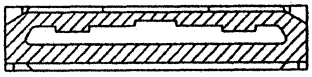
INFOPORT Series III Cable Housing Assemblies, .08 [.031] Centerline

No. of Positions	Keying Options	Part Number
15 (Partially Loaded-8 Positions)	1	558880-1
	2	558880-2
	3	558880-3
	4	558880-4
	5	558880-5
15	1	558666-1
	2	558666-2
	3	558666-3
	4	558666-4
	5	558666-5

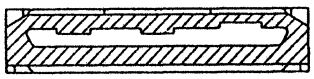
Keying Options



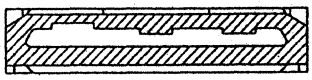
Key 1
Closed



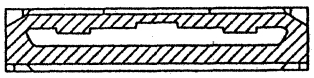
Key 4
LAN



Key 2
Multi Function



Key 5

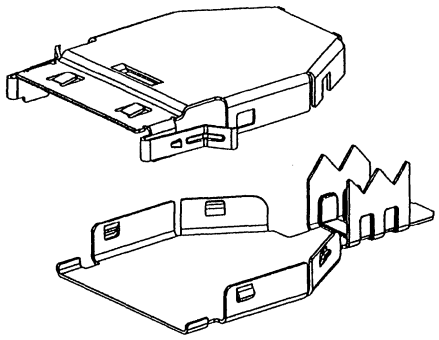


Key 3
Modem

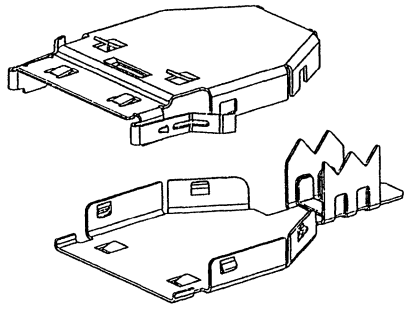
SOURCE: Catalog 65701

METRIC

INFOPORT Series III Shield Kits



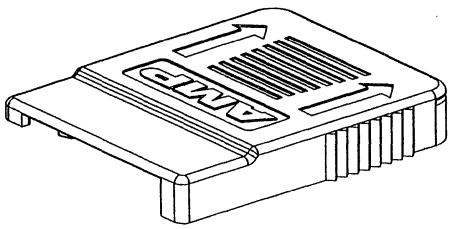
Pull-to-Release

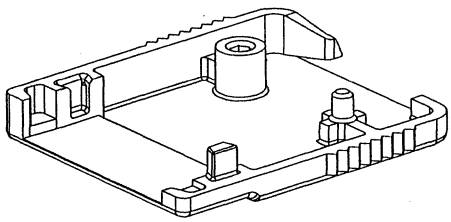


Squeeze-to-Release

Shield Kit	Cable Exit	Part Number
Pull-to-Release	Small	558807-1
	Large	558807-2
Squeeze-to-Release	Small	558790-1
	Large	558790-2

INFOPORT Series III Cable Connector Covers





Description	Logo	Part Number
Cover Kit (Pull-to-Release)	Yes	558809-1
	No	558809-2
Slip-On Boot (Squeeze-to-Release)	Yes	558665-1
	No	558665-2
		558875-1*

*This option has post-molded boot.

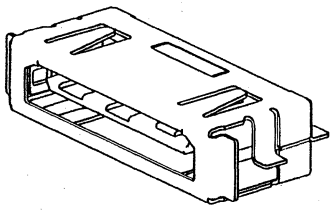
SOURCE: Catalog 65701

Specifications subject to change.

1-800-522-6752
Product Information Center/ AMP FAX Service

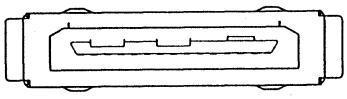
1-800-722-1111
Tooling/Technical Assistance Center

INFOPORT Series III Pin Headers, Shielded

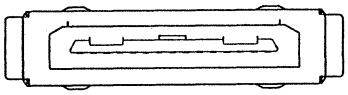


No. of Positions	Packaging Method	Keying Option	Part Number
15	Tape and reel	1	5-558556-1
		2	5-558556-2
		3	5-558556-3
		4	5-558556-4
		5	5-558556-5
	Tray	1	558556-1
		2	558556-2
		3	558556-3
		4	558556-4
		5	558556-5

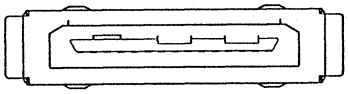
Keying Options



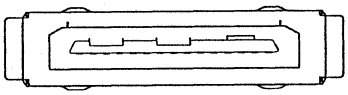
Key 1
Closed



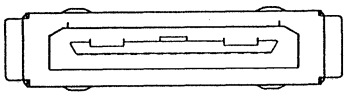
Key 4
LAN



Key 2
Multi-Function

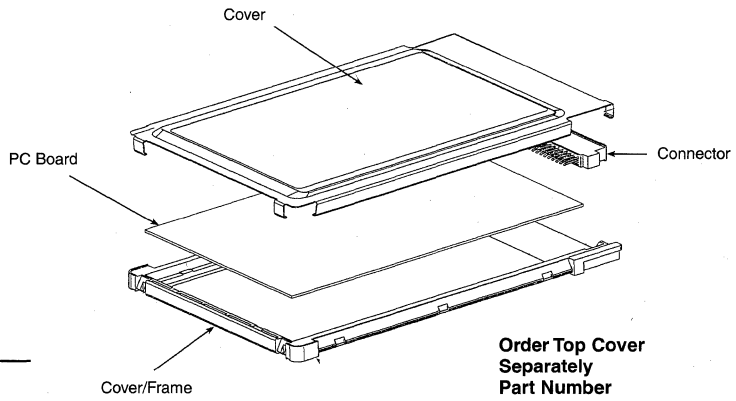


Key 5



Key 3
Modem

Frame Kits, Type II, (for Memory Card Application)



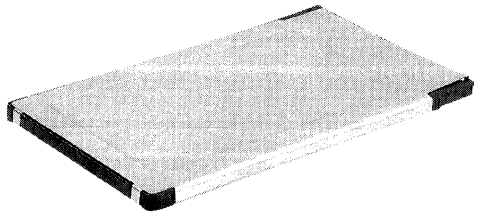
Order Top Cover Separately Part Number 558895-1

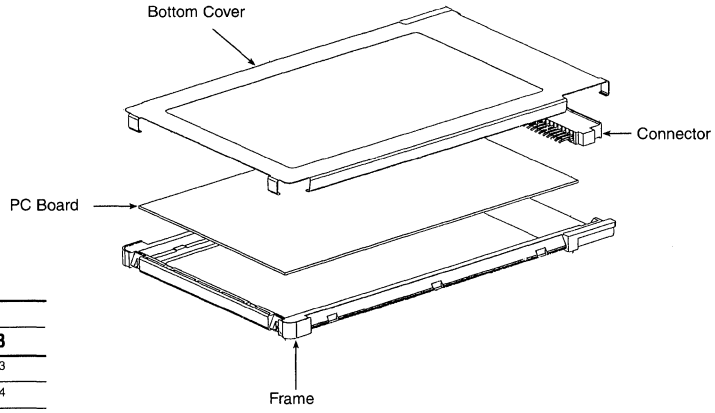
PCB Location	Part Numbers
0.8 [.031] Offset	558894-1
Center	558894-2

Note: Receptacle Assemblies and PC Board Not Included in Kit

Specifications subject to change.
1-800-522-6752 Product Information Center/ AMP FAX Service
1-800-722-1111 Tooling/Technical Assistance Center

Frame Kits, Type I, (for Memory Card Applications)





No. of Positions	Recessed Areas[1]	Frame Kit Part Numbers	
		0.8 [.031] Offset PCB	Center PCB
15	Yes	558138-1[3]	558361-1[3]
		558138-3[4]	558361-3[4]
	No	558138-2[3]	558361-2[3]
		558138-4[4]	558361-4[4]

[1] Recess areas are located on the top and bottom covers. They will ccommodate a label size of 38.80 [1.528] x 64.0 [2.52]
[2] UL recognition and CSA certification not applicable
[3] 5 Volt applications
[4] Less than 5 Volt applications

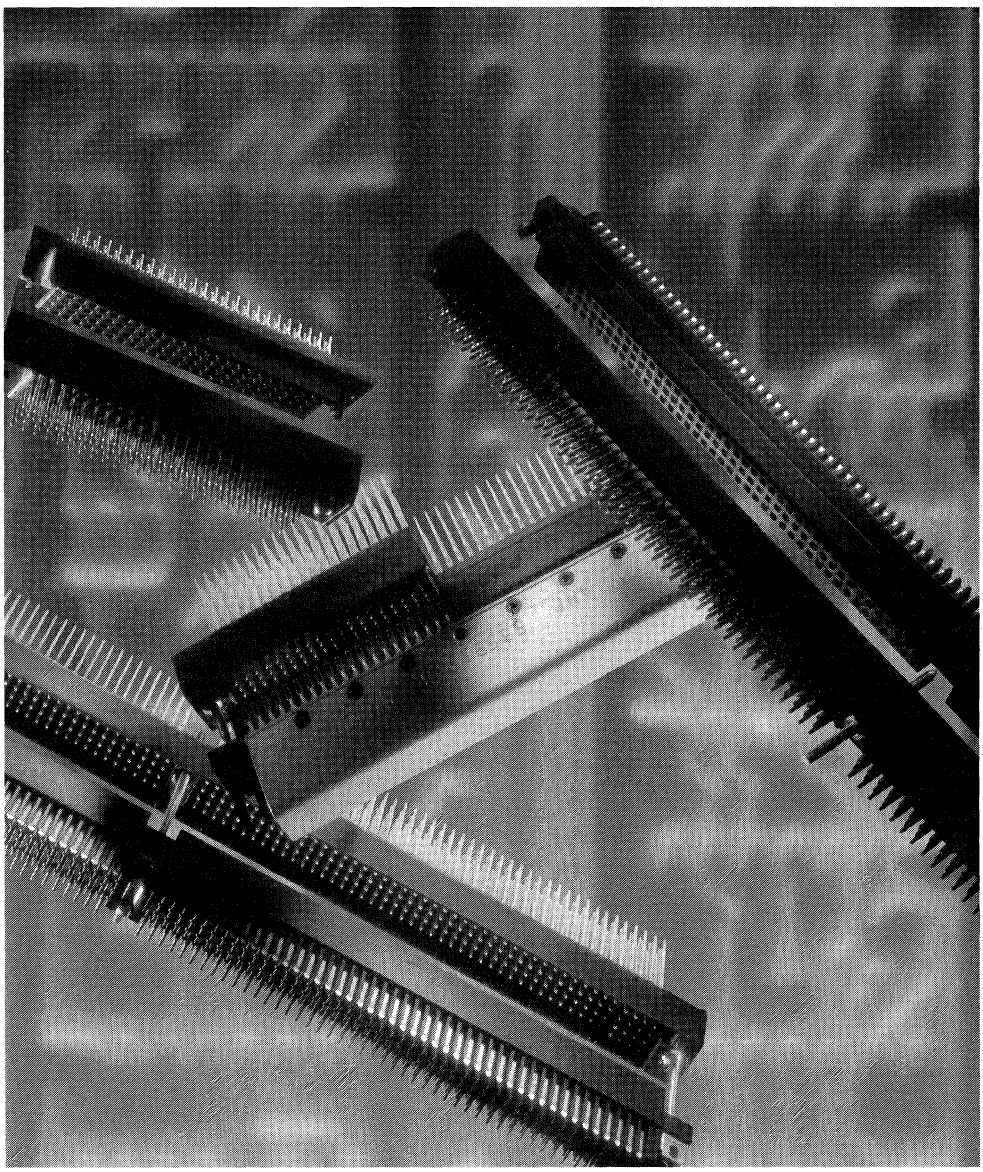
Note: Receptacle Assemblies and PC Board Not Included in Kit

SOURCE: Catalog 65701

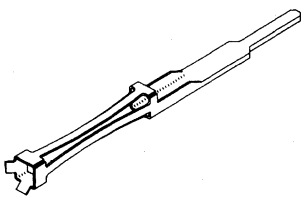
Specifications subject to change.
1-800-522-6752 Product Information Center/ AMP FAX Service
1-800-722-1111 Tooling/Technical Assistance Center

Two-Piece, High-Density Printed Circuit Board Connectors

- AMP-HDI Connectors
- AMP-HDI Hybrid Connectors
- Vertical Receptacles with ACTION PIN and Solder Post Contacts
- TBC (Twin-Beam Contact) Connectors
- TBC Plus (Twin-Beam Contact) Connectors

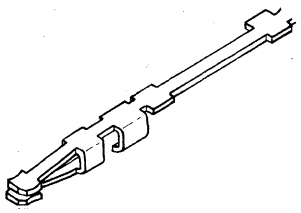


FOUR-BEAM CONTACT



- Four redundant points of contact
- Excellent performance in vibration and shock
- Proven reliability for twenty years in Military Box Connectors (MIL-C-55302)
- Repairability of individual contacts due to front entry
- Low insertion force due to gentle radii on Four-Beam Contact (1.9 oz. [0.53 N] Max. Avg.)
- Contact wipe .085 [22.16]
- Available in all AMP-HDI Connectors and Vertical Receptacles

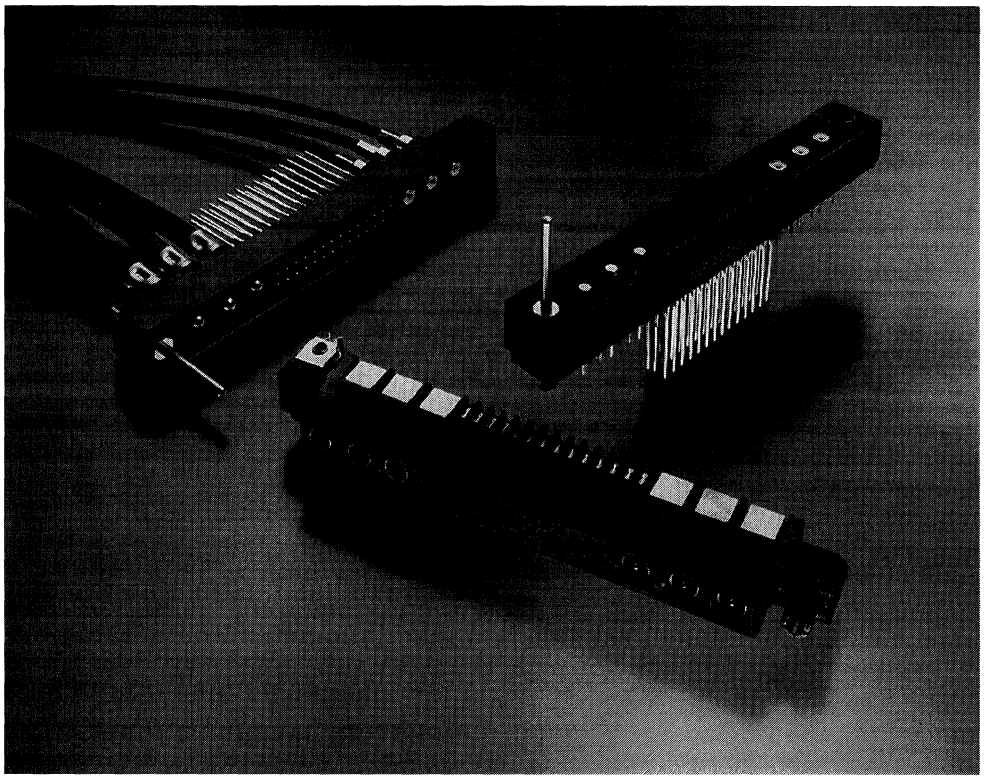
TWIN-BEAM CONTACT



- Two redundant points of contact
- Closed entry allows for pin MFBL sequencing
- .100 [2.54] min. wipe
- Individual contacts not replaceable
- Insertion force 2.5 oz. [0.7 N] Max. Avg.
- Available in all TBC and TBC Plus Connectors

SOURCE: Catalog 82618

AMP-HDI Hybrid Connectors

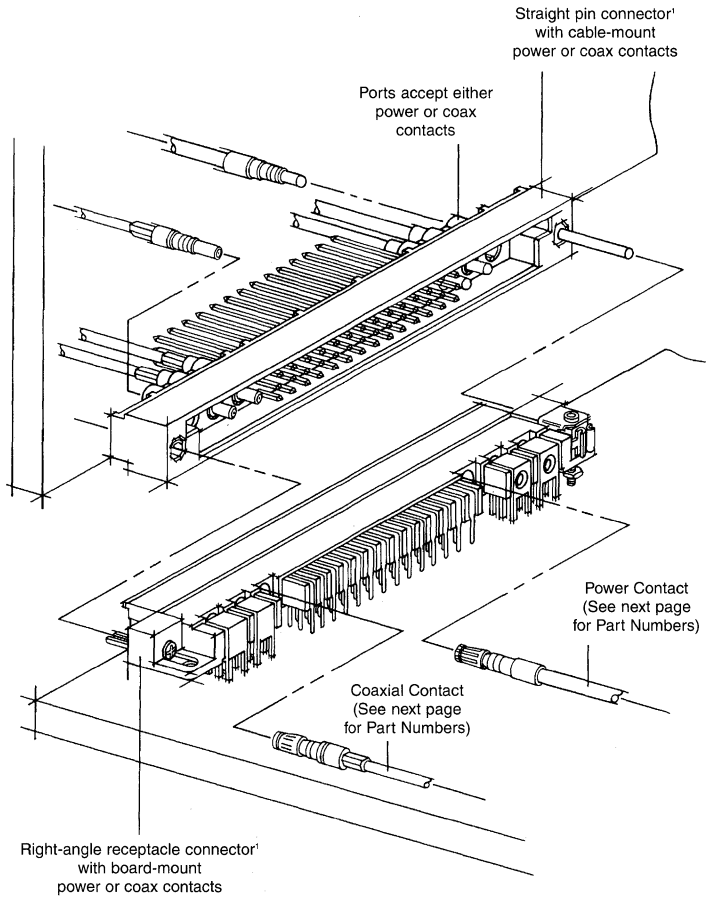


Unusual Convenience in High-Density Applications

Hybrid versions of the state-of-the-art AMP-HDI connector provide an easy blend of signal with power or coax. With signal contacts on the standard .100 x .100 [2.54 x 2.54] grid, these hybrid connectors feature ports that accept either power or coax contacts for board-mount and cable-mount applications. The connectors are compatible with all standard AMP-HDI connector hardware, application tooling and low power guide pins, and possess all the high performance features of their standard counterparts.

The durability of these hybrids has been tested to 250 cycles, and they have an operating temperature of –65°C to 125°C. Power contacts handle up to 30 amperes each (depending upon application) and coax contacts maintain a low VSWR of between 1.30 and 1.40, depending on the application.

The connector housing material withstands the high temperatures of vapor phase soldering, and pin assemblies are available with solder posts or compliant ACTION PIN posts.



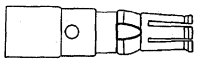
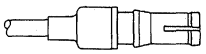
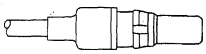
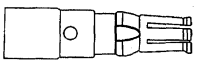
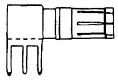
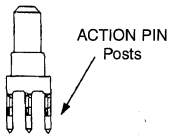
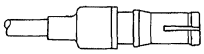
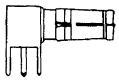
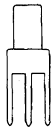
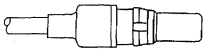
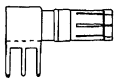
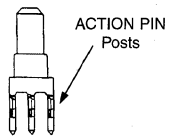
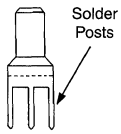
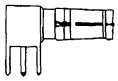
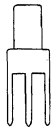
[1]Consult AMP for availability

SOURCE: Catalog 82618

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

AMP-HDI Hybrid Connectors
(Continued)

Power and Coaxial Contacts (Size 8) for Three- and Four-Row AMP-HDI Hybrid Connectors

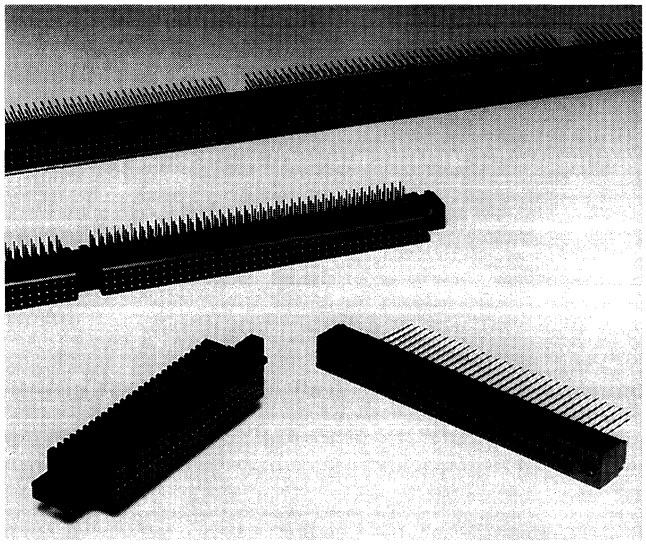
	Contacts for Receptacle Assemblies	Contacts for Pin Assemblies
Cable-to-Cable Power Applications	 Straight Socket Contact Part Number 211161-1	 Straight Pin Contact Part Number 211159-1
Cable-to-Cable Coaxial Applications	 Straight Socket Contact Part Number 228596-1	 Straight Pin Contact Part Number 228618-1
Cable-to-Board Power Applications	 Straight Socket Contact Part Number 211161-1  Right-Angle Socket Contact Part Number 532823-1	 Vertical Pin Contact Part Number 534135-1* Straight Pin Contact Part Number 211159-1
Cable-to-Board Coaxial Applications	 Straight Socket Contact Part Number 228596-1  Right-Angle Socket Contact Part Number 221162-1	 Vertical Pin Contact Part Number 221158-1*  Straight Pin Contact Part Number 228618-1
Board-to-Board Power Applications	 Right-Angle Socket Contact Part Number 532823-1 (Gold Solder Tail) Part Number 532823-2 (Tin-Lead Solder Tail)	 Vertical Pin Contact Part Number 534135-1*  Vertical Pin Contact Part Number 532824-1*
Board-to-Board Coaxial Applications	 Right-Angle Socket Contact Part Number 221162-1	 Vertical Pin Contact Part Number 221158-1*

*These contacts are used in square power ports only; all other contacts are used in round power ports.
Extraction Tool **Part No. 58095-2** is used to remove coaxial and power contacts from AMP-HDI hybrid connector housings.

SOURCE: Catalog 82618

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

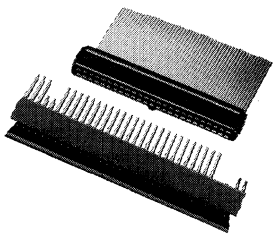
AMP-HDI Connectors



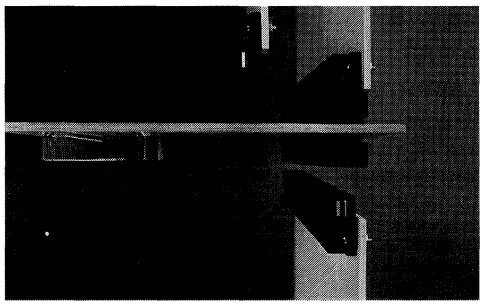
Product Facts

- Mateable with Vertical Receptacles
- High pin count—through 684 positions
- Four areas of contact per connection
- Available with ACTION PIN contacts and solder posts on pin assemblies
- Pin assemblies available with both vertical and right-angle posts
- Inserts into standard .100 [2.54] grid
- Keying system provides 64 combinations without loss of contact count
- High temperature material permits vapor phase reflow soldering
- Low mating forces
- Highly economical for quality and density
- Recognized under the Component Program of Underwriters Laboratories Inc., File No. E28476
- Certified by Canadian Standards Association, File No. LR 7189
- Free 3D and 2D CAD images—See page 56

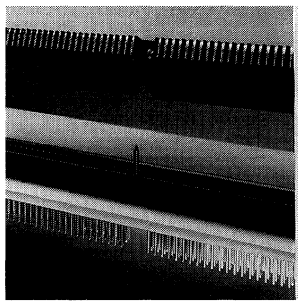
Typical Applications



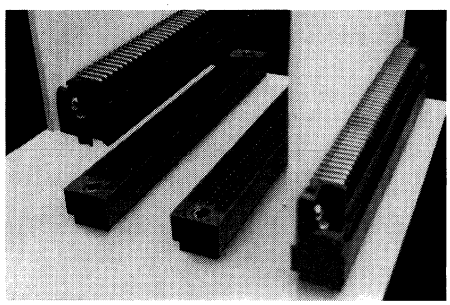
Selectively Loaded Connector



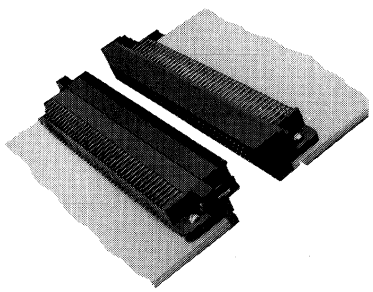
Shrouds



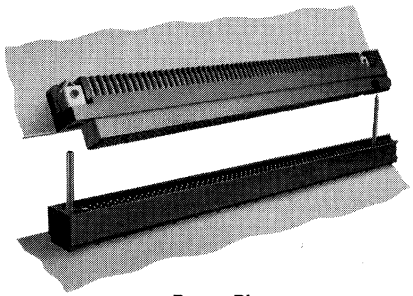
Typical Guide Pin Application



Typical Mother/Daughter Application



Extender Board Application



Power Pins

SOURCE: Catalog 82618

AMP-HDI Connectors
(Continued)

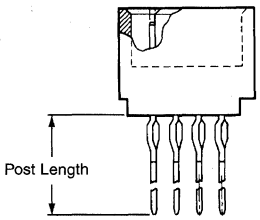
Four-Row Pin Assemblies Without Guide Holes

Vertical Posts

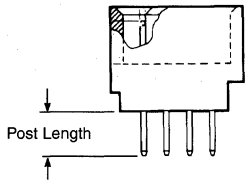
Contacts—Phosphor bronze, plated as follows:

A—.000030 [0.00076] gold in contact area

B—Gold flash over .000050-.000100 [0.00127-0.00254] nickel on entire contact, with .000030 [0.00076] gold in contact area and for .200 [5.08] from tip of wrap-type post



ACTION PIN Posts (Solderless Press-fit)



Solder Posts

Mates with—Right-Angle Solder Post Receptacle Assemblies, Page 3295; Vertical Receptacle Assemblies with ACTION PIN and Solder Posts, Page 3307; and TBC Right-Angle Receptacle Assemblies with Solder Posts, Page 3310.

Note: 200 Pos. Housing Dim. (Typ.)—5.750 [146.05] L x .580 [14.73] W x .462 [11.73] H

No. of Pos.	Post Length	Contact Finish	Part Numbers*		Shroud Part No.**
			ACTION PIN Posts	Solder Posts	
100	**.733** [18.62]	A	532435-1	—	—
	.533 [13.54]	A	533254-1	—	533562-1
		B	533270-1	—	
	.250 [6.35]	A	532448-1	—	—
	.190 [4.83]	A	—	532436-1	—
128	**.733** [18.62]	A	532435-3	—	—
	.533 [13.54]	A	533254-3	—	—
		B	533270-3	—	—
	.250 [6.35]	A	532448-3	—	—
	.190 [4.83]	A	—	532436-3	—
140	**.250** [6.35]	A	532448-4	—	—
160	**.733** [18.62]	A	532435-5	—	—
	.533 [13.54]	B	533270-5	—	—
	.250 [6.35]	A	532448-5	—	—
	.190 [4.83]	A	—	1-532436-5	—
180	**.733** [18.62]	A	532435-6	—	—
	.533 [13.54]	A	533254-6	—	—
	.190 [4.83]	A	—	1-532436-6	—
200	**.733** [18.62]	B	532818-7	—	—
	.533 [13.54]	B	533270-7	—	533562-7
	.250 [6.35]	A	532448-7	—	—
	.190 [4.83]	A	—	1-532436-7	—
220	**.533** [13.54]	A	533254-8	—	—
	.190 [4.83]	A	—	1-532436-8	—
240	**.733** [18.62]	A	532435-9	—	—
	.533 [13.54]	B	533270-9	—	533562-9
	.250 [6.35]	A	532448-9	—	—
	.190 [4.83]	A	—	1-532436-9	—
260	**.533** [13.54]	B	1-533270-0	—	—
280	**.250** [6.35]	A	1-532448-1	—	—
300	**.733** [18.62]	A	1-532435-2	—	—
	.533 [13.54]	A	533254-4	—	1-533562-2
		B	1-533270-2	—	
	.250 [6.35]	A	1-532448-2	—	—
	.190 [4.83]	A	—	1-532436-2	—

*Connectors with other post style/length/plating combinations can be made available, consult AMP.
**These shrouds are to be used with connectors having a post length of .533 [13.54] and with .093-.125 [2.36-3.18] thick pc boards. Other sizes can be made available, consult AMP.
Note: Housing with center mounting is recommended for assemblies having 75 contacts or more per row.

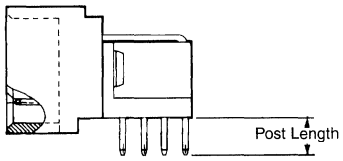
AMP-HDI Connectors
(Continued)

Four-Row Pin Assemblies Without Guide Holes
(Continued)

Right-Angle Solder Posts

Contacts—Phosphor bronze, plated .000030 [0.00076] gold in contact area

Mates with—Receptacle Assemblies with Right-Angle Solder Posts, Page 3295; Vertical Receptacle Assemblies with ACTION PIN and Solder Posts, Page 3307; and TBC Receptacle Assemblies with Right-Angle Solder Posts, Page 3310



Note: 200 Pos. Housing Dim. (Typ.)—5.750 [146.05] L x .882 [22.40] W x .580 [14.73] H

No. of Pos.	Part Numbers* .180 [4.57] Post Length	.120 [3.05] Post Length
100	533444-1	533286-1
120	—	533286-2
128	533444-3	533286-3
140	533444-4	—
160	533444-5	533286-5
180	—	533286-6
200	533444-7	533286-7
240	533444-9	533286-9
280	1-533444-1	—
300	—	1-533286-2

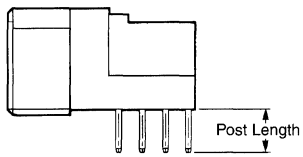
*Connectors with other post lengths can be made available, consult AMP.
Note: Housing with center guide is recommended for assemblies having 75 contacts or more per row.

Four-Row Receptacle Assemblies Without Guide Holes

Right-Angle Solder Posts

Contacts—Beryllium copper, plated .000030 [0.00076] gold in contact area

Mates with—Pin Assemblies with Vertical Posts and Right-Angle Solder Posts, Pages 3294 and 3295



Note: 200 Pos. Housing Dim. (Typ.)—5.750 [146.05] L x .824 [20.93] W x .460 [11.68] H

No. of Pos.	Part Numbers* .180 [4.57] Post Length	.120 [3.05] Post Length
100	532434-1	532903-2
120	532434-2	1-532903-2
128	532434-3	532903-3
140	532434-4	532903-4
160	532434-5	532903-5
180	532434-6	532903-6
200	532434-7	532903-7
220	532434-8	—
240	532434-9	532903-9
260	1-532434-0	1-532903-0
280	1-532434-1	1-532903-1
300	1-532434-2	532903-1

*Connectors with other post lengths can be made available, consult AMP.
Note: Housing with center guide is recommended for assemblies having 75 contacts or more per now.

SOURCE: Catalog 82618

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

AMP-HDI Connectors
(Continued)

Four-Row Pin Assemblies With One Guide Hole

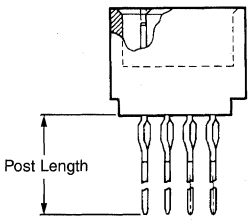
Vertical Posts

Contacts—Phosphor bronze, plated as follows:

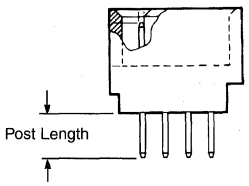
A—.000030 [0.00076] gold in contact area

B—Gold flash over .000050-.000100 [0.00127-0.00254] nickel on entire contact, with .000030 [0.00076] gold in contact area and for .200 [5.08] from tip of wrap-type post

Mates with—Receptacle Assemblies with Right-Angle Solder Posts, Page 3297 and TBC Receptacle Assemblies with Right-Angle Solder Posts, Page 3310



ACTION PIN Posts (Solderless press-fit)



Solder Posts

Note: 368 Pos. Housing Dim. (Typ.)—10.250 [260.35] L x .580 [14.73] W x .462 [11.73] H

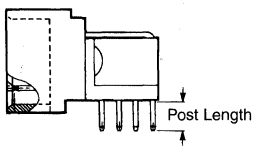
No. of Pos.	Post Length	Contact Finish	Part Numbers* ACTION PIN Posts	Part Numbers* Solder Posts	Shroud Part No.**
320	**.733** 18.62	A	532921-1	—	—
	.533 13.54	A	533445-1	—	—
	.250 6.35	A	533447-1	—	—
	.190 4.83	A	—	533083-1	—
344	**.533** 13.54	B	532933-2	—	—
	.250 6.35	A	533447-2	—	—
368	**.733** 18.62	A	532921-3	—	—
	.533 13.54	B	532933-3	—	533563-3
	.250 6.35	A	533447-3	—	—
392	**.190** 4.83	A	—	533083-4	—
416	**.250** 6.35	A	533447-5	—	—
	.190 4.83	A	—	533083-5	—
440	**.733** 18.62	A	532921-6	—	—
	.533 13.54	A	532933-6	—	—
	.250 6.35	A	533447-6	—	—
464	**.190** 4.83	A	—	533083-7	—
488	**.533** 13.54	A	533445-8	—	—
		B	532933-8	—	—

*Connectors with other post style/length/plating combinations can be made available, consult AMP.
**These shrouds are to be used with connectors having a post length of .533 [13.54] and with .093-.125 [2.36-3.18] thick pc boards. Other sizes can be made available, consult AMP.
Note: Housing with center mounting is recommended for assemblies having 75 contacts or more per row.

Right-Angle Solder Posts

Contacts—Phosphor bronze, plated .000030 [0.00076] gold in contact area

Mates with—Receptacle Assemblies with Right-Angle Solder Posts, Page 3297; and TBC Receptacle Assemblies with Right-Angle Solder Posts, Page 3310



Note: 368 Pos. Housing Dim. (Typ.) 10.250 [260.35] L x .882 [22.40] W x .580 [14.73] H

No. of Pos.	Part Numbers* .180 [4.57] Post Length
368	533523-3
416	533523-5
488	533523-8

*Connectors with other post lengths can be made available, consult AMP.
Note: Housing with center guide is recommended for assemblies having 75 contacts or more per row.

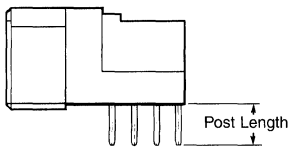
AMP-HDI Connectors
(Continued)

Four-Row Receptacle Assemblies With One Guide Hole

Right-Angle Solder Posts

Contacts—Beryllium copper, plated .000030 [0.00076] gold in contact area

Mates with—Pin Assemblies with Vertical Posts and Right-Angle Solder Posts, Page 3296



Note: 368 Pos. Housing Dim. (Typ.)—10.250 [260.35] L x .824 [20.93] W x .460 [11.68] H

No. of Pos.	Part Numbers* .180 [4.57] Post Length	Part Numbers* .120 [3.05] Post Length
320	532920-1	533443-1
344	532920-2	—
368	532920-3	533443-3
392	532920-4	—
416	532920-5	533443-5
440	532920-6	533443-6
464	—	533443-7
488	532920-8	533443-8

*Connectors with other post lengths can be made available, consult AMP.
Note: Housing with center mounting is recommended for assemblies having 75 contacts or more per row.

Four-Row Pin Assemblies With Two Guide Holes

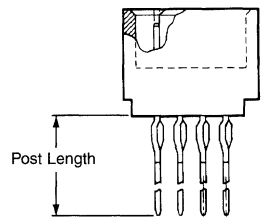
Vertical Posts

Contacts—Phosphor bronze, plated as follows:

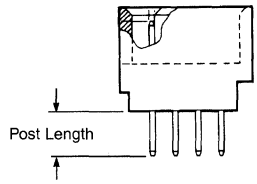
A—.000030 [0.00076] gold in contact area

B—Gold flash over .000050-.000100 [0.00127-0.00254] nickel on entire contact, with .000030 [0.00076] gold in contact area and for .200 [5.08] from tip of wrap-type post

Mates with—Receptacle Assemblies with Right-Angle Solder Posts, Page 3298; and TBC Receptacle Assemblies with Right-Angle Solder Posts, Page 3310



ACTION PIN Posts (Solderless press-fit)



Solder Posts

Note: 540 Pos. Housing Dim. (Typ.)—14.850 [377.19] L x .580 [14.73] W x .462 [11.73] H

No. of Pos.	Post Length	Contact Finish	Part Numbers* ACTION PIN Posts	Part Numbers* Solder Posts	Shroud Part No.**
516	.733 18.62	B	533404-1	—	—
	.250 6.35	A	533448-1	—	—
540	.733 18.62	A	532841-2	—	—
	.533 13.54	A	533056-2	—	533564-2
		B	532837-1	—	
	.250 6.35	A	533448-2	—	—
	.190 4.83	A	—	532944-2	—
612	.250 6.35	A	533448-5	—	—
636	.733 18.62	B	533404-6	—	—
	.250 6.35	A	533448-6	—	—
684	.733 18.62	A	532841-8	—	—

*Connectors with other post style/length/plating combinations can be made available, consult AMP.
**These shrouds are to be used with connectors having a post length of .533 [13.54] and with .093-.125 [2.36-3.18] thick pc boards. Other sizes can be made available, consult AMP.
Note: Housing with center mounting is recommended for assemblies having 75 contacts or more per row.

SOURCE: Catalog 82618

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

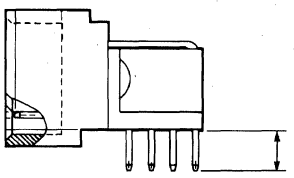
AMP-HDI Connectors
(Continued)

Four-Row Pin Assemblies With Two Guide Holes
(Continued)

Right-Angle Solder Posts

Contacts—Phosphor bronze, plated .000030 [0.00076] gold in contact area

Mates with—Receptacle Assemblies with Right-Angle Solder Posts, Page 3298; and TBC Receptacle Assemblies with Right-Angle Solder Posts, Page 3310



Note: 540 Pos. Housing Dim. (Typ.)—14.850 [377.19] L x .882 [22.4] W x .580 [14.73] H

No. of Pos.	Part Numbers* .180 [4.57] Post Length
540	533525-2
636	533525-6

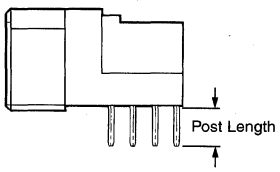
*Connectors with other post lengths can be made available, consult AMP.
Note: Housing with center guide is recommended for assemblies having 75 contacts or more per row.

Four-Row Receptacle Assemblies With Two Guide Holes

Right-Angle Solder Posts

Contacts—Beryllium copper, plated .000030 [0.00076] gold in contact area

Mates with—Pin Assemblies with Vertical Posts and Right-Angle Solder Posts, Pages 3297 and 3298



Note: 540 Pos. Housing Dim. (Typ.)—14.850 [377.19] L x .824 [20.93] W x .460 [11.68] H

No. of Pos.	Part Numbers* 180 [4.57] Post Length	.120 [3.05] Post Length
516	532840-1	533449-1
540	532840-2	533449-2
564	—	533449-3
588	—	533449-4
612	532840-5	533449-5
636	532840-6	533449-6
660	—	533449-7
684	532840-8	533449-8

*Connectors with other post lengths can be made available, consult AMP.
Note: Housing with center mounting is recommended for assemblies having 75 contacts or more per row.

Three-Row Pin Assemblies Without Guide Holes

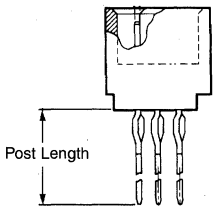
Vertical Posts

Contacts—Phosphor bronze, plated as follows:

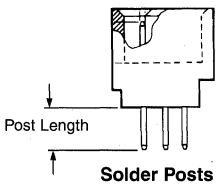
A— .000030 [0.00076] gold in contact area

B— Gold flash over .000050-.000100 [0.00127-0.00254] nickel on entire contact, with .000030 [0.00076] gold in contact area and for .200 [5.08] from tip of wrap-type post

Mates with—Receptacle Assemblies with Right-Angle Solder Posts, Pages 3299 and 3310; and Vertical Receptacle Assemblies with ACTION PIN and Solder Posts, Page 3307



ACTION PIN Posts (Solderless press-fit)



Solder Posts

Note: 150 Pos. Housing Dim. (Typ.)—5.750 [146.05] L x .480 [12.19] W x .462 [11.73] H

No. of Pos.	Post Length	Contact Finish	Part Numbers* ACTION PIN Posts	Part Numbers* Solder Posts	Shroud Part No.**
75	**.190** [4.83]	A	—	532433-1	—
90	**.190** [4.83]	A	—	532433-2	—
96	**.533** [13.54]	A	533061-3	—	533558-3
	.250 [6.35]	A	532447-3	—	—
	.190 [4.83]	A	—	532433-3	—
105	**.190** [4.83]	A	—	532433-4	—
120	**.733** [18.62]	A	532432-5	—	—
	.533 [13.54]	A	533061-5	—	—
		B	533093-5	—	—
	.250 [6.35]	A	532447-5	—	—
	.190 [4.83]	A	—	532433-5	—
150	**.533** [13.54]	B	533093-7	—	533558-7
	.250 [6.35]	A	532447-7	—	—
	.190 [4.83]	A	—	532433-7	—
165	**.533** [13.54]	A	533061-8	—	—
	.250 [6.35]	A	532447-8	—	—
	.190 [4.83]	A	—	532433-8	—
180	**.533** [13.54]	A	533061-9	—	533558-9
		B	533093-9	—	
	.250 [6.35]	A	532447-9	—	—
	.190 [4.83]	A	—	532433-9	—
195	**.250** [6.35]	A	1-532447-0	—	—
	.190 [4.83]	A	—	1-532433-0	—
210	**.733** [18.62]	A	1-532432-1	—	—
	.533 [13.54]	B	1-533093-1	—	—
	.250 [6.35]	A	1-532447-1	—	—
	.190 [4.83]	A	—	1-532433-1	—
225	**.733** [18.62]	A	1-532432-2	—	—
	.533 [13.54]	B	1-533093-2	—	—
	.250 [6.35]	A	1-532447-2	—	—

*Connectors with other post style/length/plating combinations can be made available, consult AMP.
**These shrouds are to be used with connectors having a post length of .533 [13.54] and with .093-.125 [2.36-3.18] thick pc boards. Other sizes can be made available, consult AMP.
Note: Housing with center mounting is recommended for assemblies having 75 contacts or more per row.

SOURCE: Catalog 82618

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

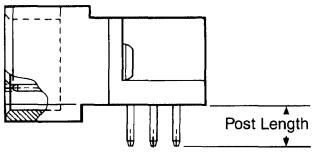
AMP-HDI Connectors
(Continued)

Three-Row Pin Assemblies Without Guide Holes
(Continued)

Right-Angle Solder Posts

Contacts—Phosphor bronze, plated .000030 [0.00076] gold in contact area

Mates with—Receptacle Assemblies with Right-Angle Solder Posts, Pages 3299 and 3310; and Vertical Receptacle Assemblies with ACTION PIN and Solder Posts, Page 3307



Note: 150 Pos. Housing Dim. (Typ.)—5.750 [146.05] L x .882 [22.4] W x .480 [12.19] H

No. of Pos.	Part Numbers* .180 [4.57] Post Length	.120 [3.05] Post Length
75	533420-1	—
96	—	533288-3
120	—	533288-5
150	—	533288-7
165	533420-8	—
180	533420-9	—
210	1-533420-1	1-533288-1
225	1-533420-2	1-533288-2

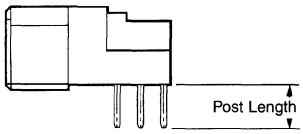
*Connectors with other post lengths can be made available, consult AMP.
Note: Housing with center guide is recommended for assemblies having 75 contacts or more per row.

Three-Row Receptacle Assemblies Without Guide Holes

Right-Angle Solder Posts

Contacts—Beryllium copper, plated .000030 [0.00076] gold in contact area

Mates with—Pin Assemblies with Vertical Posts and Right-Angle Solder Posts, Pages 3298 and 3299



Note: 150 Pos. Housing Dim. (Typ.)—5.750 [146.05] L x .724 [18.39] W x .360 [9.14] H

No. of Pos.	Part Numbers* .180 [4.57] Post Length	.120 [3.05] Post Length
75	532431-1	533268-1
90	—	533268-2
96	532431-3	533268-3
105	—	533268-4
120	532431-5	533268-5
135	—	533268-6
150	532431-7	533268-7
165	532431-8	—
180	532431-9	533268-9
210	1-532431-1	1-533268-1
225	—	1-533268-2

*Connectors with other post lengths can be made available, consult AMP.
Note: Housing with center mounting is recommended for assemblies having 75 contacts or more per row.

Three-Row Pin Assemblies With One Guide Hole

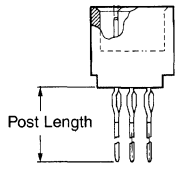
Vertical Posts

Contacts—Phosphor bronze, plated as follows:

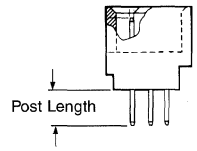
A—.000030 [0.00076] gold in contact area

B—Gold flash over .000050-.000100 [0.00127-0.00254] nickel on entire contact, with .000030 [0.00076] gold in contact area and for .200 [5.08] from tip of wrap-type post

Mates with—Receptacle Assemblies with Right-Angle Solder Posts, Pages 3300 and 3310



ACTION PIN Posts (Solderless press-fit)



Solder Posts

Note: 312 Pos. Housing Dim. (Typ.)—11.450 [290.83] L x .480 [12.19] W x .462 [11.73] H

No. of Pos.	Post Length	Contact Finish	Part Numbers* ACTION PIN Posts	Solder Posts
240	**.250** 6.35	A	533294-1	—
276	**.733** 18.62	A	532919-3	—
	.190 4.83	A	—	532931-3
294	**.733** 18.62	A	532919-4	—
	.250 6.35	A	533294-4	—
312	**.250** 6.35	A	533294-5	—
330	**.733** 18.62	A	532919-6	—
	.533 13.54	A	533513-6	—
	.250 6.35	A	533294-6	—
366	**.733** 18.62	B	533296-8	—
	.533 13.54	A	533513-8	—

*Connectors with other post style/length/plating combinations can be made available, consult AMP.
Notes: 1. Housing with center mounting is recommended for assemblies having 75 contacts or more per row.
2. Shrouds can be made available, consult AMP.

SOURCE: Catalog 82618

Specifications subject to change.
1-800-522-6752 Product Information Center/ AMP FAX Service
1-800-722-1111 Tooling/Technical Assistance Center

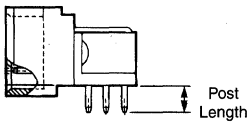
AMP-HDI Connectors
(Continued)

Three-Row Pin Assemblies With One Guide Hole
(Continued)

Right-Angle Solder Posts

Contacts—Phosphor bronze, plated .000030 [0.00076] gold in contact area

Mates with—Receptacle Assemblies with Right-Angle Solder Posts, Pages 3300 and 3310



Note: 312 Pos. Housing Dim. (Typ.)—11.450 [290.83] L x .882 [22.40] W x .480 [12.19] H

No. of Pos.	Part Numbers* .180 [4.57] Post Length	.120 [3.05] Post Length
240	—	533519-1
312	—	533519-5
366	533518-8	533519-8

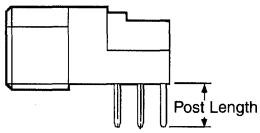
*Connectors with other post lengths can be made available, consult AMP.
Note: Housing with center guide is recommended for assemblies having 75 contacts or more per row.

Three-Row Receptacle Assemblies With One Guide Hole

Right-Angle Solder Posts

Contacts—Beryllium copper, plated .000030 [0.00076] gold in contact area

Mates with—Pin Assemblies with Vertical Posts and Right-Angle Solder Posts, Pages 3299 and 3300



Note: 312 Pos. Housing Dim. (Typ.)—11.450 [290.83] L x .724 [18.39] W x .360 [9.14] H

No. of Pos.	Part Numbers* .180 [4.57] Post Length	.120 [3.05] Post Length
240	532918-1	533514-1
276	—	533514-3
294	532918-4	533514-4
312	532918-5	533514-5
330	532918-6	533514-6
348	532918-7	533514-7
366	532918-8	—

*Connectors with other post lengths can be made available, consult AMP.
Note: Housing with center guide is recommended for assemblies having 75 contacts or more per row.

Three-Row Pin Assemblies With Two Guide Holes

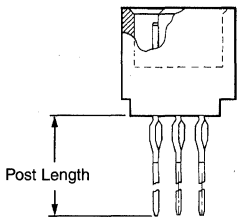
Vertical Posts

Contacts—Phosphor bronze, plated as follows:

A—.000030 [0.00076] gold in contact area

B—Gold flash over .000050-.000100 [0.00127-0.00254] nickel on entire contact, with .000030 [0.00076] gold in contact area and for .200 [5.08] from tip of wrap-type post

Mates with—Receptacle Assemblies with Right-Angle Solder Posts, Pages 3301 and 3310



ACTION PIN Posts (Solderless press-fit)

Note: 387 Pos. Housing Dim. (Typ.)—14.250 [361.95] L x .480 [12.19] W x .462 [11.73] H

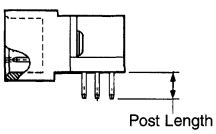
No. of Pos.	Post Length	Contact Finish	ACTION PIN Post Part Numbers
387	.733 18.62	A	532839-1
	.533 13.54	B	533426-1
	.250 6.35	A	533094-1
405	.733 18.62	A	532839-2
	.533 13.54	B	533426-2
	.250 6.35	A	533094-2

*Connectors with other post style/length/plating combinations can be made available, consult AMP.
Notes: 1. Housing with center mounting is recommended for assemblies having 75 contacts or more per row.
2. Shrouds can be made available, consult AMP.

Right-Angle Solder Posts

Contacts—Phosphor bronze, plated .000030 [0.00076] gold in contact area

Mates with—Receptacle Assemblies with Right-Angle Solder Posts, Pages 3301 and 3310



Note: 387 Pos. Housing Dim. (Typ.)—14.250 [361.95] L x .882 [22.40] W x .480 [12.19] H

No. of Pos.	Part Number* .180 [4.57] Post Length
387	533520-1

*Connectors with other post lengths can be made available, consult AMP.
Note: Housing with center guide is recommended for assemblies having 75 contacts or more per row.

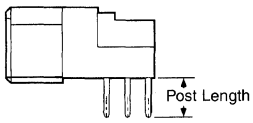
AMP-HDI Connectors
(Continued)

Three-Row Receptacle Assemblies With Two Guide Holes

Right-Angle Solder Posts

Contacts—Beryllium copper, plated .000030 [0.00076] gold in contact area

Mates with—Pin Assemblies with Vertical Posts and Right-Angle Solder Posts, Page 3300



Note: 387 Pos. Housing Dim. (Typ.)—14.250 [361.95] L x .724 [18.39] W x .360 [9.14] H

No. of Pos.	Part Numbers* .180 [4.57] Post Length	.120 [3.05] Post Length
387	532838-1	533425-1
405	532838-2	533425-2

*Connectors with other post lengths can be made available, consult AMP.
Note: Housing with center mounting is recommended for assemblies having 75 contacts or more per row.

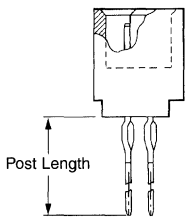
Two-Row Pin Assemblies Without Guide Holes

Vertical Posts

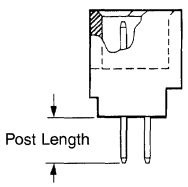
Contacts—Phosphor bronze, plated as follows:

A—.000030 [0.00076] gold in contact area
B—Gold flash over .000050-.000100 [0.00127-0.00254] nickel on entire contact, with .000030 [0.00076] gold in contact area and for .200 [5.08] from tip of wrap-type post

Mates with—Receptacle Assemblies with Right-Angle Solder Posts, Page 3302; and Vertical Receptacle Assemblies with ACTION PIN and Solder Posts, Page 3307



ACTION PIN Posts (Solderless press-fit)



Solder Posts

Note: 100 Pos. Housing Dim. (Typ.)—5.750 [146.05] L x .380 [9.65] W x .462 [11.73] H

No. of Pos.	Post Length	Contact Finish	Part Numbers* ACTION PIN Posts	Solder Posts	Shroud Part No.**
20	**.190** [4.83]	A	—	532430-1	—
40	**.190** [4.83]	A	—	532430-3	—
50	**.533** [13.54]	A	533060-4	—	—
	.250 [6.35]	A	532446-4	—	—
60	**.733** [18.62]	A	532429-5	—	—
	.533 [13.54]	B	533091-5	—	—
	.250 [6.35]	A	532446-5	—	—
	.190 [4.83]	A	—	532430-5	—
70	**.733** [18.62]	A	532429-6	—	–
	.250 [6.35]	A	532446-6	—	—
80	**.533** [13.54]	A	533060-7	—	533557-7
		B	533091-7	—	
	.250 [6.35]	A	532446-7	—	—
	.190 [4.83]	A	—	532430-7	—
100	**.533** [13.54]	A	533060-9	—	—
	.250 [6.35]	A	532446-9	—	—
	.190 [4.83]	A	—	532430-9	—
110	**.533** [13.54]	B	1-533091-0	—	—
	.190 [4.83]	A	—	1-532430-0	—
120	**.533** [13.54]	B	1-533091-1	—	—
	.250 [6.35]	A	1-532446-1	—	—
140	**.733** [18.62]	A	1-532429-3	—	—
	.533 [13.54]	A	1-533060-3	—	—
	.190 [4.83]	A	—	1-532430-3	—
150	**.733** [18.62]	A	1-532429-4	—	—
	.533 [13.54]	A	1-533060-4	—	—
		B	1-533091-4	—	—
	.250 [6.35]	A	1-532446-4	—	—

*Connectors with other post style/length/plating combinations can be made available, consult AMP.
**These shrouds are to be used with connectors having a post length of .533 [13.54] and with .093-.125 [2.36-3.18] thick pc boards. Other sizes can be made available, consult AMP.

SOURCE: Catalog 82618

Specifications subject to change.

1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

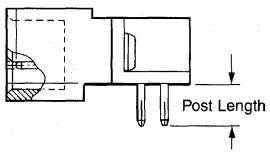
AMP-HDI Connectors
(Continued)

Two-Row Pin Assemblies Without Guide Holes
(Continued)

Right-Angle Solder Posts

Contacts—Phosphor bronze, plated .000030 [0.00076] gold in contact area

Mates with—Receptacle Assemblies with Right-Angle Solder Posts, Page 3302; and Vertical Receptacle Assemblies with ACTION PIN and Solder Posts, Page 3307



Note: 100 Pos. Housing Dim. (Typ.)—5.750 [146.05] L x .807 [20.49] W x .380 [9.65] H

No. of Pos.	Part Numbers* .180 [4.57] Post Length	.120 [3.05] Post Length
50	—	533295-4
60	533515-5	—
100	—	533295-9
150	—	1-533295-4

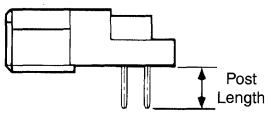
*Connectors with other post lengths can be made available, consult AMP.

Two-Row Receptacle Assemblies Without Guide Holes

Right-Angle Solder Posts

Contacts—Beryllium copper, plated .000030 [0.00076] gold in contact area

Mates with—Pin Assemblies with Vertical Posts and Right-Angle Solder Posts, Pages 3301 and 3302



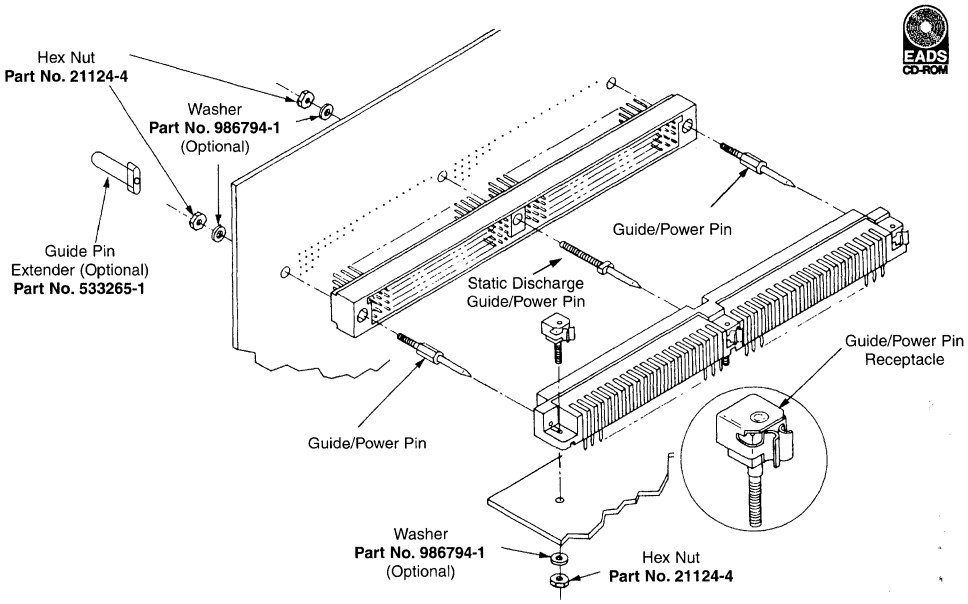
Note: 100 Pos. Housing Dim. (Typ.)—5.750 [146.05] L x .724 [18.39] W x .260 [6.6] H

No. of Pos.	Part Numbers* .180 [4.57] Post Length	.120 [3.05] Post Length
20	532428-1	—
30	—	532825-2
40	532428-3	532825-3
50	532428-4	532825-4
60	532428-5	532825-5
70	532428-6	532825-6
80	532428-7	532825-7
100	532428-9	532825-9
110	1-532428-0	—
120	1-532428-1	1-532825-1
140	1-532428-3	1-532825-3
150	1-532428-4	1-532825-4

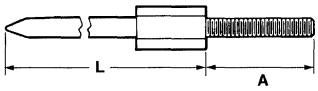
*Connectors with other post lengths can be made available, consult AMP.

AMP-HDI Connectors and Vertical Receptacle Accessories

Power Hardware and Applications (for Three- and Four-Row Connectors Only)

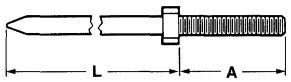


Guide/Power Pins (for use in End Guide Holes)



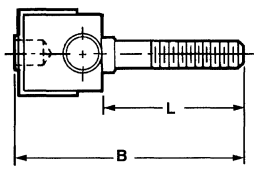
Dimensions				Finish	Part Numbers
A		L			
Inch	mm	Inch	mm		
.375	9.52	1.025	26.04	None	533082-1
		1.025	26.04	Gold/Nickel	533082-3
		1.195	30.35	Gold/Nickel	533082-4
.475	12.07	1.195	30.35	Gold/Nickel	533082-6
.475	12.07	1.025	26.04	Gold/Nickel	533082-9
.560	14.22	1.025	26.04	Gold/Nickel	1-533082-1

Static Discharge Guide/Power Pins (for use in Center Guide Holes)



Dimensions				Part Numbers
A		L		
Inch	mm	Inch	mm	
.475	12.07	1.150	29.21	532828-2
.475	12.07	.980	24.89	532828-5
.562	14.27	.980	24.89	533400-2
.475	12.07	1.025	26.04	532828-8
.562	14.27	1.025	26.04	533400-5
.475	12.07	1.195	30.35	1-532828-1

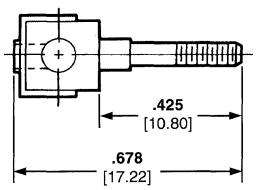
Guide Pin/Power Receptacles (for use in End Mounts)



Dimensions				Part Numbers
B		L		
Inch	mm	Inch	mm	
.678	17.22	.425	10.80	532924-1
.578	14.68	.325	8.26	532924-3
.538	13.67	.285	7.25	532924-4

Guide Pin/Power Receptacles (for use in Center Mounts)

Part No. 533065-1



SOURCE: Catalog 82618

Specifications subject to change.
1-800-522-6752
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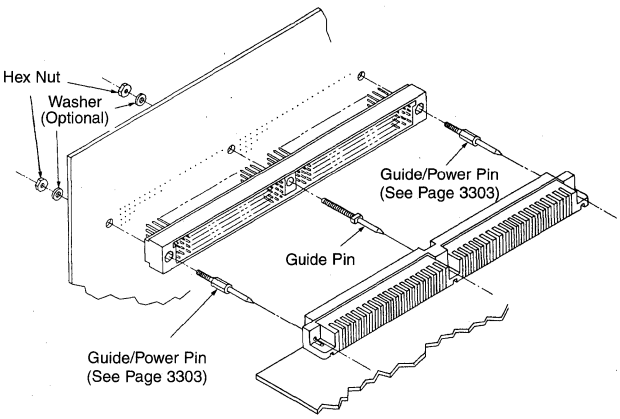
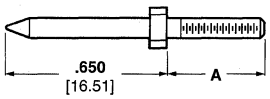
1-800-722-1111
Tooling/Technical Assistance Center

AMP-HDI Connectors and Vertical Receptacle Accessories
(Continued)

Guidance Hardware and Applications

Guide Pin Kits (for use in Center Guide Holes)





Washer
Part No. 986794-1

Hex Nut
Part No. 21124-4

Dimension A	Guide Pin Part Numbers	Guide Pin Kit Numbers
.475 12.06	532807-1	532808-1
.562 14.27	532807-2	532808-2
.750 19.05	532807-3	532808-3

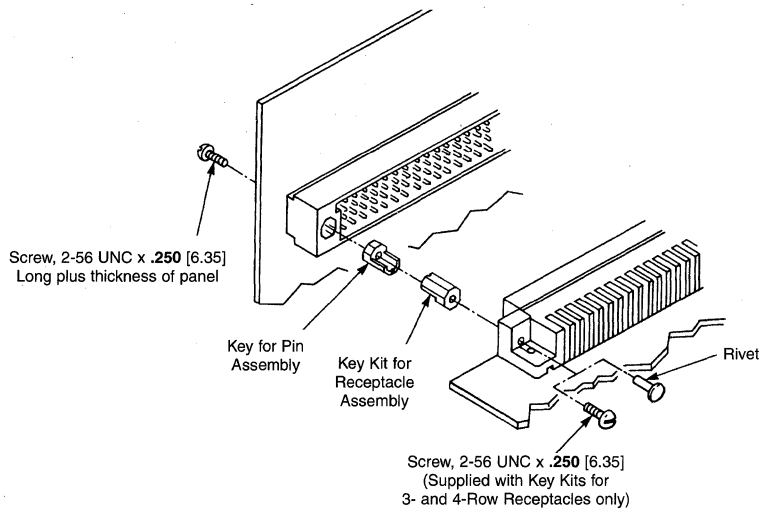
Note: Each kit includes a guide pin, washer and nut. All parts may be purchased separately.

Keying Hardware and Applications

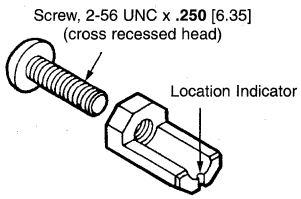
Keys for Pin Assemblies

Key Part No. 530341-1
Key Part No. 530341-6 (contains 2 per package)

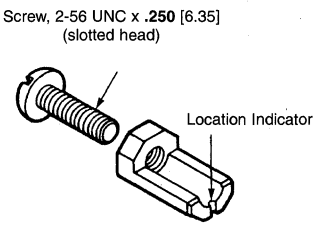
Note: Customer must supply screws, .250 [6.35] min. long, plus thickness of panel.



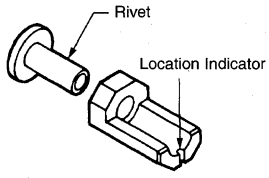
Key Kits for Three- and Four-Row Receptacles



Kit No. 530341-7
(includes 2 keys and 2 screws)

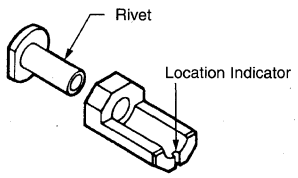


Kit No. 530341-3
(includes 2 keys and 2 screws)



Kit No. 530341-5
(includes 2 keys and 2 rivets)
Note: Use Clinching Tool **Part No. 91117-3**

Key Kit for Two-Row Receptacles

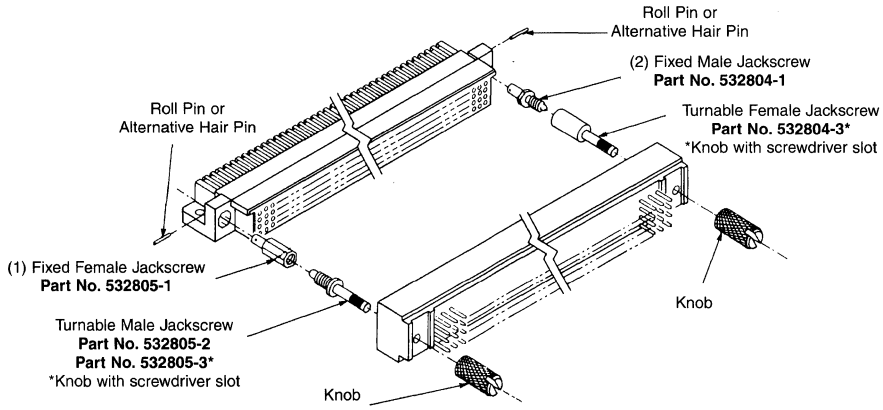


Kit No. 530341-4
(includes 2 keys and 2 rivets)
Note: Use Clinching Tool **Part No. 91117-5**

AMP-HDI Connectors and Vertical Receptacle Accessories
(Continued)

Mating Hardware and Applications

Jackscrews for Three- and Four-Row Connectors Only



Hair Pin
(Alternative)

Material and Finish	Hair Pin Part Numbers
Plain Stainless Steel	534380-1
Passivated Stainless Steel	534380-2

(1) Fixed Female Jackscrew
Threaded (Alternative)

Length	Material and Finish	Fixed Female (Threaded) Part Numbers
.750 19.05	Plain Stainless Steel	533424-1
	Passivated Stainless Steel	533424-2
.625 15.88	Plain Stainless Steel	533424-3
	Passivated Stainless Steel	533424-4
.525 14.61	Plain Stainless Steel	533424-5
	Passivated Stainless Steel	533424-6

(2) Fixed Male Jackscrew
Threaded (Alternative)

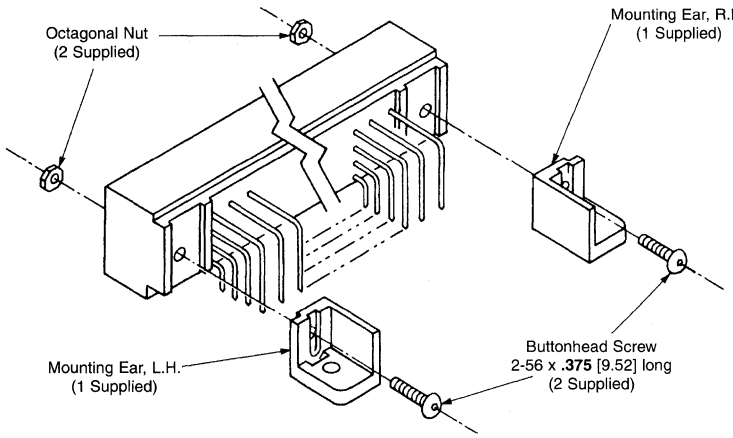
Length	Material and Finish	Fixed Male (Threaded) Part Numbers
.695 17.65	Plain Stainless Steel	533423-1
	Passivated Stainless Steel	533423-2
.960 24.38	Plain Stainless Steel	533423-3
	Passivated Stainless Steel	533423-4

Mounting Hardware and Applications

Mounting Ear Kits

For Three- and Four-Row Right-Angle Pin Assemblies
Kit Part No. 533050-1

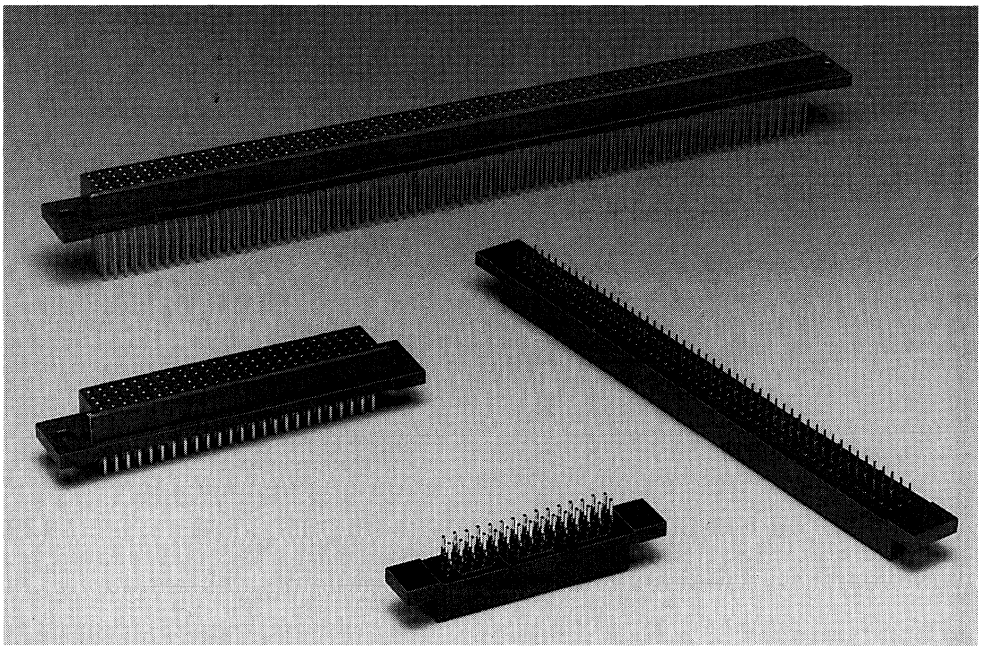
For Two-Row Right-Angle Pin Assemblies
Kit Part No. 533069-1



SOURCE: Catalog 82618

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

Vertical Receptacles with ACTION PIN and Solder Post Contacts

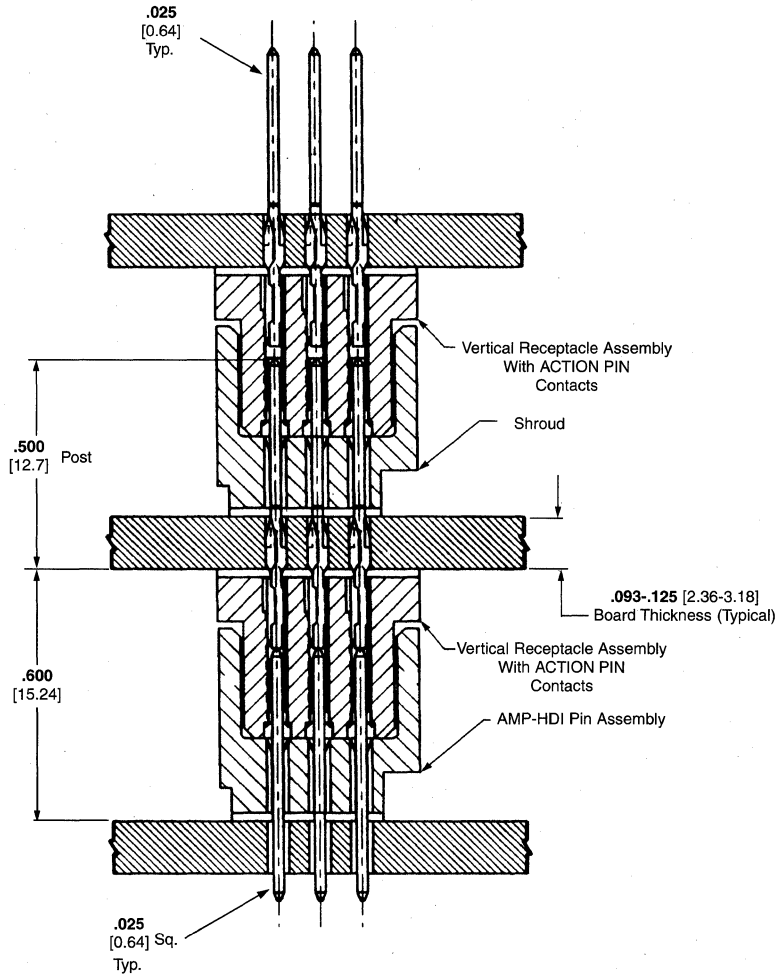


Product Facts

- **Mateable with AMP-HDI pin assemblies**
- **Horizontal mother board stacking capability**
- **Four areas of contact per connection**
- **Available with ACTION PIN contacts or solder posts**
- **Inserts into standard .100 [2.54] grid**
- **Keying system provides 64 combinations without loss of contact count**
- **High temperature material permits vapor phase reflow soldering**
- **Low mating forces**
- **Highly economical for quality and density**

Horizontal Mother Board Stacking (Not Recommended for MFBL Applications)

Multiple stacking of mother boards on backplanes is readily achieved using AMP vertical receptacle assemblies and AMP-HDI pin assemblies. This unique board-to-board interconnection concept eliminates exposed contacts inherent with open pin fields. Vertical receptacle assemblies with either ACTION PIN posts or solder posts provide the same low .600 [15.24] stack height between boards.



Note: The .600 [15.24] board-to-board stacking height is also achieved using vertical receptacle assemblies with solder posts.

SOURCE: Catalog 82618

Vertical Receptacles with ACTION PIN and Solder Post Contacts (Continued)

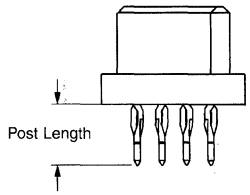
Four-Row Vertical Receptacle Assemblies Without Guide Holes

Contacts—ACTION PIN (phosphor bronze), solder (beryllium copper), plated as follows:

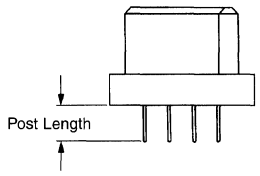
A—.000030 [0.00076] gold in contact area

B—Gold flash over .000050-.000100 [0.00127-0.00254] nickel on entire contact, with .000030 [0.00076] gold on contact area and for .200 [5.08] from tip of ACTION PIN post

Mates with—AMP-HDI Four-Row Pin Assemblies, Pages 3294 and 3295



ACTION PIN Posts (Solderless press-fit)



Solder Posts

Note: 160 Pos. Housing Dim. (Typ.)—4.750 [120.65] L x .585 [14.86] W x .400 [10.16] H

No. of Pos.	Contact Finish	Part Numbers* ACTION PIN Posts .500 [12.70] Length	ACTION PIN Posts .250 [6.35] Length	Solder Posts .149 [3.78] Length
100	A	533694-1	533427-1	533285-1
	B	533656-1	—	—
128	A	—	533427-3	533285-3
140	A	—	—	533285-4
160	A	—	533427-5	533285-5
180	B	533656-6	—	—
200	A	—	—	533285-7
240	A	—	533427-9	533285-9
260	A	—	1-533427-0	1-533285-0
280	A	—	—	1-533285-1
300	A	—	1-533427-2	1-533285-2
	B	1-533656-2	—	—

*Other connector sizes can be made available, consult AMP.

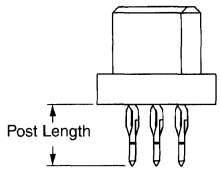
Three-Row Vertical Receptacle Assemblies Without Guide Holes

Contacts—ACTION PIN (phosphor bronze), solder (beryllium copper), plated as follows:

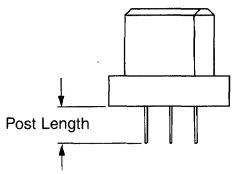
A—.000030 [0.00076] gold in contact area

B—Gold flash over .000050-.000100 [0.00127-0.00254] nickel on entire contact, with .000030 [0.00076] gold on contact area and for .200 [5.08] from tip of ACTION PIN post

Mates with—AMP-HDI Three-Row Pin Assemblies, Pages 3298 and 3299



ACTION PIN Posts (Solderless press-fit)



Solder Posts

Note: 120 Pos. Housing Dim. (Typ.)—4.750 [120.65] L x .485 [12.32] W x .400 [10.16] H

No. of Pos.	Contact Finish	Part Numbers* ACTION PIN Posts .500 [12.7] Length	Solder Posts .149 [3.78] Length
75	A	—	533287-1
96	A	—	533287-3
120	A	—	533287-5
150	A	—	533287-7
	B	533681-7	—
165	A	—	533287-8
210	A	—	1-533287-1

*Other connector sizes can be made available, consult AMP.

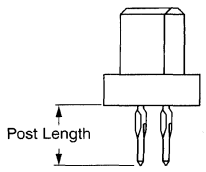
Two-Row Vertical Receptacle Assemblies Without Guide Holes

Contacts—ACTION PIN (phosphor bronze), solder (beryllium copper), plated as follows:

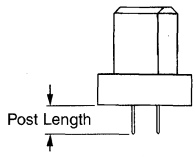
A—.000030 [0.00076] gold in contact area

B—Gold flash over .000050-.000100 [0.00127-0.00254] nickel on entire contact, with .000030 [0.00076] gold on contact area and for .200 [5.08] from tip of ACTION PIN post

Mates with—AMP-HDI Two-Row Pin Assemblies, Pages 3301 and 3302



ACTION PIN Posts (Solderless press-fit)



Solder Posts

Note: 80 Pos. Housing Dim. (Typ.)—4.750 [120.65] L x .385 [9.78] W x .400 [10.16] H

No. of Pos.	Contact Finish	Part Numbers* ACTION PIN Posts .500 [12.70] Length	ACTION PIN Posts .250 [6.35] Length	Solder Posts .149 [3.78] Length
20	A	—	—	533289-1
40	A	—	—	533289-3
60	A	—	—	533289-5
80	B	533693-7	—	—
200	A	—	1-533650-9	—

*Other connector sizes can be made available, consult AMP.

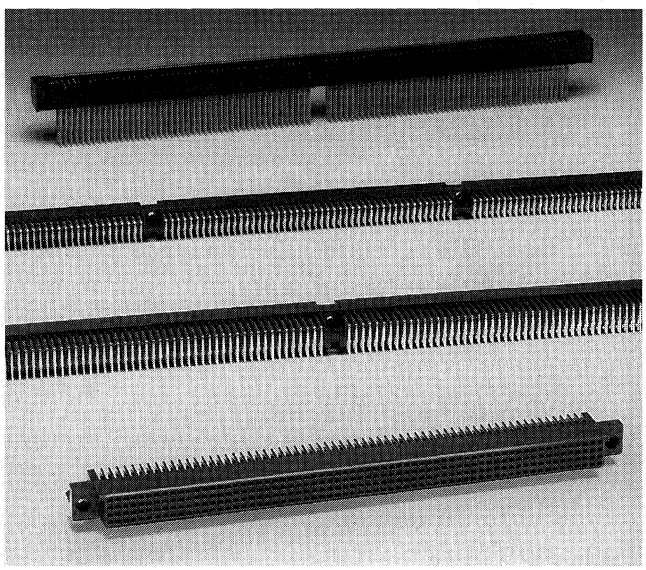
SOURCE: Catalog 82618

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

TBC (Twin-Beam Contact) Connectors

Product Facts

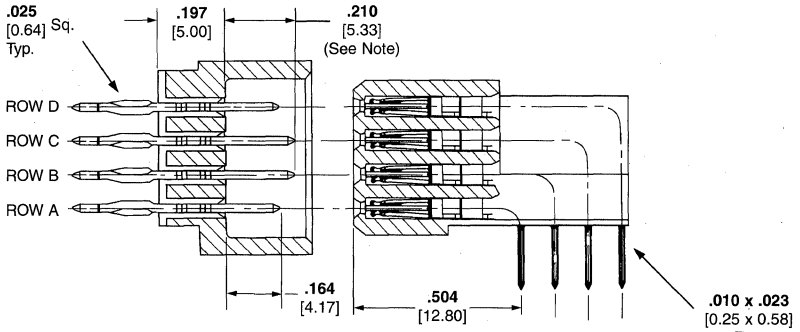
- High-density interconnect: three or four rows on .100 x .100 [2.54 x 2.54] grid.
- 100 through 540 positions in four-row version; 90 through 423 positions in three-row versions
- Two sequencing levels provide make-first/break-last of power and ground connections
- Low insertion force
- .070 [1.78] and .116 [2.95] contact wipe provides clean, reliable electrical connection
- Closed-entry design eliminates contact stubbing
- Compatible with AMP-HDI pin connectors
- Mating pin connectors available with any combination of short and long pins for sequencing
- High-temperature materials are compatible with vapor-phase and infrared reflow soldering
- Polarized housings prevent mismating
- Zero, one, or two guide holes
- Recognized under the Component Program of Underwriters Laboratories Inc., File No. E28476
- Certification pending by Canadian Standards Association, File No. LR 7189A
- Free 3D and 2D CAD images— See page 56



MFBL Connector System (For TBC Connectors Only)

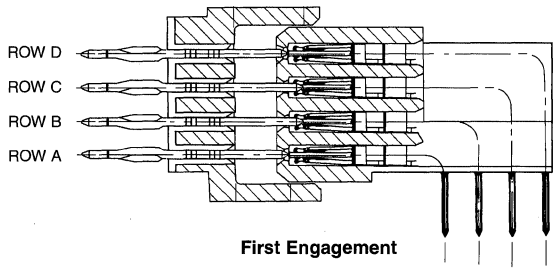
AMP offers MFBL capabilities with TBC connectors. The MFBL concept is achieved by loading two different pin heights within a connector housing. AMP uses .210 ± .005 [5.33 ± 0.13] high mating pins for MFBL positions and .164 ± .005 [4.17 ± 0.13] high mating pins for signal positions. Standard Twin-Beam Contact pin assemblies not requiring MFBL capabilities use .210 ± .005 [.533 ± 0.13] high mating pins for signal positions. This dimensioning scheme eliminates the possibilities of pin stubbing on the receptacle face which is inherent with MFBL concepts using longer mating pins for MFBL positions. AMP provides two levels of pin height with sequential engagement capabilities which allow power or ground positions to make contact before signal positions are engaged.

TBC pin assemblies with ACTION PIN posts use standard AMP-HDI seating tools.

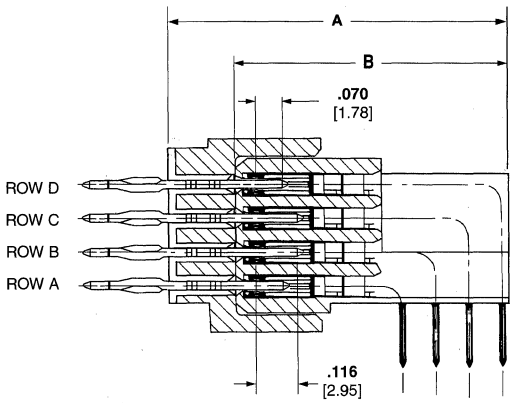


Pin Height

Note: .210 [5.33] pin height ensures housing engagement prior to pin engagement for stub-free mating.



First Engagement



Contact Wipe

Connector Configuration	Dimensions A	Dimensions B
Three-Row	.921 23.39	.724 18.39
Four-Row	1.021 25.93	.824 20.93

SOURCE: Catalog 82618

TBC (Twin-Beam Contact) Connectors
(Continued)

Three- and Four-Row Pin Assemblies, Selectively Loaded With MFBL Capabilities (Mate with TBC Receptacles Only)

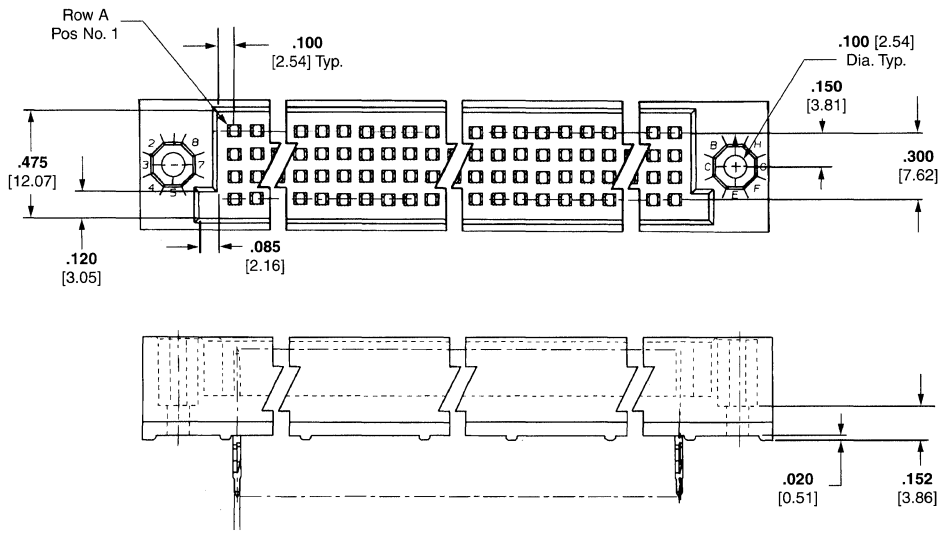
Vertical ACTION PIN Posts

Contacts—Phosphor bronze, plated as follows:

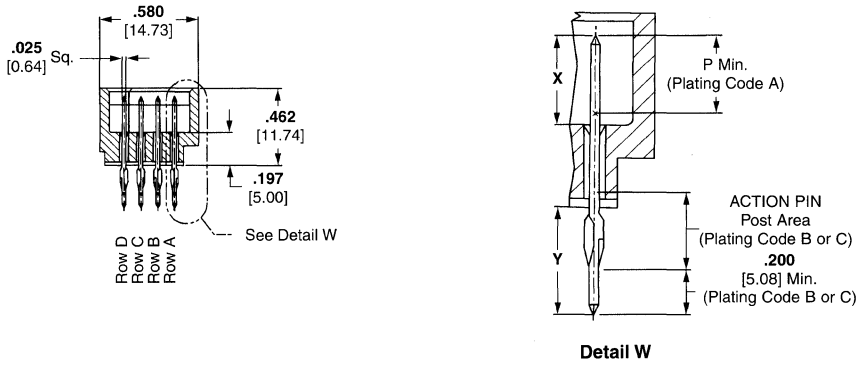
A—.000030 [0.00076] gold for minimum length (P dimension) from mating post tip (two sides), with entire contact underplated .000050 [0.00127] min. nickel

B—.000100-.000200 [0.00254-0.00508] tin-lead on ACTION PIN post, with entire contact underplated .000050 [0.00127] min. nickel

C—.000030 [0.00076] gold for .200 [5.08] min. length from ACTION PIN post tip (four sides), gold flash on ACTION PIN post area, with entire contact underplated .000050 [0.00127] min. nickel



Note: A four-row pin assembly without guide holes is shown for illustration purposes only. Three-row pin assemblies, as well as pin assemblies with one and two guide holes are also available with any desired MFBL configuration, consult AMP.



Detail W

Available Post Plating/Length Combinations

Plating Code A		Plating Code B	Plating Code C
Dimension X	Dimension P	Dimension Y	Dimension Y
.164 4.17	.120 3.05	.250 6.35	—
		.533 13.54	—
		.733 18.62	—
		—	.533 13.54
		—	.733 18.62
.210 5.33	.165 4.19	.250 6.35	—
		.533 13.54	—
		.733 18.62	—
		—	.533 13.54
		—	.733 18.62

SOURCE: Catalog 82618

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

TBC (Twin-Beam Contact) Connectors
(Continued)

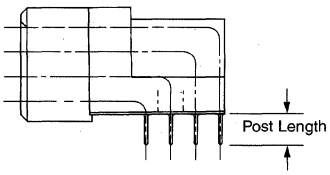
EADS CD-ROM

Four-Row Receptacle Assemblies Without Guide Holes

Right-Angle Solder Post

Contacts—Copper alloy, plated .000030 [0.00076] gold in mating area, tin-lead on solder posts, with entire contact underplated .000050-.000100 [0.00127-0.00254] nickel

Mates with—AMP-HDI Four-Row Pin Assemblies, Pages 3294 and 3295; and Selectively Loaded TBC Pin Assemblies, Page 3309



Note: 160 Pos. Housing Dim. (Typ.)—4.750 [120.65] L x .824 [20.93] W x .460 [11.69] H

No. of Pos.	Part Numbers* .120 [3.05] Post Length	.180 [4.75] Post Length
100	534008-1	—
120	534008-7	—
128	534008-8	534047-8
140	534008-9	534047-9
160	1-534008-0	—
168	1-534008-7	—
200	1-534008-1	1-534047-1
240	1-534008-3	1-534047-2
260	1-534008-4	—
284	1-534008-5	—
300	1-534008-2	—

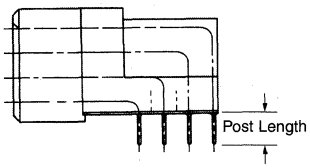
*Other connector sizes can be made available, consult AMP.

Four-Row Receptacle Assemblies With One Guide Hole

Right-Angle Solder Post

Contacts—Copper alloy, plated .000030 [0.00076] gold in mating area and tin-lead on solder posts, with entire contact underplated .000050-.000100 [0.00127-0.00254] nickel

Mates with—AMP-HDI Four-Row Pin Assemblies, Page 3296



Note: 320 Pos. Housing Dim. (Typ.)—9.050 [229.87] L x .824 [20.93] W x .460 [11.69] H

No. of Pos.	Part Numbers* .120 [3.05] Post Length	.180 [4.75] Post Length
320	534010-1	—
344	534010-2	534048-2
368	534010-3	—
416	534010-5	—

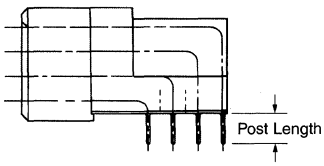
*Other connector sizes can be made available, consult AMP Incorporated.

Four-Row Receptacle Assemblies With Two Guide Holes

Right-Angle Solder Post

Contacts—Copper alloy, plated .000030 [0.00076] gold in mating area and tin-lead on solder posts, with entire contact underplated .000050-.000100 [0.00127-0.00254] nickel

Mates with—AMP-HDI Four-Row Pin Assemblies, Pages 3297 and 3298



Note: 540 Pos. Housing Dim. (Typ.)—14.850 [377.19] L x .824 [20.93] W x .460 [11.69] H

No. of Pos.	Part Number* .120 [3.05] Post Length	.180 [4.75] Post Length
540	534043-2	—

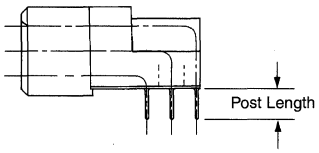
*Other connector sizes can be made available, consult AMP.

Three-Row Receptacle Assemblies Without Guide Holes

Right-Angle Solder Post

Contacts—Copper alloy, plated .000030 [0.00076] gold in mating area and tin-lead on solder posts, with entire contact underplated .000050-.000100 [0.00127-0.00254] nickel

Mates with—AMP-HDI Three-Row Pin Assemblies, Pages 3298 and 3299; and Selectively Loaded TBC Pin Assemblies, Page 3309



Note: 165 Pos. Housing Dim. (Typ.)—6.250 [158.75] L x .724 [18.39] W x .360 [9.15] H

No. of Pos.	Part Numbers* .120 [3.05] Post Length	.180 [4.75] Post Length
96	534026-2	—
120	534026-3	—
150	534026-4	—
165	534026-8	534044-5
180	534026-9	—
210	534026-5	—
225	534026-6	—

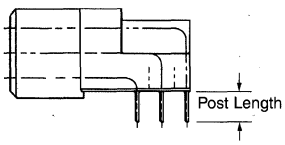
*Other connector sizes can be made available, consult AMP.

Three-Row Receptacles Assemblies With One Guide Hole

Right-Angle Solder Post

Contacts—Copper alloy, plated .000030 [0.00076] gold in mating area and tin-lead on solder posts, with entire contact underplated .000050-.000100 [0.00127-0.00254] nickel

Mates with—AMP-HDI Three-Row Pin Assemblies, Pages 3299 and 3300



Note: 312 Pos. Housing Dim. (Typ.)—11.450 [290.83] L x .724 [18.39] W x .360 [9.15] H

No. of Pos.	Part Numbers* .120 [3.05] Post Length	.180 [4.75] Post Length
240	534027-1	—
312	534027-3	—
366	534027-8	—

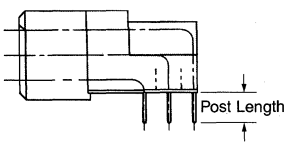
*Other connector sizes can be made available, consult AMP.

Three-Row Receptacle Assemblies With Two Guide Holes

Right-Angle Solder Post

Contacts—Copper alloy, plated .000030 [0.00076] gold in mating area and tin-lead on solder posts, with entire contact underplated .000050-.000100 [0.00127-0.00254] nickel

Mates with—AMP-HDI Three-Row Pin Assemblies, Page 3300



Note: 423 Pos. Housing Dim. (Typ.)—15.450 [392.43] L x .724 [18.39] W x .360 [9.15] H

No. of Pos.	Part Number* .120 [3.05] Post Length	.180 [4.75] Post Length
423	534042-2	—

*Other connector sizes can be made available, consult AMP.

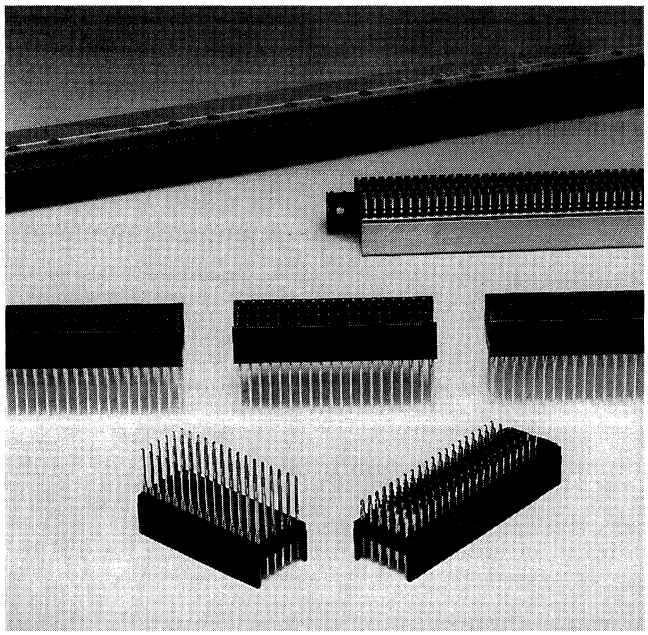
SOURCE: Catalog 82618

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

TBC Plus (Twin-Beam Contact) Connectors

Product Facts

- Six rows of contacts on high-density .100 [2.54] grid
- Modular design with 90- and 120-position modules
- High-conductivity beryllium copper twin-beam receptacle contacts provide two redundant points of contact
- Headers use ACTION PIN press-fit contacts with .025 x .025 [0.64 x 0.64] posts
- Various pin heights for make-first/break-last sequencing of ground, power and signals
- Select loading available
- Guide pins provide positive connector alignment
- Keying hardware allows 64 combinations to prevent mismating
- Receptacle modules preassembled to stiffener
- Right-angle pin headers available for card extender applications
- Integral (nonmodular) assemblies available for high-volume requirements
- Interchangeable with other high-density, six-row connectors
- Recognized under the Component Program of Underwriters Laboratories Inc., File No. E28476
- Certification pending by Canadian Standards Association, File No. LR 7189
- Free 3D and 2D CAD images—See page 56



Typical Application and Material Specifications

Material and Finish:

Housing—Black glass-filled polyester, 94V-0 rated

Receptacle Contacts—Beryllium copper, duplex plated .000030 [0.00076] gold in mating area, tin-lead on solder posts, with entire contact underplated .000050 [0.00127] min. nickel

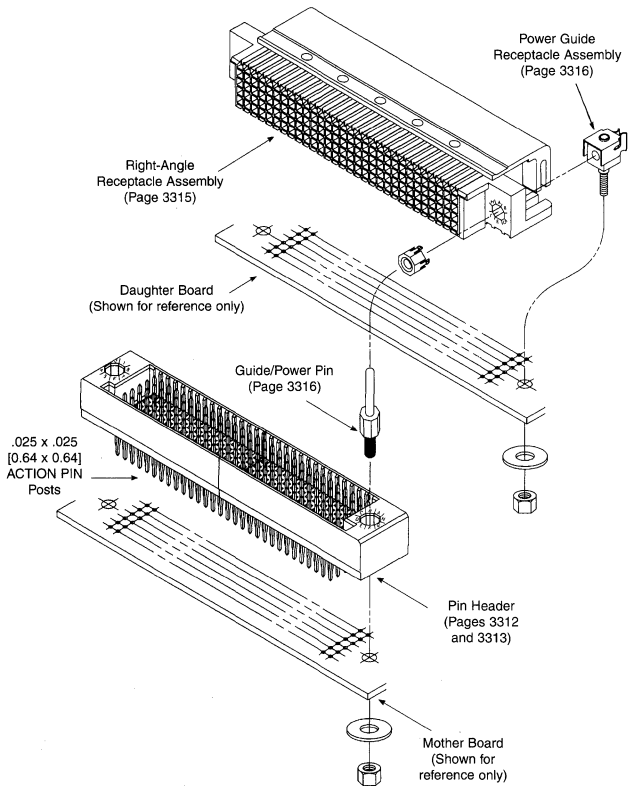
Pin Contacts—Phosphor bronze, duplex plated .000030 [0.00076] gold in mating area, tin-lead on solder posts, with entire contact underplated .000050 [0.00127] min. nickel

Stiffener—Aluminum

Power Guide Pin—Brass, plated .000030 [0.00076] gold over .000050 [0.00127] min. nickel

Power Guide Receptacle Assembly—Phosphor bronze contact, plated .000030 [0.00076] gold in contact area and gold flash on remainder, with entire contact underplated .000050 [0.00127] min. nickel. Brass bracket, plated gold flash over .000030 [0.00076] min. nickel

Center Guide Pin, Guide Pin, Inserts, Key Pin, Washer, and Nuts—Stainless steel

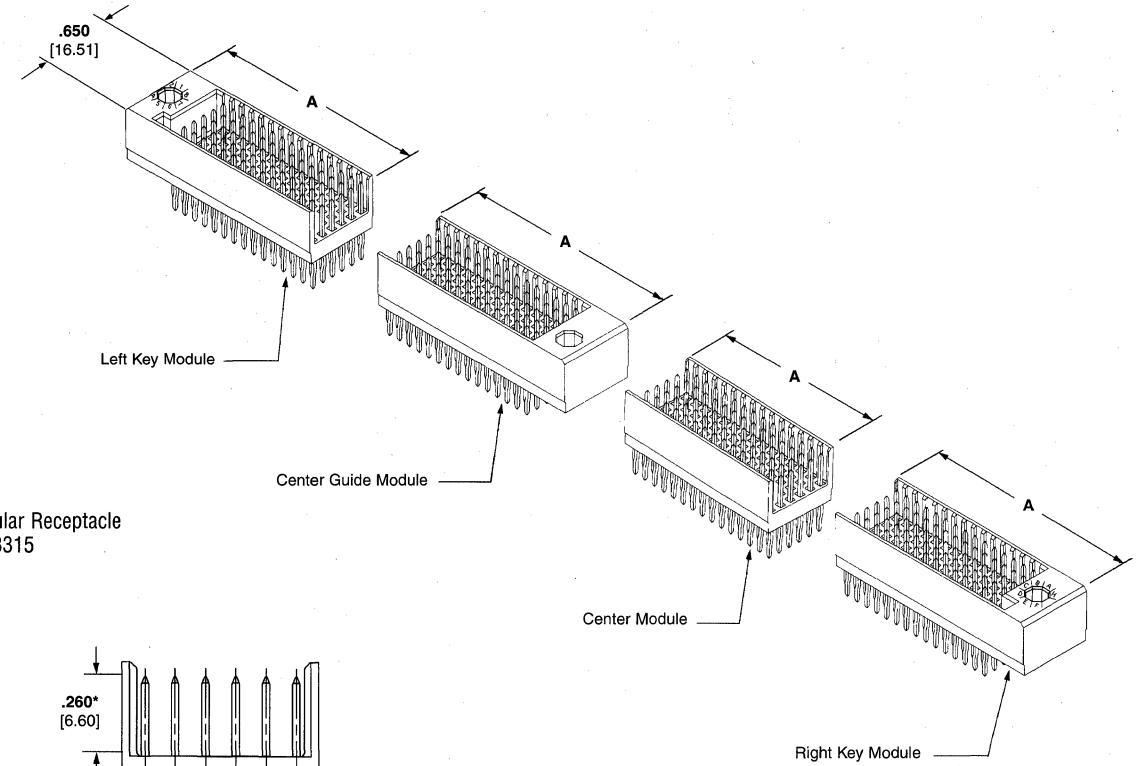


SOURCE: Catalog 82618

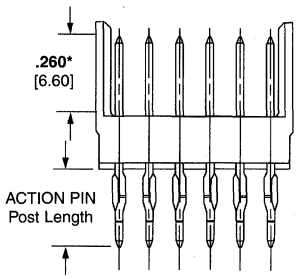
Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

TBC Plus (Twin-Beam Contact) Connectors
(Continued)

Vertical Pin Header Modules



Mates with—Modular Receptacle Assemblies, Page 3315



Note: ACTION PIN posts require .093 [2.36] min. thick Pc board.

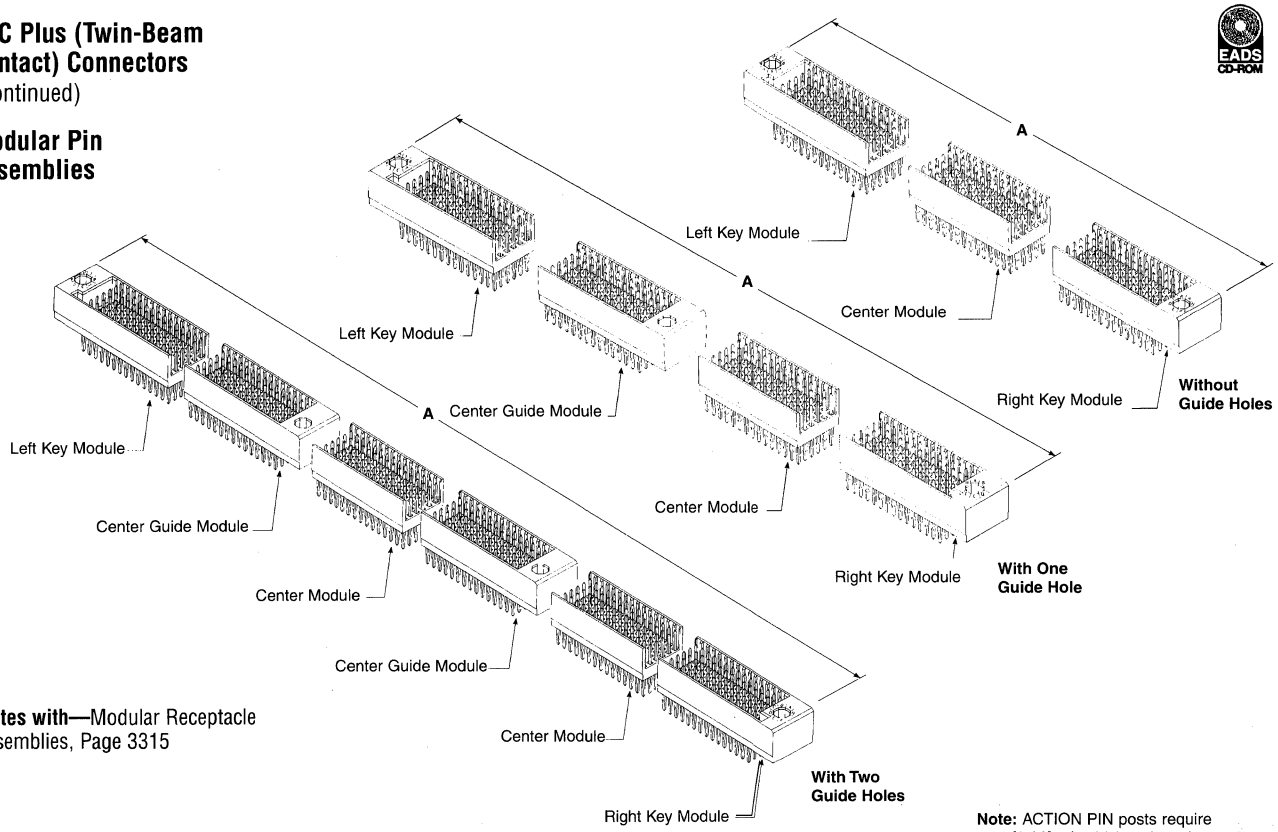
* .180 [4.57] and .220 [5.59] post lengths available upon request.

Module Type	No. of Pos.	Dimension A	Module Part Number .250 [6.35] Post Length	.555 [14.10] Post Length	.684 [17.37] Post Length
Left Key	90	**1.868** 47.45	535843-1	535843-5	535843-3
	120	**2.368** 60.15	535843-2	535843-6	535843-4
Center	90	**1.497** 38.02	535841-1	535841-5	535841-3
	120	**1.997** 50.72	535841-2	535841-6	535841-4
Center Guide	90	**1.789** 45.44	650369-1	650369-5	650369-3
	120	**2.289** 58.14	650369-2	650369-6	650369-4
Right Key	90	**1.868** 47.45	535845-1	535845-5	535845-3
	120	**2.368** 60.15	535845-2	535845-6	535845-4

Note: Contact AMP for information on selective loading of different height posts for sequencing.

TBC Plus (Twin-Beam Contact) Connectors
(Continued)

Modular Pin Assemblies



Mates with—Modular Receptacle Assemblies, Page 3315

Note: ACTION PIN posts require .093 [2.36] min. thick pc board.

Modular Pin Assemblies without Guide Holes

No. of Pos.	Dimension A	Modules Required					
		Left Key		Center		Right Key	
		90	120	90	120	90	120
180	**3.750** [95.25]	1	—	—	—	1	—
210	**4.250** [107.95]	1	—	—	—	—	1
240	**4.750** [120.65]	—	1	—	—	—	1
270	**5.250** [113.35]	1	—	1	—	1	—
300	**5.750** [146.05]	1	—	—	1	1	—
330	**6.250** [158.75]	—	1	1	—	—	1
360	**6.750** [171.45]	—	1	—	1	—	1
390	**7.250** [184.15]	1	—	1	1	1	—
420	**7.750** [196.85]	1	—	1	1	—	1
450	**8.250** [209.55]	—	1	1	1	—	1
480	**8.750** [222.25]	—	1	—	2	—	1
600	**10.750** [273.05]	—	1	—	3	—	1

Modular Pin Assemblies with One Guide Hole

No. of Pos.	Dimension A	Modules Required							
		Left Key		Center		Center Guide		Right Key	
		90	120	90	120	90	120	90	120
480	**9.050** [229.87]	—	1	—	1	—	1	—	1
540	**10.050** [255.27]	1	—	3	—	1	—	1	—
600	**11.050** [280.67]	—	1	3	—	1	—	—	1
660	**12.050** [306.07]	1	—	—	3	—	1	1	—

Modular Pin Assemblies with Two Guide Holes

No. of Pos.	Dimension A	Modules Required							
		Left Key		Center		Center Guide		Right Key	
		90	120	90	120	90	120	90	120
720	**13.350** [339.09]	—	1	—	2	—	2	—	1
810	**14.850** [377.19]	1	—	5	—	2	—	1	—

SOURCE: Catalog 82618

Specifications subject to change.
1-800-522-6752
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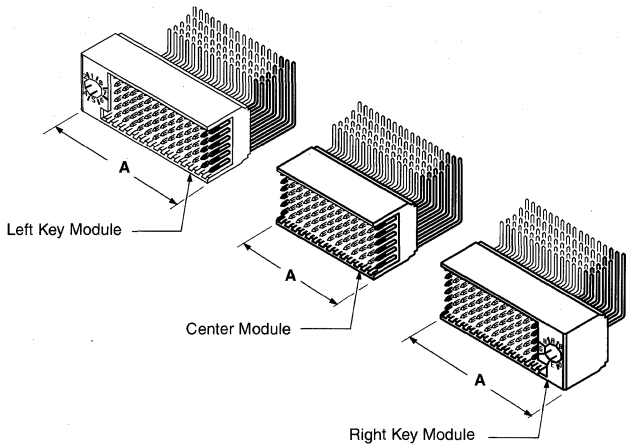
1-800-722-1111
Tooling/Technical Assistance Center

TBC Plus (Twin-Beam Contact) Connectors
(Continued)

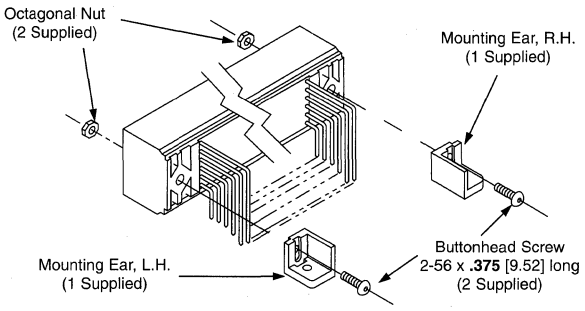
Right-Angle Pin Header Card Extender Modules

Mates with—Modular Receptacle Assemblies, Page 3315

Module Type	No. of Pos.	Dimension A	Module Part Number
Left Key	90	**1.868** [47.45]	650364-1
	120	**2.368** [60.15]	650364-2
Center	90	**1.495** [37.97]	650365-1
	120	**1.995** [50.67]	650365-2
Right Key	90	**1.868** [47.45]	650366-1
	120	**2.368** [60.15]	650366-2

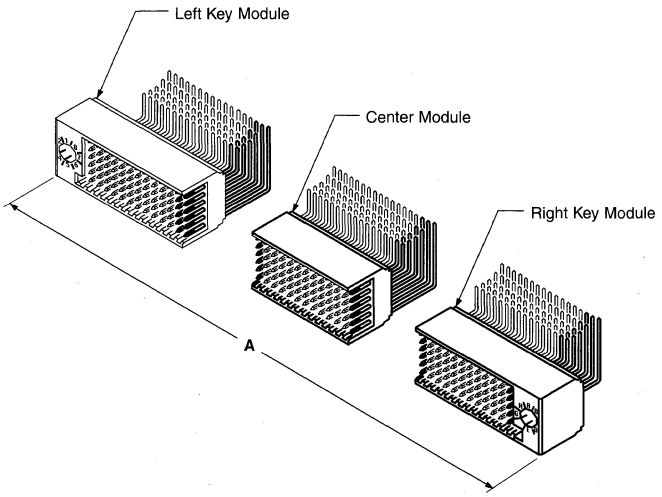


Mounting Ear Kit
Part No. 650551-1



Modular Right-Angle Card Extender Pin Assemblies without Guide Holes

Mates with—Modular Receptacle Assemblies, Page 3315



No. of Pos.	Dimension A	Modules Required					
		Left Key		Center		Right Key	
		90	120	90	120	90	120
180	**3.750** [95.25]	1	—	—	—	1	—
210	**4.250** [107.95]	1	—	—	—	—	1
240	**4.750** [120.65]	—	1	—	—	—	1
270	**5.250** [113.35]	1	—	1	—	1	—
300	**5.750** [146.05]	1	—	—	1	1	—
330	**6.250** [158.75]	—	1	1	—	—	1
360	**6.750** [171.45]	—	1	—	1	—	1
390	**7.250** [184.15]	1	—	1	1	1	—
420	**7.750** [196.85]	1	—	1	1	—	1
450	**8.250** [209.55]	—	1	1	1	—	1
480	**8.750** [222.25]	—	1	—	2	—	1
600	**10.750** [273.05]	—	1	—	3	—	1

SOURCE: Catalog 82618

Specifications subject to change.
1-800-522-6752
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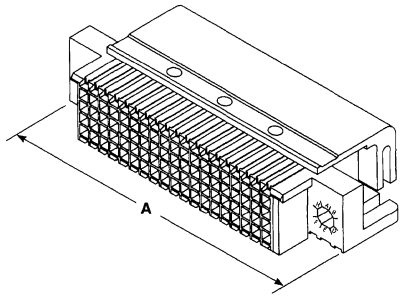
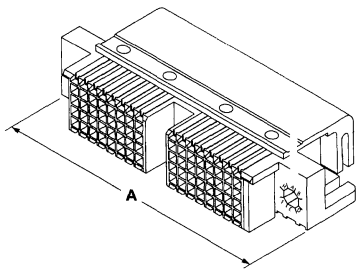
1-800-722-1111
Tooling/Technical Assistance Center

TBC Plus (Twin-Beam Contact) Connectors
(Continued)

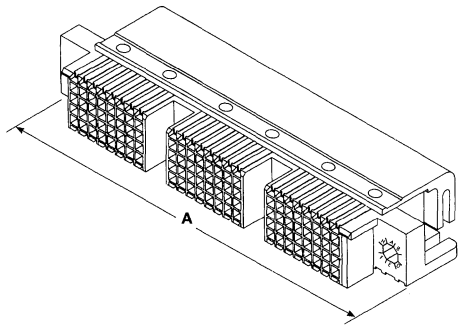
Modular Receptacle Assemblies



Without Center Guide



With One Center Guide



With Two Center Guides

Mates with—Pin Assemblies, Pages 3312 and 3314

No. of Guide Holes	No. of Pos.	Dimension A	Part Numbers
0	180	**3.730** 94.74	535919-1
	210	**4.230** 107.44	535919-2
	240	**4.730** 120.14	535919-3
	270	**5.230** 132.84	535919-4
	300	**5.730** 145.54	535919-5
	330	**6.230** 158.24	535919-6
	360	**6.730** 170.94	535919-7
	390	**7.230** 183.64	535919-8
	420	**7.730** 196.34	535919-9
	450	**8.230** 209.04	1-535919-0
	480	**8.730** 221.74	1-535919-3
	540	**9.730** 247.14	1-535919-1
	600	**10.730** 272.54	1-535919-2
1	480	**9.030** 229.36	650362-1
	540	**10.030** 254.76	650362-2
	600	**11.030** 280.16	650362-3
	660	**12.030** 305.56	650362-4
2	720	**13.350** 339.09	650363-1
	810	**14.850** 377.19	650363-2

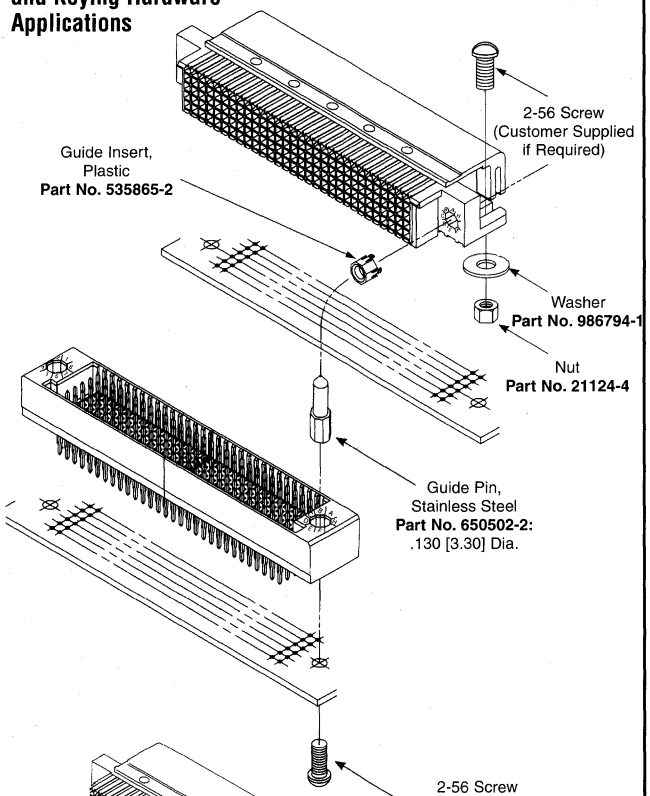
Note: Recommended mounting screw for stiffener is **Part No. 646135-2**, (stainless steel No. 2 pan head, thread-forming Type AB threads 3/8 [9.53] long). Maximum spacing of 1.500 [38.1] is recommended.

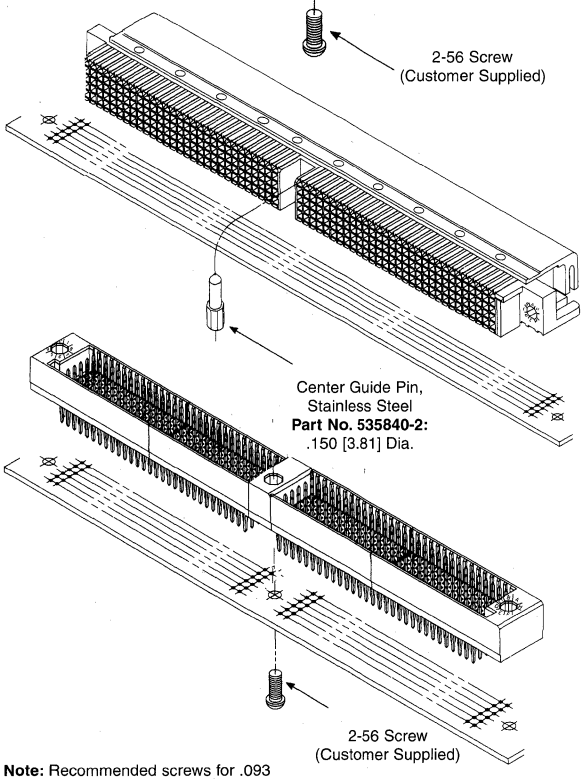
SOURCE: Catalog 82618

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

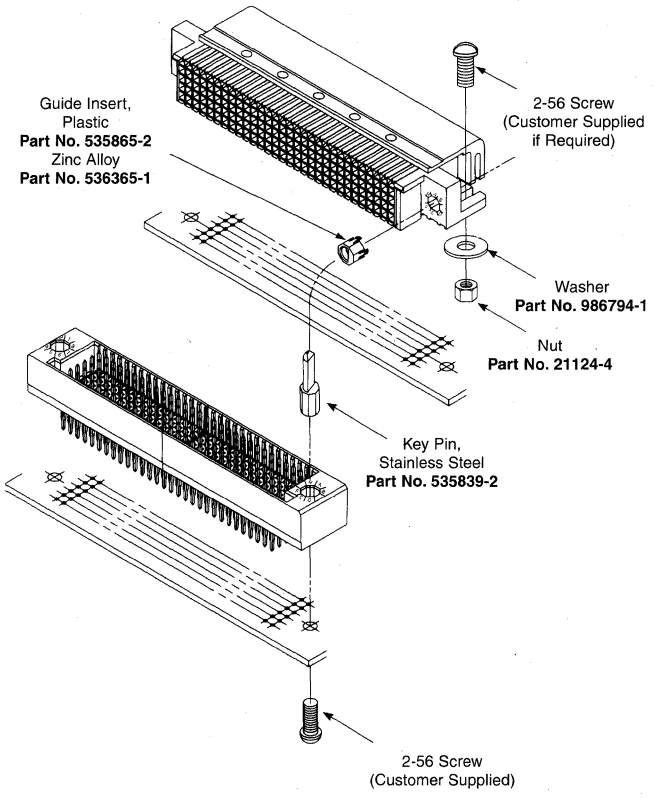
TBC Plus (Twin-Beam Contact) Connectors
(Continued)

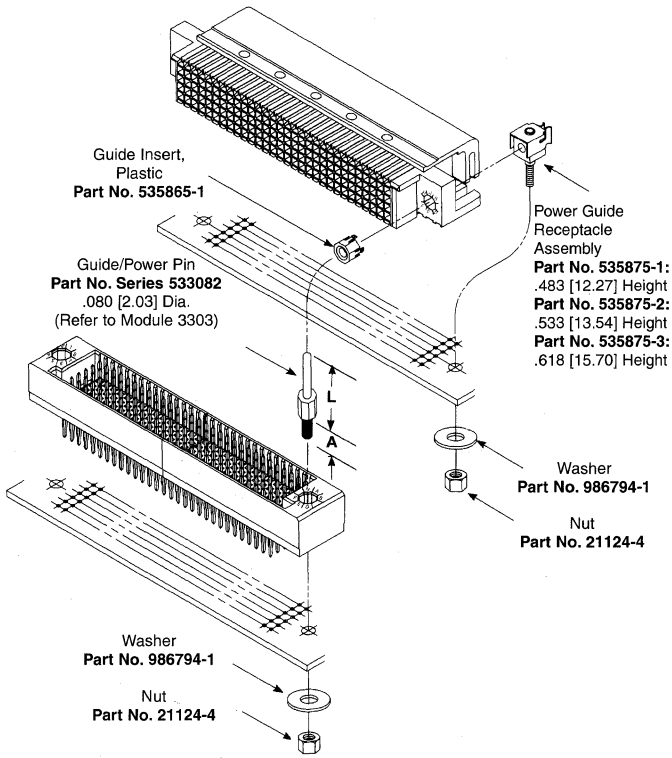
Guidance, Power and Keying Hardware Applications





Note: Recommended screws for .093 [2.36] to .125 [3.18] thick boards are stainless steel No. 2-56 binding head screws .375 [9.53] long.





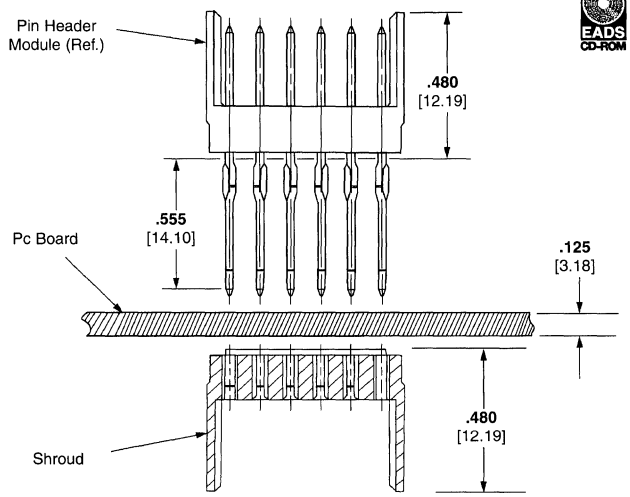
Note: Recommended screws for .093 [2.36] to .125 [3.18] thick boards are stainless steel No. 2-56 binding head screws .375 [9.53] long.

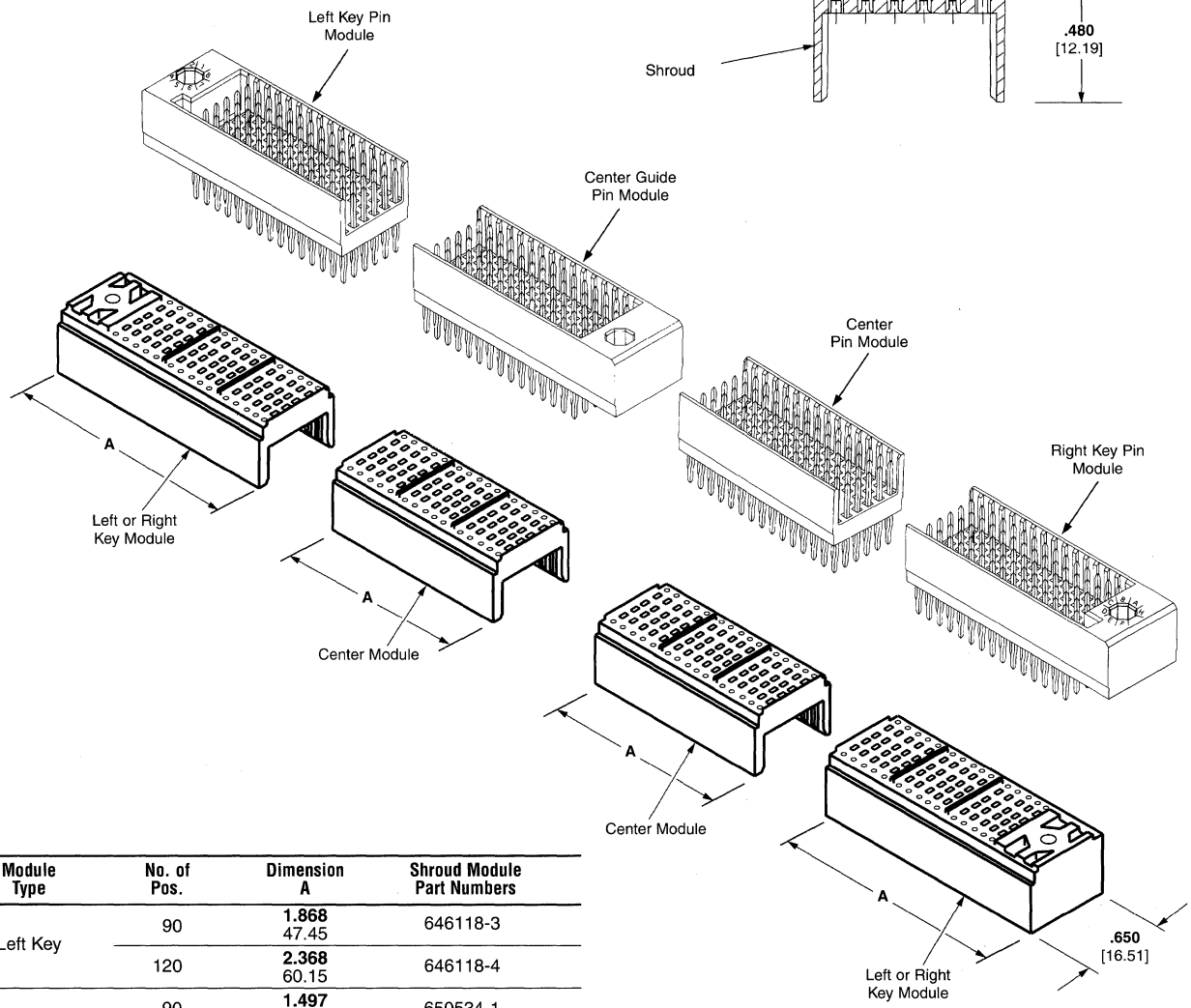
SOURCE: Catalog 82618

TBC Plus (Twin-Beam Contact) Connectors
(Continued)

Shrouds for Vertical Pin Header Modules

Note: These shrouds are to be used with connectors having a post length of .555 [14.10] and with .125 [3.18] thick pc boards. A post length of .684 [17.37] is available for thicker pc boards.





Module Type	No. of Pos.	Dimension A	Shroud Module Part Numbers
Left Key	90	**1.868** 47.45	646118-3
	120	**2.368** 60.15	646118-4
Center	90	**1.497** 38.02	650534-1
	120	**1.997** 50.72	650534-2
Center Guide*	90	**1.497** 38.02	650534-1*
	120	**1.997** 50.72	650534-2*
Right Key	90	**1.868** 47.45	646137-3
	120	**2.368** 60.15	646137-4

* Center shroud modules are used with Center Guide pin modules.

SOURCE: Catalog 82618

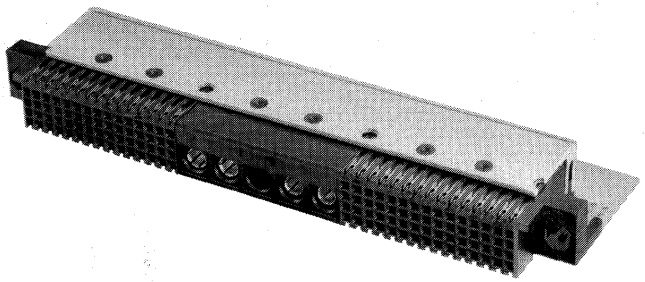
Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

TBC Plus (Twin-Beam Contact) Connectors
(Continued)

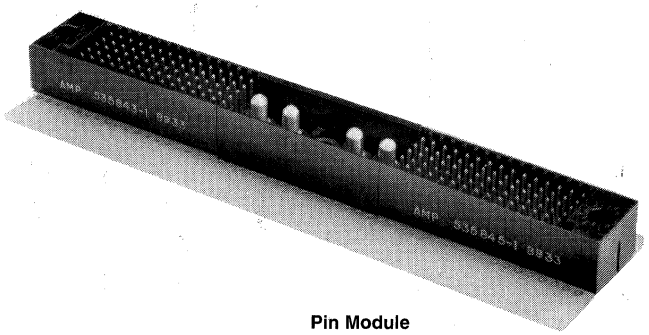
Power Modules

Power modules permit power to be carried from board to board without using parallel signal pins. The modules offer the same form factor as TBC Plus connectors. The receptacle modules are attached to a stiffener, thus becoming an integral part of the connector.

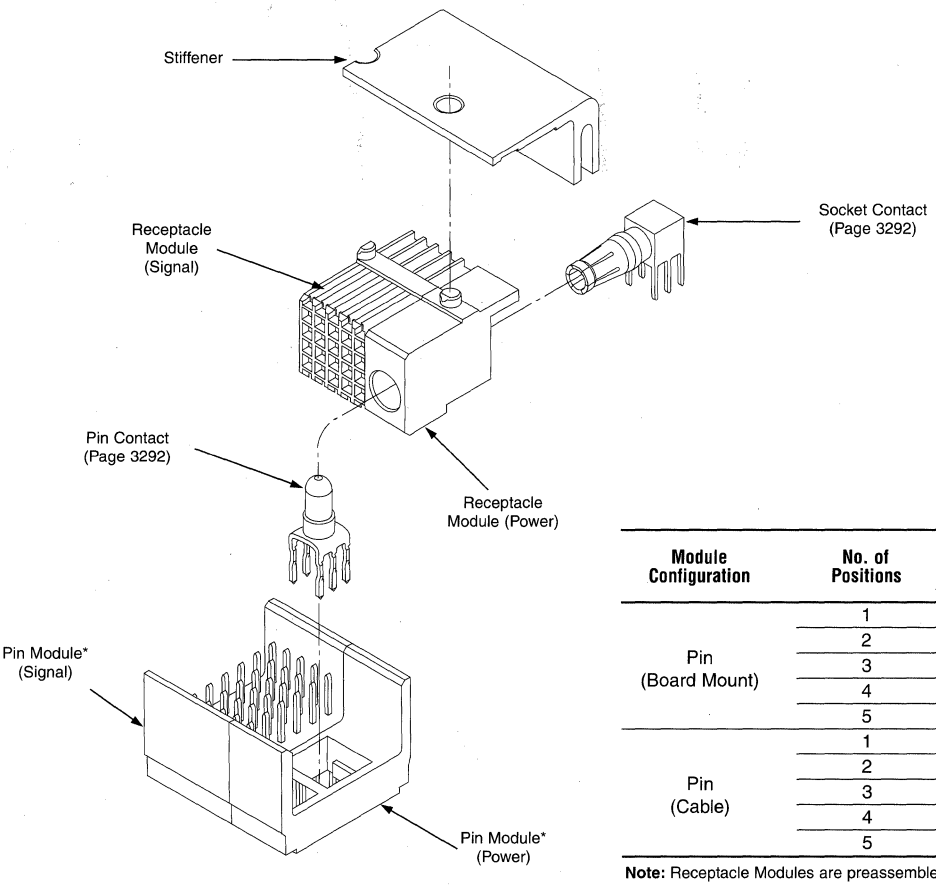
Various size 8 contacts are available for use in the modules. These contacts provide board-to-board, cable-to-board and cable-to-cable connections for both power and coaxial applications. For complete information on these contacts, refer to Page 3292.



Receptacle Module



Pin Module



Typical Board-to-Board Application

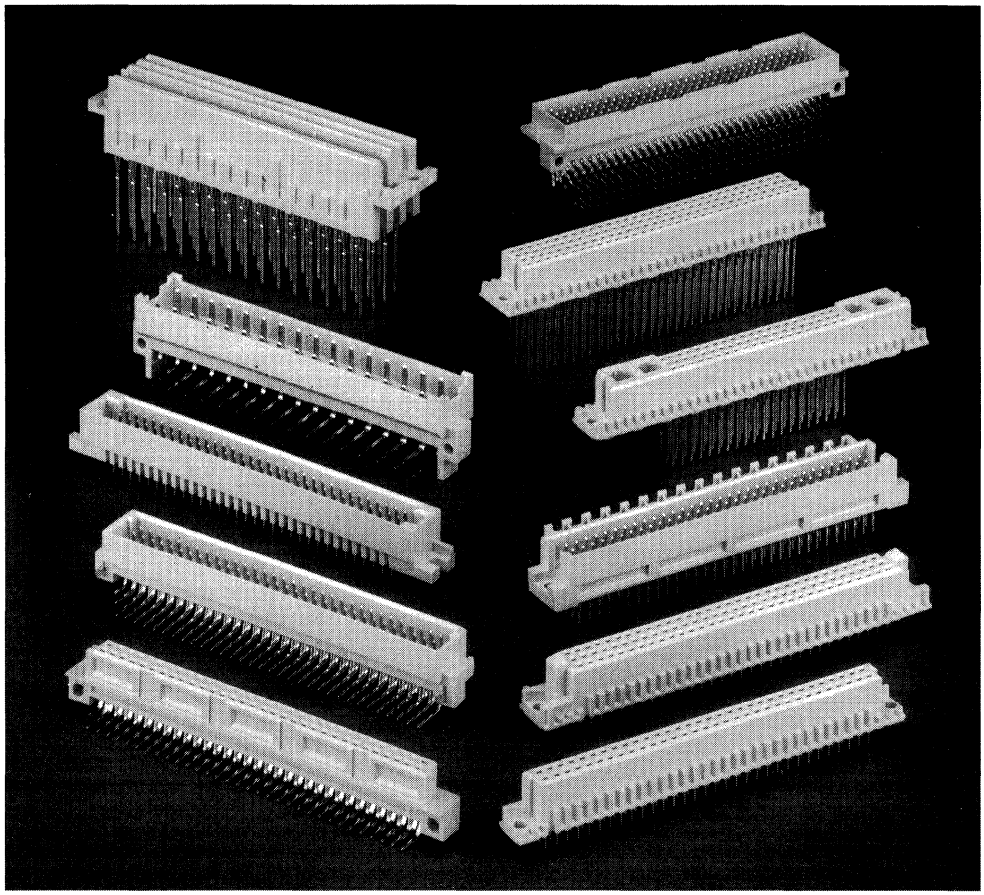
Module Configuration	No. of Positions	Module Part Numbers	
		For Power Contacts	For Coaxial Contacts
Pin (Board Mount)	1	650537-1	—
	2	650537-2	—
	3	650537-3	—
	4	650537-4	—
	5	650537-5	—
Pin (Cable)	1	—	650536-1
	2	—	650536-2
	3	—	650536-3
	4	—	650536-4
	5	—	650536-5

Note: Receptacle Modules are preassembled at the factory, consult AMP.

* A No. 2 self-tapping screw (customer supplied) is used to attach housing to Pc board.

METRIC

Eurocard Connectors per DIN 41612 and IEC 603-2



Product Facts

- Meets DIN 41612 and IEC 603-2
- Two-piece reliability
- Polarized housings
- Flame retardant
- Types B, C, D, F, G, M, Q and R
- Standard DIN sizes as well as half sizes, and expanded sizes
- AMP ACTION PIN post assemblies for reliability and economical motherboard assembly
- Various solder post lengths
- Selective contact loading
- Global manufacturing capability
- Recognized under the Component Program of Underwriters Laboratories Inc., File No. E28476
- Certified by Canadian Standards Association, File No. LR 7189
- Produced under a Quality Management System certified to ISO 9001

A copy of the certificate is available upon request.

AMP Eurocard Connectors incorporate internationally accepted design advantages of DIN 41612 and IEC 603-2 two-piece connectors with the universally known quality, service and delivery of AMP products. The Eurocard Connectors meet DIN 41612 and IEC 603-2 specifications.

AMP has worldwide manufacturing capabilities for Eurocard products including standard board-to-board, wire-to-board, ribbon cable-to-board and high current connectors as well as other product configurations.

Eurocard Connectors for Common Bus System Application

The Eurocard Connectors listed below provide high reliability and economy in packages compatible with the industry standard for printed circuit board computer backplane bus system application.

Common Bus Systems	AMP Eurocard Connectors	Part Numbers		Page Numbers
		Pin	Receptacle	
STE Bus	Type B, 64 Position	536052-5	650861-4	3322
CIMBUS	Type B, 64 Position	536052-5	650861-4	3322
FUTUREBUS	Type C, 96 Position	650473-5	535043-4	3323, 3325
VMEbus	Type C, 96 Position	650473-5	535043-4	3323, 3325
MULTIBUS (II)	Type C, 96 Position	650473-5	535043-4	3323, 3325
NUBUS	Type C, 96 Position	650473-5	535043-4	3323, 3325
VXI Bus	Type C, 96 Position	650473-5	535043-4	3323, 3325

SOURCE: Catalog 82721

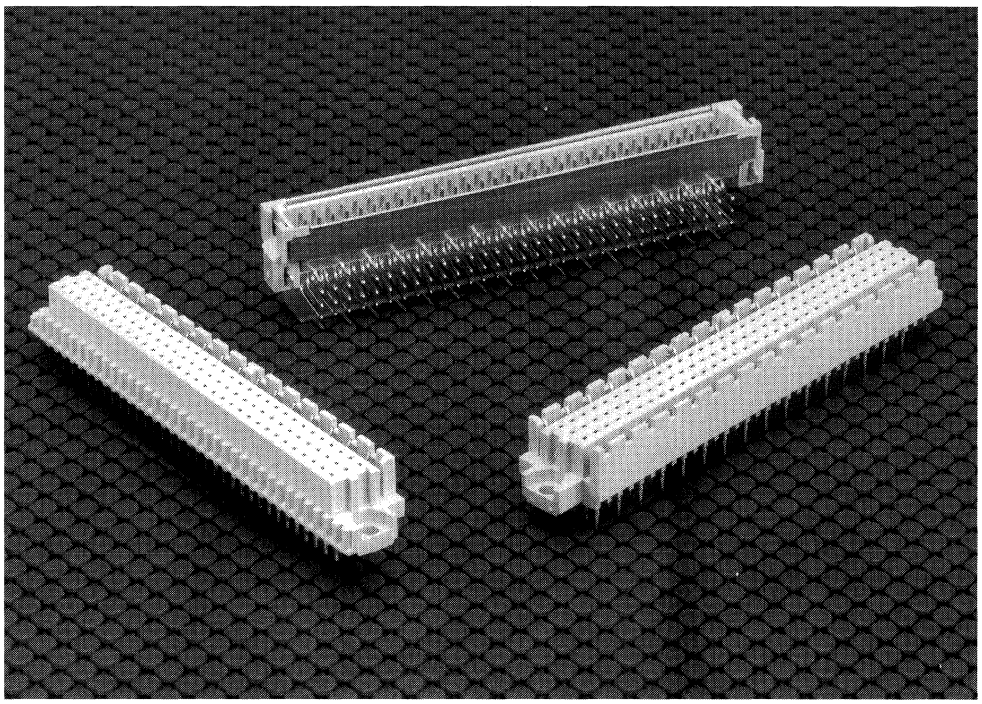
Specifications subject to change.

1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

METRIC

Enhanced Eurocard Connectors



Product Facts

- Compatible with existing type C DIN 41612 connectors and VME bus applications
- Upgrades existing systems with minimal design change
- Additional low inductance, low resistance grounds
- Lowers common mode noise
- Make-first/break-last contacts provide ESD protection
- Pin headers with high temperature plastic housings
- Pin headers compatible with vapor phase and IR solder reflow process
- Boardlocks provide hold-down during soldering process
- Press-fit ACTION PIN contacts eliminate need for soldering on backplane
- Recognized under the Component Program of Underwriters Laboratories Inc., File No. E28476
- Certified by Canadian Standards Association, File No. LR 7189
- Produced under a Quality Management System certified to ISO 9001

A copy of the certificate is available upon request.

Taking advantage of higher logic speeds to increase performance of computer systems, VME designers find themselves faced with problems such as common mode noise, crosstalk and limited I/O between daughter cards and the backplane.

The Enhanced Eurocard connector provides additional grounds while maintaining the standard Eurocard connector interface. Also, the Enhanced Eurocard connector substantially lowers common mode noise, permitting designers to use faster logic families.

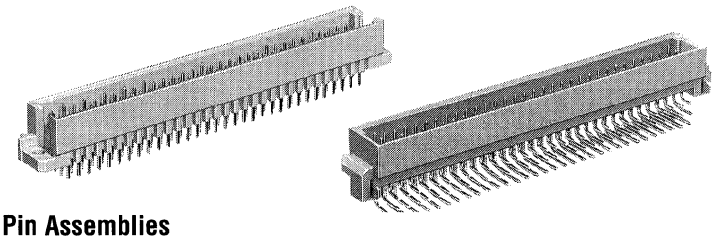
The Enhanced Eurocard connector is cost competitive and provides customers with superior electrical performance, while maintaining the downward compatibility to standard VME daughter cards.

METRIC

MFBL (Make First/Break Last) Connector System

AMP offers MFBL Eurocard pin assemblies in both vertical and right-angle styles. The MFBL concept is achieved by loading a connector with staggered length pins. The long pins make contact first during connector mating, and break last during unmating. AMP recommends the use of 4.93 [.194] high pins for MFBL positions and 4.17 [.164] high pins for signal positions. Also, AMP offers a 5.69 [.224] long mating post. However, it exceeds the lead-in envelope of the housing and is susceptible to stubbing on the receptacle mating face. If the 5.69 [.224] long post is required, AMP recommends the use of Eurocard connectors with guides (Type C and Type R assemblies).

Type R Eurocard MFBL pin assemblies are available with either ACTION PIN posts or solder posts. For press-fit MFBL applications, AMP offers a connector with contacts of all one height which is pressed into a board using AMP's patented programmable tool. This allows the customer to buy a standard connector and configure the tool to the specific MFBL sequence required. For a description of the use of this tool, request AMP Instruction Sheet 408-9894.



Type B Pin Assemblies

Number of Positions	Rows Loaded*	DIN Level	Part Numbers*
64	—	II	536783
32	—	II	148103

*Refer to customer drawing for specific loading patterns and part numbers.

Type C Pin Assemblies

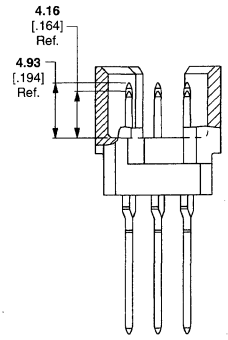
Number of Positions	Rows Loaded*	DIN Level	Part Numbers*
96	—	II	536437
			148123**
			536366[1]
48	—	II	108019
			536751[1]
120	—	II	148002
			148032[1]

*Refer to customer drawing for specific loading patterns and part numbers.
**Three levels of sequencing.
[1]With Boardlocks

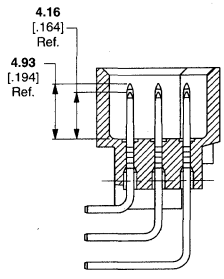
Type R Pin Assemblies, 4.57 [.180] Solder Post Length

Number of Positions	Rows Loaded*	DIN Level	Part Numbers*
96	—	II	536744

*Refer to customer drawing for specific loading patterns and part numbers.



Type R



Type C

Type R Pin Assemblies, 6.35 [.250] ACTION PIN (Press-Fit) Post Length, Programmable
(for 2.36 [.093] Min. Thick Pc Board)

Number of Positions	Rows Loaded	DIN Level	Part Numbers
96	A,B,C	II	536019-5
64	A,C	II	536098-5
48	A,B,C	II	536092-5
32	A,C	II	536100-5
120	A,B,C	II	536094-5
80	A,C	II	536102-5
150	A,B,C	II	536096-5
100	A,C	II	536104-5

Type R Pin Assemblies, 13.23 [.521] ACTION PIN (Press-Fit) Post Length, Programmable
(for 2.36 [.093] Min. Thick Pc Board)

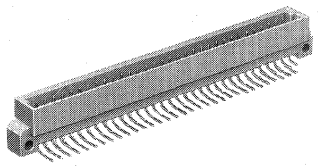
Number of Positions	Rows Loaded	DIN Level	Part Numbers
96	A,B,C	II	536067-5
64	A,C	II	536099-5
48	A,B,C	II	536093-5
32	A,C	II	536101-5
120	A,B,C	II	536095-5
80	A,C	II	536103-5
150	A,B,C	II	536097-5
100	A,C	II	536105-5

SOURCE: Catalog 82721

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

METRIC

Type B Right-Angle Pin Assemblies with Solder Posts



Note: 64 Pos. Housing Dim. (Typ.)—93.98 [3.700] L x 12.62 [.497] W x 8.56 [.337] H

Standard Size

Number of Positions	Rows Loaded	DIN Level	Part Numbers
64	A,B	II	536052-5
			536385-5[1]

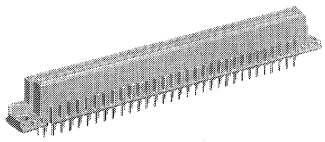
[1]With Boardlocks

Half Size

Number of Positions	Rows Loaded	DIN Level	Part Numbers
32	A,B	II	536053-5
			536386-5[1]

[1]With Boardlocks

Type B Vertical Receptacle Assemblies with Solder Posts for Pc Board Mount



Note: 64 Pos. Housing Dim. (Typ.)—93.96 [3.700] L x 7.95 [.313] W x 11.51 [.453] H

Standard Size

Number of Positions	Rows Loaded	DIN Levels	Part Numbers		
			2.49 [.098] Post Length	3.30 [.130] Post Length	4.57 [.180] Post Length
64	A,B	II	650859-5	650860-4	650861-4
			536456-4[1]	536457-4[1]	536458-4[1]
		III	650859-9	—	—

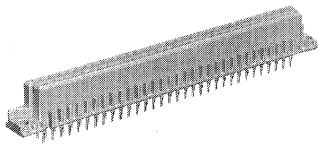
[1]With Boardlocks

Half Size

Number of Positions	Rows Loaded	DIN Levels	Part Numbers		
			2.49 [.098] Post Length	3.30 [.130] Post Length	4.57 [.180] Post Length
32	A,B	II	—	—	650858-4
					536461-4[1]

[1]With Boardlocks

Type B Vertical Receptacle Assemblies with ACTION PIN Posts for Pc Board Mount (0.64 [.025] Square and 0.30 x 0.61 [.012 x .024])



Note: 64 Pos. Housing Dim. (Typ.)—93.96 [3.700] L x 7.95 [.313] W x 11.51 [.453] H

Standard Size (for Pc Board Thicknesses 1.57 [.062] and Above)

Number of Positions	Rows Loaded	DIN Levels	Part Numbers	
			0.30 x 0.61 [.012 x .024] Posts 4.83 [.190] Post Length	0.64 Sq. [.025] Posts 17 [.669] Post Length
64	A,B	II	650865-4	216633-4[2]
		III	—	216633-8[2]
		II	—	1-216633-4[1,2]
		III	—	1-216633-8[1,2]

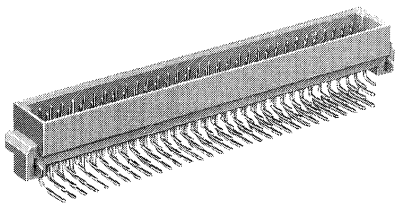
[1] Precious metal plating in contact area and for 5.08 [.200] from tip of post; gold flash on remainder of post.
[2] Insertion tool required.

SOURCE: Catalog 82721

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

METRIC

Type C Right-Angle Pin Assemblies with Solder Posts (with and without Boardlocks)



Note: 96 Pos. Housing Dim. (Typ.)—93.98 [3.700] L x 12.62 [.497] W x 11.10 [.437] H

Standard Size

Number of Positions	Rows Loaded	DIN Levels	Part Numbers	
			2.64 [.104] Post Length	3.30 [.130] Post Length
96	A,B,C	II	650473-5	650947-5
			650913-5[1]	536405-5[1]
			536010-5[2]	536742-5[2]
			536416-5[1,2]	—
		III	650473-9	650947-9
64	A,C	II	650945-5	650951-5
			536356-5[1]	536406-5[1]
			536011-5[2]	—
		III	650945-9	650951-9

[1]With Boardlocks
[2]High Temperature Housing

Note: 48 Pos. Housing Dim. (Typ.)—53.34 [2.100] L x 12.62 [.497] W x 11.10 [.437] H

Half Size

Number of Positions	Rows Loaded	DIN Levels	Part Numbers	
			2.64 [.104] Post Length	3.30 [.130] Post Length
48	A,B,C	II	650478-5	650948-5
			650916-5[1]	536407-5[1]
			536012-5[2]	—
		III	650478-9	650948-9
32	A,C	II	650946-5	—
			650978-5[1]	—
		III	536013-5[2]	—
			650946-9	—

[1]With Boardlocks
[2]High Temperature Housing

Note: 120 Pos. Housing Dim. (Typ.)—114.30 [4.500] L x 12.62 [.497] W x 11.10 [.437] H

Expanded Size

Number of Positions	Rows Loaded	DIN Levels	Part Numbers	
			2.64 [.104] Post Length	3.30 [.130] Post Length
120	A,B,C	II	650906-5	650949-5
			650914-5[1]	536409-5[1]
			536413-5[1,2]	536741-5[2]
		III	—	650949-9
150	A,B,C	II	650907-5	—
			650915-5[1]	—
			536414-5[1,2]	—
		III	650907-9	—

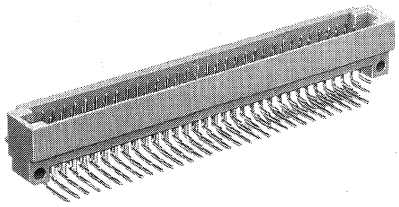
[1]With Boardlocks
[2]High Temperature Housing

SOURCE: Catalog 82721

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

METRIC

Type C Right-Angle Pin Assemblies with Solder Posts and Guides

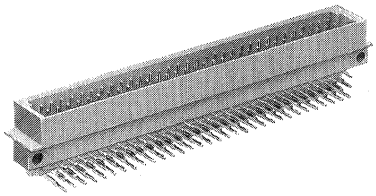


Note: 96 Pos. Housing Dim. (Typ.)—93.85 [3.695] L x 13.51 [.532] W x 11.10 [.437] H

Number of Positions	Rows Loaded	DIN Level	Part Numbers
96	A,B,C	II	148003-5
96	—	II	148040*

*MFBL (Make First/Break Last). Refer to customer drawing for specific part numbers.

Type C Right-Angle Pin Assemblies with ACTION PIN Posts for Pc Board Mount (0.64 [.025] Square)



Note: 64 Pos. Housing Dim. (Typ.)—93.70 [3.689] L x 11.0 [.433] H

Standard Size (for 1.57 [.062] Min. Pc Board Thickness)

Number of Positions	Rows Loaded	DIN Levels	Part Numbers*
96	A,B,C	II	215605-4
		III	215605-8
64	A,C	II	216432-4
		III	216432-8
32	A,C (Even Positions)	II	100038-4
		III	100038-8

Note: 48 Pos. Housing Dim. (Typ.)—53.34 [2.100] L x 9.27 [.365] W x 17.73 [.698] H

Half Size (for 1.57 [.062] Min. Pc Board Thickness)

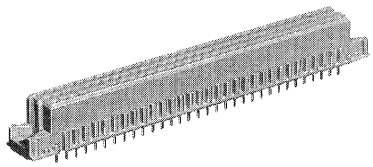
Number of Positions	Rows Loaded	DIN Levels	Part Numbers*
48	A,B,C	II	216398-4
		III	216398-8

*Connectors are toolless (flat rock).

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

METRIC

Type C Vertical Receptacle Assemblies with Solder Posts for Pc Board Mount



Note: 64 Pos. Housing Dim. (Typ.)—93.98 [3.700] L x 10.49 [.413] W x 11.51 [.453] H

Standard Size

Number of Positions	Rows Loaded	DIN Levels	Part Numbers		
			2.49 [.098] Post Length	3.30 [.130] Post Length	4.57 [.180] Post Length
96	A,B,C	II	535089-4	535090-4	535043-4
			536418-4[1]	650963-4[1]	536412-4[1]
		III	535089-9	535090-9	535043-9
64	A,C	II	650458-4	650956-4	650408-4
			536481-4[1]	650983-4	—
		III	650458-9	650956-9	—

[1]With Boardlocks

Note: 32 Pos. Housing Dim. (Typ.)—53.34 [2.100] L x 10.49 [.413] W x 11.51 [.453] H

Half Size

Number of Positions	Rows Loaded	DIN Levels	Part Numbers		
			2.49 [.098] Post Length	3.30 [.130] Post Length	4.57 [.180] Post Length
48	A,B,C	II	535091-4	535070-4	535071-4
			536397-4[1]	536484-4[1]	536485-4[1]
		III	535091-9	—	535071-9
32	A,C	II	650459-4	650957-4	650466-4
			536486-4[1]	536487-4[1]	536488-4[1]

[1]With Boardlocks

Note: 120 Pos. Housing Dim. (Typ.)—114.30 [4.500] L x 10.49 [.413] W x 11.51 [.453] H

Expanded Sizes

Number of Positions	Rows Loaded	DIN Levels	Part Numbers		
			2.49 [.098] Post Length	3.30 [.130] Post Length	4.57 [.180] Post Length
120	A,B,C	II	535097-4	535098-4	535099-4
			536489-4[1]	536494-4[1]	536490-4[1]
		III	535097-9	535098-9	—
150	A,C	II	650404-4	650405-4	650406-4
			536491-4[1]	536492-4[1]	536493-4[1]

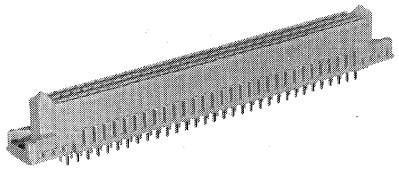
[1]With Boardlocks

SOURCE: Catalog 82721

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

METRIC

Type C Vertical Receptacle Assemblies with Solder Posts, ACTION PIN Posts (0.64 [.025] Square) and Guides



Note: 96 Pos. Housing Dim. (Typ.)—99.06 [3.900] L x 10.49 [.413] W x 11.51 [.453] H

Standard Size (for Pc Board Thicknesses 1.57 [.062] and Above)

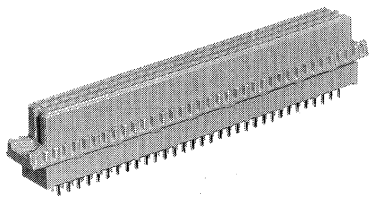
Number of Positions	Rows Loaded	DIN Level	Part Numbers	
			Solder Posts 3.30 [.130] Post Length	ACTION PIN Posts 4.83 [.512] Post Length
96	A,B,C	II	650998-4	148001-4

Note: 48 Pos. Housing Dim. (Typ.)—58.42 [2.300] L x 10.49 [.413] W x 11.51 [.453] H

Half Size (for Pc Board Thicknesses 1.57 [.062] and Above)

Number of Positions	Rows Loaded	DIN Level	Part Numbers	
			Solder Posts 3.30 [.130] Post Length	ACTION PIN Posts 4.83 [.512] Post Length
48	A,B,C	II	650999-4	—

Type C Vertical Receptacle Assemblies with Solder Posts and Spacers



Note: 96 Pos. Housing Dim. (Typ.)—93.98 [3.700] L x 10.49 [.413] W x 11.51 [.453] (not including spacer) H

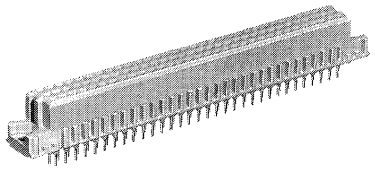
Standard Size

Number of Positions	Rows Loaded	Spacer Height	DIN Level	Part Numbers	
				3.05 [.120] Post Length	3.43 [.135] Post Length
96	A,B,C	**5.36** .211	II	—	536026-4
		13.97 .550	II	536142-4	—

SOURCE: Catalog 82721

METRIC

Type C Vertical Receptacle Assemblies with ACTION PIN Posts for Pc Board Mount (0.30 x 0.61 [.012 x .024])



Note: 64 Pos. Housing Dim. (Typ.)—93.98 [3.700] L x 10.49 [.413] W x 11.51 [.453] H

Standard Size (for Pc Board Thicknesses 1.57 [.062] and Above)

Number of Positions	Rows Loaded	DIN Levels	Part Numbers
96	A,B,C	II	535032-4
			536056-4[1]
		III	535032-9
			536056-9[1]
64	A,C	II	535059-4
		III	535059-9

[1]Without mounting ears.

Note: 32 Pos. Housing Dim. (Typ.)—53.34 [2.100] L x 10.49 [.413] W x 11.51 [.453] H

Half Size (for Pc Board Thicknesses 1.57 [.062] and Above)

Number of Positions	Rows Loaded	DIN Levels	Part Numbers
48	A,B,C	II	535034-4
		III	535034-9
32	A,C	II	535068-4

Note: 120 Pos. Housing Dim. (Typ.)—114.30 [4.500] L x 10.49 [.413] W x 11.51 [.453] H

Expanded Size (for Pc Board Thicknesses 1.57 [.062] and Above)

Number of Positions	Rows Loaded	DIN Level	Part Numbers
120	A,B,C	II	535079-4
150	A,B,C	II	535080-4

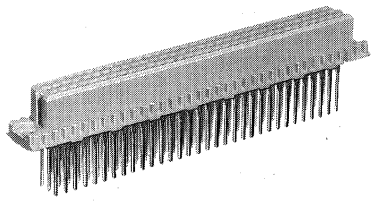
Note: Connectors on this page are toolless (flat rock).
When they are installed using an SM-3 Machine, a spacer of 26.67 [1.050] is needed to make up height difference.

SOURCE: Catalog 82721

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

METRIC

Type C Vertical Receptacle Assemblies with ACTION PIN Posts for Pc Board Mount (0.64 [.025] Square)



Note: 64 Pos. Housing Dim. (Typ.)—95.00 [3.740] L x 10.49 [.413] W x 11.51 [.453] H

Standard Size (for Pc Board Thicknesses 2.36 [.093] and Above)

Number of Positions	Rows Loaded	DIN Levels	Part Numbers	
			13 [.512] Post Length	17 [.669] Post Length
96	A,B,C	II	215912-4	215614-4
			1-215912-4[1]	1-215614-4[1]
			148057-5[2]	148059-5[2]
			1-148057-5[1,2]	1-148059-5[1,2]
		III	215912-8	215614-8
			1-215912-8[1]	1-215614-8[1]
64	A,C	II	215913-4	215781-4
			1-215913-4[1]	1-215781-4[1]
		III	215913-8	215781-8
			1-215913-8[1]	1-215781-8[1]

[1]Precious metal plating in contact area and for 5.08 [.200] from tip of post; gold flash on remainder of post.
[2]Toolless (flat rock) connectors.
Note: Seating tool required, unless specified otherwise.

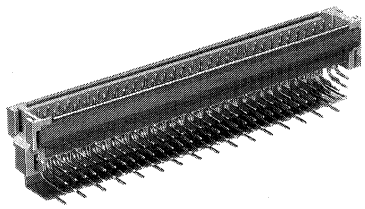
Note: 64 Pos. Housing Dim. (Typ.)—95.00 [3.740] L x 10.49 [.413] W x 11.51 [.453] H

Standard Size (for 1.57 [.062] Pc Board Thickness)

Number of Positions	Rows Loaded	DIN Levels	Part Numbers	
			13 [.512] Post Length	17 [.669] Post Length
96	A,B,C	II	215950-4	215783-4
			1-215950-4[1]	1-215783-4[1]
			148057-5[2]	148059-5[2]
			1-148057-5[1,2]	1-148059-5[1,2]
		III	215950-8	215783-8
			1-215950-8[1]	1-215783-8[1]
64	A,C	II	215951-4	215784-4
			1-215951-4[1]	1-215784-4[1]
		III	215951-8	215784-8
			1-215951-8[1]	1-215784-8[1]

[1]Precious metal plating in contact area and for 5.08 [.200] from tip of post; gold flash on remainder of post.
[2]Toolless (flat rock) connectors.
Note: Seating tool required, unless specified otherwise.

Enhanced Type C Right-Angle Pin Assemblies with Solder Leads



Note: 96 Pos. Housing Dim. (Typ.)—93.98 [3.700] L x 12.62 [.497] W x 11.10 [.437] H

Standard Size

Number of Positions	Rows Loaded	Ground Plates	DIN Levels	Part Numbers	
				2.64 [.104] Lead Length	3.30 [.130] Lead Length
96	A,B,C	Upper and Lower	II	650987-5	536146-5
				536148-5[1]	536149-5[1]
			III	650987-9	536146-9
				536148-9[1]	536149-9[1]
96	A,B,C	Lower	II	650988-5	536147-5
				536150-5[1]	536151-5[1]
			III	650988-9	536147-9
				536150-9[1]	536151-9[1]

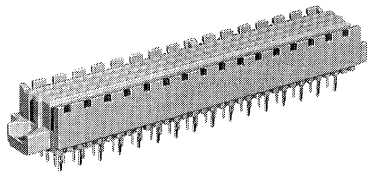
[1]With Boardlocks

SOURCE: Catalog 82721

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

METRIC

Enhanced Type C Vertical Receptacle Assemblies with Solder Leads and ACTION PIN Leads



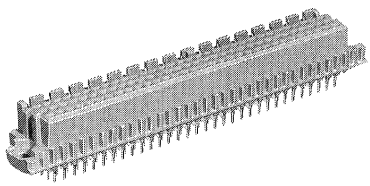
Note: 96 Pos. Housing Dim. (Typ.)—93.98 [3.700] L x 15.88 [.625] W x 11.50 [.453] H

Standard Size (for 1.57 [.062] Min. Pc Board Thickness)

Number of Positions	Rows Loaded	DIN Levels	Solder Contacts		ACTION PIN Contacts*		
			3.30 [.130] Lead Length	4.57 [.180] Lead Length	4.83 [.190] Lead Length	13 [.512] Lead Length	17 [.669] Lead Length
96	A,B,C	II	536152-4	536153-4	650992-4	148060-5	148062-5
			536154-4[1]	536155-4[1]	—	1-148060-5[2]	1-148062-5[2]
		III	536152-9	536153-9	650992-9	—	—

[1]With Boardlocks
[2]Precious metal plating in contact area and for 5.08 [.200] from tip of post; gold flash on remainder of post.
*Connectors with ACTION PIN contacts are toolless (flat rock).

Enhanced Type C Vertical Receptacle Assemblies with Solder Leads and ACTION PIN Leads (Single Ground Plane)



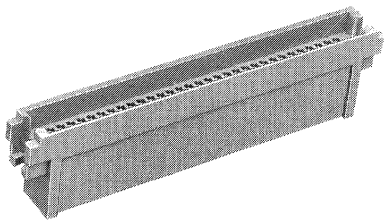
Note: 96 Pos. Housing Dim. (Typ.)—93.98 [3.700] L x 13.23 [.521] W x 11.51 [.453] H

Standard Size (for 1.57 [.062] Min. Pc Board Thickness)

Number of Positions	Rows Loaded	DIN Level	Solder Contacts		ACTION PIN Contacts*		
			3.30 [.130] Lead Length	4.57 [.180] Lead Length	4.83 [.190] Lead Length	13 [.512] Lead Length	17 [.669] Lead Length
96	A,B,C	II	148023-4	148022-4	148021-4	148063-5	148065-5
						1-148063-5[1]	1-148065-5[1]

[1]Precious metal plating in contact area and for 5.08 [.200] from tip of post; gold flash on remainder of post.
*Connectors with ACTION PIN contacts are toolless (flat rock).

Type C Vertical Pin Housing for Crimp Snap-In Pin Contacts



Note: 96 Pos. Housing Dim. (Typ.)—93.70 [3.689] L x 11.00 [.433] W x 24.4 [.961] H

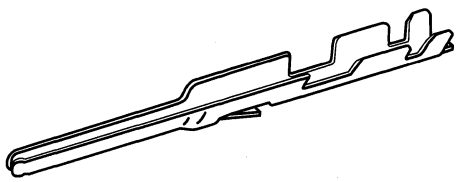
Standard Size

Number of Positions	Part Number
96	166467-1

AMPMODU Mod. IV Crimp Snap-In Pin Contacts

Hand Tool
Part Number 90418-1

Extraction Tool
Part Number 166645-1



Wire Size Range		Insulation Diameter (Max.)	DIN Levels	Part Numbers	
mm²	AWG			Strip Form*	Loose Piece
0.12 - 0.4	26-22	1.60 [.063]	II	166678-1	166679-1
			III	—	166679-4

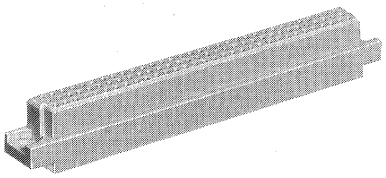
*Strip form, 12,000 pieces per reel. For automatic tooling recommendation, consult AMP.

SOURCE: Catalog 82721

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

METRIC

Type C Vertical Receptacle Housing for Crimp Snap-In Receptacle Contacts



Note: 96 Pos. Housing Dim. (Typ.)—
95.00 [3.740] L x 10.49 [.413] W x 13.80 [.543] H

Note: 48 Pos. Housing Dim. (Typ.)—
54.40 [2.142] L x 10.49 [.413] W x 13.80 [.543] H

Standard Size

Number of Positions	Part Numbers
96	925486-1
	827803-1[1]

[1]Housing material is polyester, grey, 94V-0 rated.

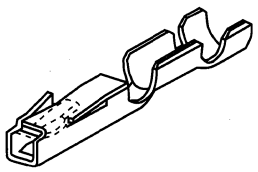
Half Size

Number of Positions	Part Number
48	926040-2

Tandem Spring Crimp Snap-In Receptacle Contacts

Hand Tool
Part No. 90301-2

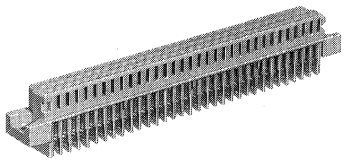
Extraction Tool
Part No. 91156-2



Wire Size Range mm²	Wire Size Range AWG	Insulation Diameter	DIN Levels	Part Numbers Strip Form*	Part Numbers Loose Piece
0.12 - 0.4	26-22	0.91 - 1.37 [.036 - .054]	II	530151-7	530151-8
			III	530151-5	530151-6

*Strip form, 50,000 pieces per reel. For automatic tooling recommendation, consult AMP.

Type C Vertical Receptacle Assemblies IDC Discrete Wire Connectors



Product Facts

- Two part receptacle housing; up to 96 positions possible
- Replacement receptacle contacts, insulation displacement contacts for solid wire or 7-strand wire with redundant slots and additional insulation support
- Wire size range 0.05 to 0.35 mm²
- The AMP standard contact cavity allows use of crimp contact up to 0.56 mm²
- Fits in cover Part Number 826196-1 or Part Number 828545-1
- Optimum application tooling

Note: 64 Pos. Housing Dim. (Typ.)—94.90 [3.736] L x 10.49 [.413] W x 16.41 [.646] H

Number of Positions	Wire Size Range mm²	Wire Size Range AWG	Insulation Diameter	Rows Loaded	DIN Level	Part Numbers (See Note)
96	0.05-0.15	30-26	1.20 [.047]	A,B,C	II	167259-2
						167259-5
	0.12-0.4	26-22			II	166873-2
						166873-5
64	0.05-0.15	30-26	1.20 [.047]	A,C	II	167257-2
						167257-5
	0.12-0.4	26-22			II	166811-2
						166811-5
32	0.05-0.15	30-26	1.20 [.047]	A,C (Even Positions)	II	167255-2
						167255-5
	0.12-0.4	26-22			II	166870-2
						166870-5

Note: Suffix -2 For Type R mating connectors; -5 For Type C mating connectors

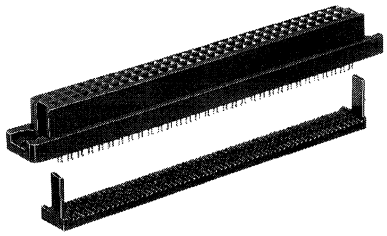
Tooling: Hand Tool Kit Part Number 658164-2

Kit consists of—
Hand Tool ..... Part No. 658096-3
Table Clamp ..... Part No. 870089-1
Cable Clamp ..... Part No. 658166-1
Service Tool ..... Part No. 658167-1
Replacement Contacts (100) ..... Part No. 827788-1
Plastic Case ..... Part No. 658169-1

For automatic tooling recommendations, call the Tooling/Technical Assistance Center.

METRIC

Type C Receptacle Assemblies EUROLATCH Ribbon Cable Connectors, Inverse Style



Receptacle Assemblies with Cover (Preassembled)

Note: 64 Pos. Housing Dim. (Typ.)—
94.74 [3.730] L x 18.57 [.731] W x 10.49 [.413] H

Cable Specifications:

64 conductor
0.05 mm² [30 AWG] solid
0.08-0.09 mm² [28 AWG] solid or stranded
0.12-0.15 mm² [26 AWG] solid or stranded
Thickness, 0.89 ±0.08 [.035 ± .003]
Conductor centerline, 1.27 [.050]

Standard Size

Number of Positions	Rows Loaded	Part Numbers
64	A, C	746603-1
	A, B	746603-2
	B, C	746603-3

Note: For more information on EUROLATCH Connectors, Planar Ribbon Cable and Tooling, request AMP-LATCH Ribbon Cable Connector System Catalog 82012.

Tooling:

Hand Tool Kit . . . . . .Part No. 768340-1 (Ref. 408-9828)
Connector-Specific Kit . . . . . .Part No. 768352-1 (Ref. 408-9840)
Pneumatic Tool . . . . . .Part No. 91112-3 (Ref. 408-6732)
Manual Tool . . . . . .Part No. 91085-2 (Ref. 408-7777)

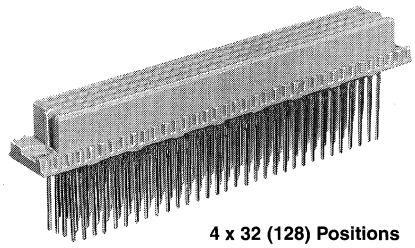
Four Row Right-Angle Pin Assemblies with Solder Posts

4 x 32 (128) Positions

Note: 128 Pos. Housing Dim. (Typ.)—93.90 [3.697] L x 10.11 [.398] W x 13.50 [.531] H

Number of Positions	Rows Loaded	DIN Levels	Part Numbers
128	A,B,C,D	II	106739-4
		III	106739-8

Four-Row Vertical Receptacle Assemblies with ACTION PIN Posts for Pc Board Mount (0.64 [.025] Square)



4 x 32 (128) Positions

Note: 128 Pos. Housing Dim. (Typ.)—95.00 [3.740] L x 13.10 [.516] W x 11.60 [.457] H

Standard Size (for 1.57 [.062] Min. Pc Board Thickness)

Number of Positions	Rows Loaded	DIN Levels	Part Numbers*	
			4 [.157] Post Length	17 [.669] Post Length
128	A,B,C,D	II	216415-4	216416-4
				1-216416-4[1]
		III	216415-8	216416-8
				1-216416-8[1]

[1]Precious metal plating in contact area and for 5.08 [.200] from tip of post; gold flash on remainder of post.
*Seating tools required for these connectors.

SOURCE: Catalog 82721

Specifications subject to change.

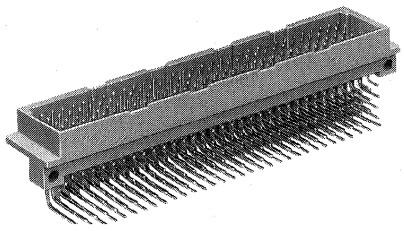
1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

METRIC

Five-Row Right-Angle Pin Assemblies with Solder Posts

5 x 32 (160) Positions

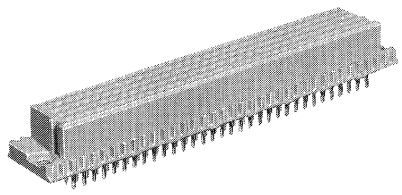


Note: 160 Pos. Housing Dim. (Typ.)—93.90 [3.697] L x 10.11 [.398] W x 16.18 [.637] H

Number of Positions	Rows Loaded	DIN Levels	Part Numbers
160	A,B,C,D,E	II	106740-4
		III	106740-8

Five-Row Vertical Receptacle Assemblies with ACTION PIN Posts for Pc Board Mount (0.64 [.025] Square)

5 x 32 (160) Positions



Note: 160 Pos. Housing Dim. (Typ.)—95.00 [3.740] L x 15.60 [.614] W x 11.60 [.457] H

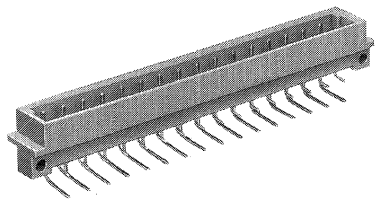
Standard Size (for 1.57 [.062] Min. Pc Board Thickness)

Number of Positions	Rows Loaded	DIN Levels	Part Numbers*	
			4 [.157] Post Length	17 [.669] Post Length
160	A,B,C,D,E	II	216417-4	216418-4
				1-216418-4[1]
		III	216417-8	216418-8
				1-216418-8[1]

[1]Precious metal plating in contact area and for 5.08 [.200] from tip of post; gold flash on remainder of post.
*Seating tools required for these connectors.

Type D Right-Angle Pin Assemblies with Solder Posts

Solder posts suitable for holes 1.0 mm nominal diameter according to IEC Publication 326.



Note: 32 Pos. Housing Dim. (Typ.)—93.96 [3.700] L x 11.10 [.437] H

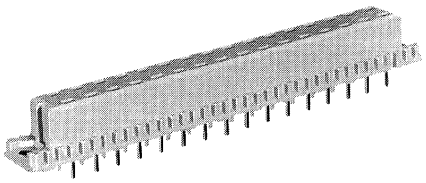
Standard Size

Number of Positions	Rows Loaded	DIN Levels	Part Numbers
32	A,C	II	2-164732-4
		III	2-164732-8

SOURCE: Catalog 82721

METRIC

Type D Vertical Receptacle Assemblies with Solder Posts for Pc Board Mount

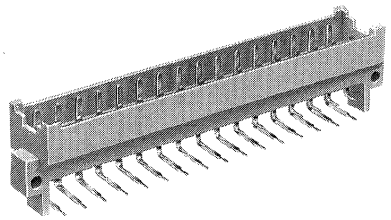


Note: 32 Pos. Housing Dim. (Typ.)—94.00 [3.700] L x 10.50 [.413] W x 11.60 [.456] H

Standard Size

Number of Positions	Rows Loaded	DIN Level	Part Number
32	A,B	II	6-106779-4

Type F Right-Angle Pin Assemblies with Solder Posts



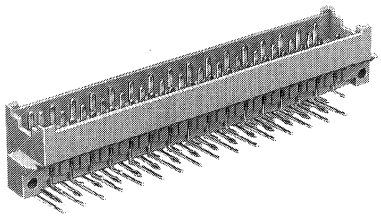
Note: 48 Pos. Housing Dim. (Typ.)—93.89 [3.693] L x 21.80 [.858] W x 14.70 [.579] H

Standard Size

Number of Positions	Rows Loaded	DIN Levels	Part Numbers	
			—	MFBL*Z32
48	Z,B,D	II	2-164045-4	2-166095-4
		III	2-164045-8	2-166095-8
32	Z,B	II	2-164043-4	2-166096-4
		III	2-164043-8	2-166096-8
32	Z,D	II	2-164306-4	2-166452-4
		III	2-164306-8	2-166452-8

*MFBL (Make First/Break Last)

Type F Right-Angle Pin Assemblies with ACTION PIN Posts (0.64 [.025] Square)



Note: 48 Pos. Housing Dim. (Typ.)—93.80 [3.693] L x 14.70 [.579] W x 21.80 [.858] H

Standard Size (for Pc Board Thicknesses 1.57 [.062] and Above)

Number of Positions	Rows Loaded	DIN Levels	Part Numbers
48	Z,B,D with no MFBL*	II	215435-4
		III	215435-8
	Z,B,D with MFBL* in B2, B32	II	215436-4
		III	215436-8
	Z,B,D with MFBL* in Z32	II	216040-4
		III	216040-8

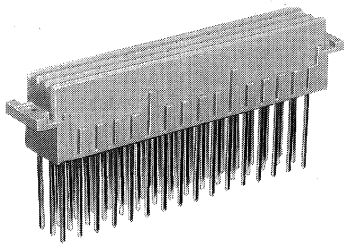
*MFBL (Make First/Break Last)

SOURCE: Catalog 82721

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

METRIC

Type F Vertical Receptacle Assemblies with Wrap Type and Solder Posts

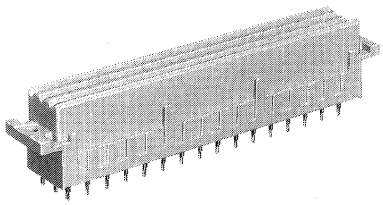


Note: 48 Pos. Housing Dim. (Typ.)—95.00 [3.740] L x 12.40 [.488] W x 20.01 [.788] H

Number of Positions	Post Type	Rows Loaded	DIN Levels	Part Numbers
48	Wrap Type 1.0 [.039] Square	Z,B,D	II	166717-4[1]
			III	166717-8[1]
	4 [.157] Solder	Z,B,D	II	166733-4
			III	166733-8
32	Wrap Type 1.0 [.039] Square	Z,B	II	166718-4[1]
			III	166718-8[1]
	4 [.157] Solder	Z,B	II	166732-4
			III	166732-8
	Wrap Type 1.0 [.039] Square	Z,D	II	166719-4[1]
			III	166719-8[1]
	4 [.157] Solder	Z,D	II	166951-4
			III	166951-8

[1]Housing material is polyester, grey, 94V-0 rated.

Type F Vertical Receptacle Assemblies with ACTION PIN Posts (0.64 [.025] Square)



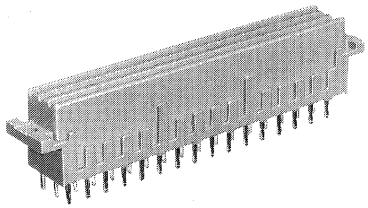
Note: 48 Pos. Housing Dim. (Typ.)—94.80 [3.732] L x 14.70 [.579] W x 20.01 [.788] H

Standard Size (for Pc Board Thicknesses 1.57 [.062] and Above)

Number of Positions	Rows Loaded	DIN Levels	Part Numbers*	
			4 [.157] Post Length	Mini Wrap Type 17.3 [.681] Post Length
48	Z,B,D	II	215334-4	215335-4
		III	215334-8	215335-8

*Connectors are toolless (flat rock).

Type F Vertical Receptacle Assemblies with ACTION PIN Posts (1.00 [.039] Square)



Note: 48 Pos. Housing Dim. (Typ.)—95.00 [3.740] L x 14.80 [.582] W x 20.02 [.788] H

Standard Size (for Pc Board Thicknesses 2.36 [.093] and Above)

Number of Positions	Rows Loaded	DIN Levels	Part Numbers*		
			6 [.236][1] Post Length	Wrap Type 13 [.512] Post Length	Wrap Type 22 [.866] Post Length
48	Z,B,D	II	166648-4	167109-4	166555-4
		III	166648-8	167109-8	166555-8
32	Z,B	II	166649-4	—	166594-4
		III	166649-8	—	166594-8
	Z,D	II	166728-4	—	166727-4
		III	166728-8	—	166727-8

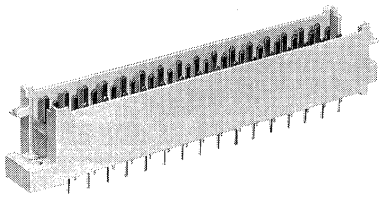
[1]Pre-notched to break off at 6.00 [.236] from bottom of connector.
*Connectors are toolless (flat rock).

SOURCE: Catalog 82721

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

METRIC

Type F Vertical Interface-I Pin Assemblies with Solder Posts

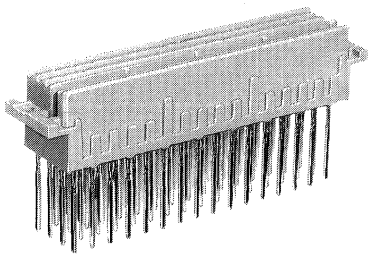


Note: 48 Pos. Housing Dim. (Typ.)—101.00 [3.976] L x 14.80 [.583] W x 18.00 [.709] H

Standard Size

Number of Positions	Rows Loaded	DIN Levels	Part Numbers
48	Z,B,D	II	2-166628-4
		III	2-166628-8
32	Z,B	II	2-166629-4
		III	2-166629-8
	Z,D	II	2-166630-4
		III	2-166630-8

Type G Vertical Receptacle Assemblies with ACTION PIN Posts (1.00 [.039] Square)



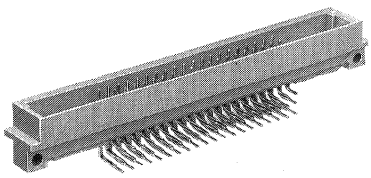
Note: 64 Pos. Housing Dim. (Typ.)—94.80 [3.732] L x 19.70 [.776] W x 42.01 [1.654] H

Standard Size (for Pc Board Thicknesses 2.36 [.093] and Above)

Number of Positions	Rows Loaded	DIN Levels	Part Numbers*
64	Z,B,D,F	II	167771-4
		III	167771-8

*Connectors are toolless (flat rock).

Type M Right-Angle Pin Assemblies with Solder Posts, for Power and Coaxial Contacts



Note: 78 Pos. Housing Dim. (Typ)—93.70 [3.689] L x 11.10 [.437] H

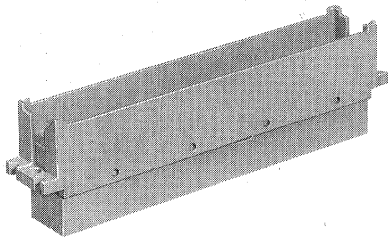
Number of Positions	Rows Loaded*	DIN Level	Part Numbers
78 + 2 SC	A,B,C	II	216963-4
60 + 4 SC	A,B,C	II	216970-4
42 + 6 SC	A,B,C	II	216977-4
24 + 8 SC	A,B,C	II	216698-4

*Loaded with signal contacts only. See page 3338 for male power and coaxial contacts.

Specifications subject to change.
1-800-522-6752 Product Information Center/ AMP FAX Service
1-800-722-1111 Tooling/Technical Assistance Center

METRIC

Type F Vertical Pin Housings for Crimp Snap-In Pin Contacts



Standard Size

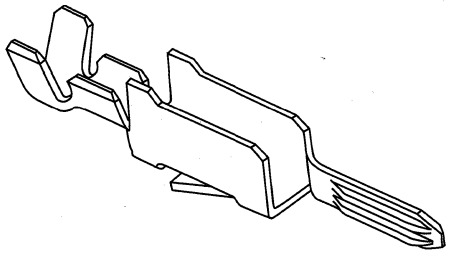
Number of Positions	Part Numbers
48	166570-1
	166570-7*
	166570-8*
	166570-9*
	1-166570-0*

*Variable printing (see customer drawings)

Crimp Snap-In Contacts

Hand Tool
Part Number 169480-1

Extraction Tool
Part Number 658033-1

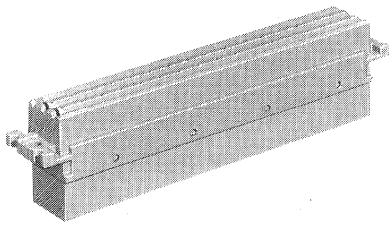


Wire Size Range mm²	Wire Size Range AWG	Insulation Diameter	DIN Levels	Part Numbers Strip Form*	Part Numbers Loose Piece
0.05-0.15	30-26	**0.30-0.70** .012-.028	II	166477-6	166634-4
			III	166477-7	166634-5
0.12-0.6	26-20	**1.10-1.80** .043-.071	II	166478-6	166635-4
			III	166478-7	166635-5
0.8-1.4	18-16	**2.00-2.50** .079-.098	II	166479-6	166636-4
			III	166479-7	166636-5

*Strip form, 5,000 pieces per reel. For automatic tooling recommendation; consult AMP.

Type F Vertical Receptacle Housings for Crimp Snap-In Receptacle Contacts

Note: 48 Pos. Housing Dim. (Typ.)—
95.00 [3.740] L x 12.70 [.500] W x 23.31 [.918] H



Standard Size

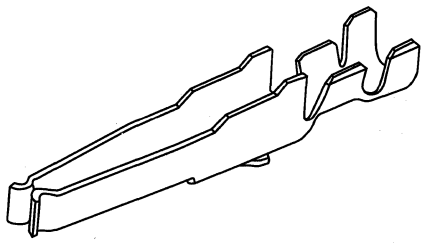
Number of Positions	Part Numbers
48	166569-1
	166569-7*
	166569-8*
	166569-9*
	1-166569-0*

*Variable printing, see customer drawings.

Crimp Snap-In Contacts

Hand Tool
Part Number 169480-1

Extraction Tool
Part Number 658033-1



Wire Size Range mm²	Wire Size Range AWG	Insulation Diameter	DIN Levels	Part Numbers Strip Form*	Part Numbers Loose Piece
0.05-0.15	30-26	**0.30-0.70** .012-.028	II	166459-3	166631-2
			III	166459-4	166631-3
0.12-0.6	26-20	**1.10-1.80** .043-.071	II	166460-3	166632-2
			III	166460-4	166632-3
0.8-1.4	18-16	**2.00-2.50** .079-.098	II	166461-3	166633-2
			III	166461-4	166633-3

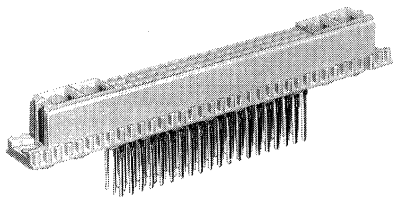
*Strip form, 5,000 pieces per reel. For automatic tooling recommendation; consult AMP.

SOURCE: Catalog 82721

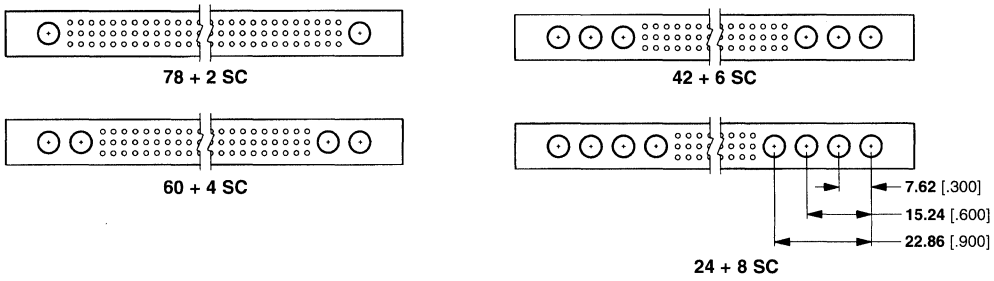
Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

METRIC

Type M Vertical Receptacle Assemblies with ACTION PIN Posts, for Power and Coaxial Contacts



Contact Arrangment



Note: 78 Pos. Housing Dim. (Typ.)—95.00 [3.740] L x 10.49 [.413] W x 11.60 [.457] H

Pc Board Thickness 1.57 [.062]

Number of Positions	Rows Loaded*	Part Numbers/Post Lengths		
		Bd.-to-Bd.	Wrap-Type**	
		3.99 [.157]	13.00 [.512]	17.00 [.669]
78 + 2 SC	A,B,C	216964-4	216965-4	216966-4
60 + 4 SC	A,B,C	216971-4	216972-4	216973-4
42 + 6 SC	A,B,C	216978-4	216979-4	216980-4
24 + 8 SC	A,B,C	216984-4	216985-4	216986-4

Pc Board Thickness 2.36 - 3.18 [.093-.125]

Number of Positions	Rows Loaded*	Part Numbers/Post Lengths		
		Bd.-to-Bd.	Wrap-Type**	
		3.99 [.157]	13.00 [.512]	17.00 [.669]
78 + 2 SC	A,B,C	216967-4	216968-4	216969-4
60 + 4 SC	A,B,C	216974-4	216975-4	216976-4
42 + 6 SC	A,B,C	216981-4	216982-4	216983-4
24 + 8 SC	A,B,C	216987-4	216699-4	216988-4

*Loaded with signal contacts only. See page 3339 for male power and coaxial contacts.
**DIN Performance Level II. Add prefix 1- to part number for "piggy back" applications.

SOURCE: Catalog 82721

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

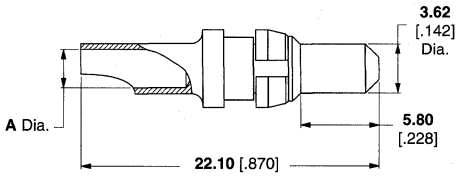
METRIC

High Current and Coaxial Contacts for Type M Pin Assemblies

High Current Contacts

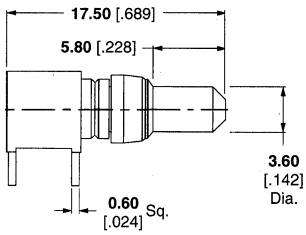
Note: These power contacts are used in the Type M Pin Assemblies shown on page 3336.

Male Power Contacts for Cable Termination



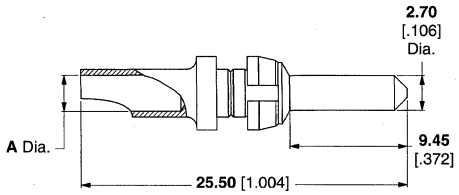
Contact Rated Current (Amperes)	Dimension A	Part Numbers
40	**4.80** .189	100069-1
20	**2.80** .110	100070-1
10	**1.70** .067	100071-1

Male Power Contact for Pc Board Mount



Part Number 216994-1

Male Power Contacts (MFBL) for Cable Termination

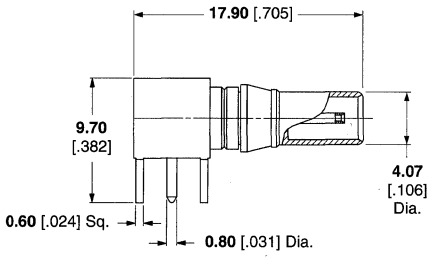


Contact Rated Current (Amperes)	Dimension A	Part Numbers
40	**4.80** .189	100072-1
20	**2.80** .110	100073-1
10	**1.70** .067	100074-1

Coaxial Contacts

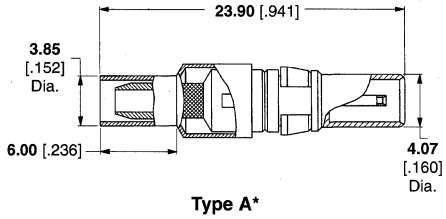
Note: These coaxial contacts are used in the Type M Pin Assemblies shown on page 3336.

Coaxial Contact for Male Connector Pc Board Mount

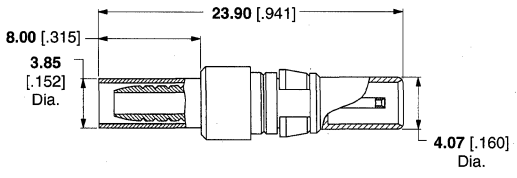


Part Number 100777-1

Coaxial Contacts for Male Connectors, Cable Termination



Type A*



Type B**

Contact Type	Part Numbers
A*	100079-2
B**	100080-2

*Inner conductor solderable through bore.
**Inner conductor separately solderable (suitable for cable type RG179 B/U and RG316/U).

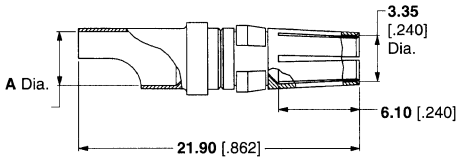
METRIC

High Current and Coaxial Contacts for Type M Receptacle Assemblies

High Current Contacts

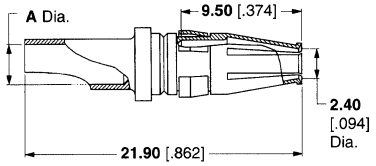
Note: These power contacts are used in the Type M Receptacle Assemblies shown on page 3337.

Female Power Contacts for Cable Termination



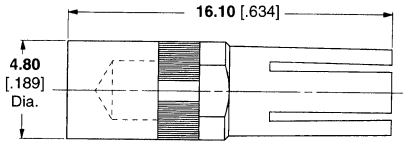
Contact Rated Current (Amperes)	Dimension A	Part Numbers
40	4.80 .189	100081-1
20	2.80 .110	100082-1
10	1.70 .067	100083-1

Female Power Contacts (MFBL) for Cable Termination



Contact Rated Current (Amperes)	Dimension A	Part Numbers
40	4.80 .189	100084-1
20	2.80 .110	100085-1
10	1.70 .067	100086-1

Female Power Contact for Pc Board Mount

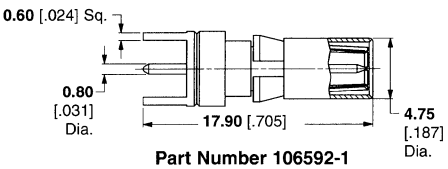


Part Number 106776-1

Coaxial Contacts

Note: These coaxial contacts are used in the Type M Receptacle Assemblies shown on page 3337.

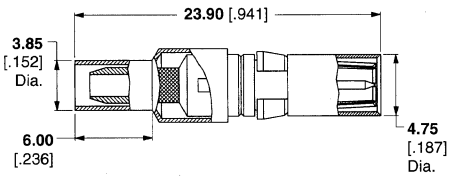
Coaxial Contact for Female Connector, Pc Board Mount



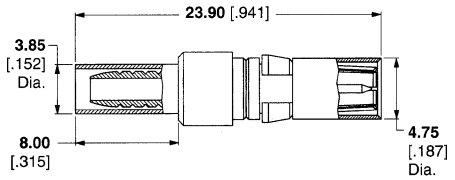
Part Number 106592-1

Note: Contact will raise the connector assembly up 3.18 [.125] from the Pc board surface.

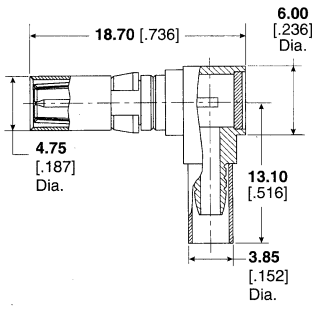
Coaxial Contacts for Female Connectors, Cable Termination



Type A*



Type B**



90° Right-Angle

Contact Type	Part Numbers
A*	100093-2
B**	100094-2
90°	100095-2

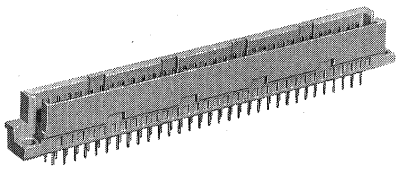
*Inner conductor solderable through bore.
**Inner conductor separately solderable (suitable for cable types RG179 B/U and RG316/U).

SOURCE: Catalog 82721

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

METRIC

Type Q Vertical Pin Assemblies with Solder Posts



Note: 64 Pos. Housing Dim. (Typ.)—94.80 [3.732] L x 8.60 [.338] W x 10.4 [.410] H

Standard Size

Number of Positions	Rows Loaded	DIN Level	Part Number
64	A,B	III	174254-2

Half Size

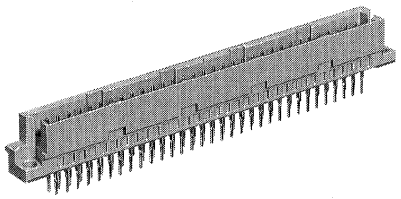
Number of Positions	Rows Loaded	DIN Level	Part Number
32	A,B	III	174254-1

Expanded Size

Number of Positions	Rows Loaded	DIN Level	Part Number
80	A,B	III	174254-3

Type Q Vertical Pin Assemblies with ACTION PIN Posts* (0.56 [.022] Square)

*These ACTION PIN posts require 0.75 -0.85 [.030-.033] diameter plated-thru holes.



Contact Replacement Tool Kit Part Number 265871-7

Contact Removal Tool Part Number 58209-1

Note: 64 Pos. Housing Dim. (Typ.)—94.80 [3.732] L x 8.60 [.339] W x 11.50 [.453] H

Standard Size (for Pc Board Thicknesses 2.36 [.093] and Above)

Number of Positions	Rows Loaded	DIN Level	Part Number
64	A,B	III	174252-2

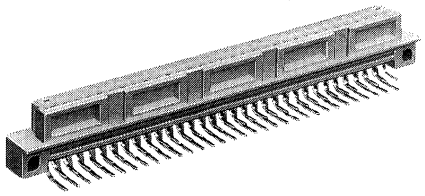
Half Size (for Pc Board Thicknesses 2.36 [.093] and Above)

Number of Positions	Rows Loaded	DIN Level	Part Number
32	A,B	III	174252-1

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

METRIC

Type Q Right-Angle Receptacle Assemblies with Solder Posts and MFBL Contacts



Note: 64 Pos. Housing Dim. (Typ.)—93.80 [3.693] L x 8.10 [.319] W x 6.00 [.236] H

Standard Size

Number of Positions	Rows Loaded	DIN Level	Part Number
64	A,B	III	174253-2

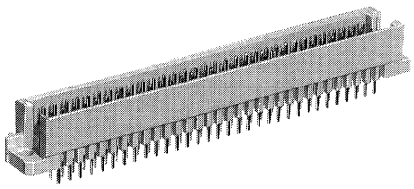
Note: Locations of MFBL contacts; B1, B32.

Half Size

Number of Positions	Rows Loaded	DIN Level	Part Number
32	A,B	III	174253-1

Note: Locations of MFBL contacts; B1, B16.

Type R Vertical Pin Assemblies with Solder Posts



Note: 96 Pos. Housing Dim. (Typ.)—95.00 [3.740] L x 8.74 [.344] W x 11.51 [.453] H

Standard Size

Number of Positions	Rows Loaded	DIN Levels	Part Numbers	
			3.30 [.130] Post Length	4.57 [.180] Post Length
96	A,B,C	II	650908-5	650470-5
			536035-5[1]	650969-5[1]
		III	—	650470-9
64	A,C	II	650933-5	650934-5
			536419-5[1]	536420-5[1]

[1]With Boardlocks

Half Size

Number of Positions	Rows Loaded	DIN Levels	Part Numbers	
			3.30 [.130] Post Length	4.57 [.180] Post Length
48	A,B,C	II	650479-5	650477-5
			536421-5[1]	536422-5[1]
		III	650479-9	—
32	A,C	II	650935-5	650936-5
			536423-5[1]	536424-5[1]

[1]With Boardlocks

Expanded Size

Number of Positions	Rows Loaded	DIN Level	Part Numbers	
			3.30 [.130] Post Length	4.57 [.180] Post Length
120	A,B,C	II	650919-5	650910-5
			536131-5[1]	536426-5[1]
150	A,B,C	II	650922-5	650911-5
			536427-5[1]	536428-5[1]

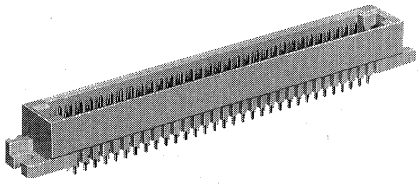
[1]With Boardlocks

SOURCE: Catalog 82721

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

METRIC

Type R Vertical Pin Assemblies with Solder Posts and Guides

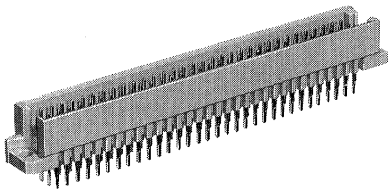


Note: 96 Pos. Housing Dim. (Typ.)—103.33 [4.068] L x 8.74 [.344] W x 11.51 [.453] H

Standard Size

Number of Positions	Rows Loaded	DIN Level	Part Number
96	A,B,C	II	148004-5

Type R Vertical Pin Assemblies with ACTION PIN Posts (0.64 [.025] Square)



Note: 96 Pos. Housing Dim. (Typ.)—95.00 [3.740] L x 11.00 [.433] W x 11.51 [.453] H

Standard Size (for Pc Board Thicknesses 2.36 [.093] and Above)

Number of Positions	Rows Loaded	DIN Levels	Part Numbers	
			6.35 [.250] Post Length	13.23 [.521] Post Length
96	A,B,C	II	650889-5	650909-5
			—	1-650909-4[1]
		III	650889-9	—
64	A,C	II	650912-5	650930-5
			—	1-650930-4[1]
		III	650912-9	—
			—	1-650930-9[1]

[1]Precious metal plating in contact area and for 5.08 [.200] from tip of post; gold flash on remainder of post.

Half Size (for Pc Board Thicknesses 2.36 [.093] and Above)

Number of Positions	Rows Loaded	DIN Level	Part Numbers	
			6.35 [.250] Post Length	13.23 [.521] Post Length
48	A,B,C	II	650918-5	650917-5
32	A,C	II	650931-5	650932-5

Expanded Size (for Pc Board Thicknesses 2.36 [.093] and Above)

Number of Positions	Rows Loaded	DIN Levels	Part Numbers	
			6.35 [.250] Post Length	13.23 [.521] Post Length
120	A,B,C	II	650921-5	650920-5
		III	650921-9	—
150	A,B,C	II	650924-5	650923-5

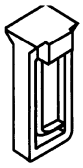
Specifications subject to change.
1-800-522-6752 Product Information Center/ AMP FAX Service
1-800-722-1111 Tooling/Technical Assistance Center

METRIC

Type R Vertical Pin Assemblies Keyed with ACTION PIN Posts (0.64 [.025] Square)

Keying Plug

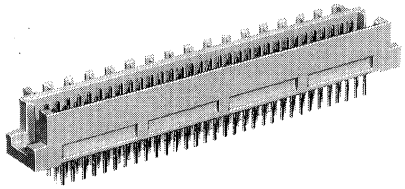
Part Number 166840-1



Keying Strip

Part Number 166839-1*

*For use only on a 1.57 [.062] thick Pc board and connector with 2.79 [.110] or shorter post.

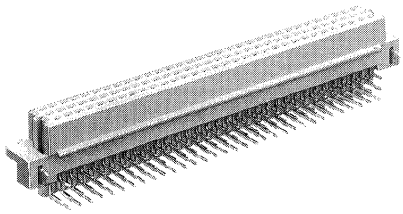


Note: 96 Pos. Housing Dim. (Typ.)—95.00 [3.740] L x 14.86 [.585] W x 11.35 [.447] H

Standard Size (for Pc Board Thicknesses 2.36 [.093] and Above)

Number of Positions	Rows Loaded	DIN Level	Part Numbers
96	A,B,C	II	2-167038-4
64	A,C	II	2-167036-4

Type R Right-Angle Receptacle Assemblies with Solder Posts (with and without Boardlocks)



Note: 96 Pos. Housing Dim. (Typ.)—93.87 [3.696] L x 18.01 [.709] W x 10.49 [.413] H

Standard Size

Number of Positions	Rows Loaded	DIN Levels	Part Numbers	
			2.79 [.110] Post Length	4.24 [.167] Post Length
96	A,B,C	II	650461-4	650462-4
			650895-4[1]	650896-4[1]
		III	650461-9	—
64	A,C	II	650870-4	—
		III	650870-9	650871-9
			—	536431-9[1]

[1]With Boardlocks

Half Size

Number of Positions	Rows Loaded	DIN Levels	Part Numbers	
			2.79 [.110] Post Length	4.24 [.167] Post Length
48	A,B,C	II	650868-4	—
			650893-4[1]	
		III	650868-9	650869-9
32	A,C	II	650867-4	650958-4

[1]With Boardlocks

Expanded Size

Number of Positions	Rows Loaded	DIN Level	Part Numbers	
			2.79 [.110] Post Length	4.24 [.167] Post Length
120	A,B,C	II	650874-4	—
			650899-4[1]	
150	A,B,C	II	650875-4	650877-4
			650959-4[1]	650901-4[1]

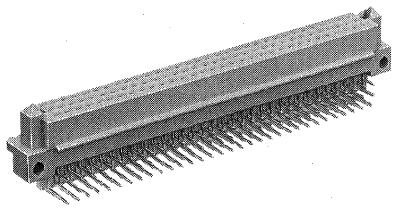
[1]With Boardlocks

SOURCE: Catalog 82721

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

METRIC

Type R Right-Angle Receptacle Assemblies with Solder Posts and Guides



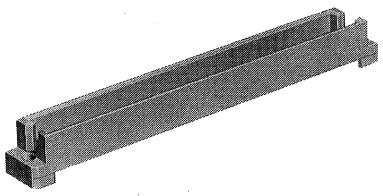
Note: 96 Pos. Housing Dim. (Typ.)—93.98 [3.700] L x 18.14 [.714] W x 10.49 [.413] H

Standard Size

Number of Positions	Rows Loaded	DIN Level	Part Number
96	A,B,C	II	650995-4

Shrouds

For Type C and Type R Standard and Half Size Connectors (96 and 48 Positions)



Standard Size

Pc Board Thickness	Use With Post Length	Part Numbers	
		Without Mounting Holes	With Mounting Holes
3.18 .125	**13.23** .521	533236-4	535074-1
	16.99 .669	533236-5	535074-2
2.36 .093	**13.23** .521	533236-7	—
	16.99 .669	533236-8	—
1.57 .062	**13.23** .521	1-533236-0	—
	16.99 .669	1-533236-1	—

Half Size

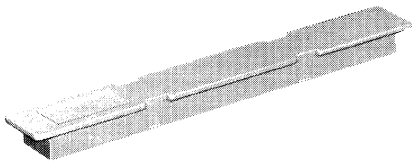
Pc Board Thickness	Use With Post Length	Part Numbers	
		Without Mounting Holes	With Mounting Holes
1.57 .062	**13.23** .521	—	650437-1

Note: Shrouds are for use with all 96 and 48 position, 3 row, Type C and R Connectors mounted in 3.18 [.125], 2.36 [.093] and 1.57 [.062] thick Pc boards. Twelve interference areas are located in selected cavities.

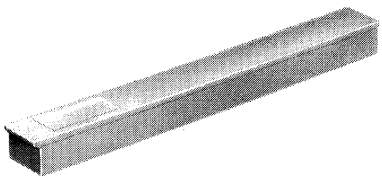
METRIC

Dust Covers

For Type C and Type R Standard Size Connectors (96 and 64 Positions)



Part Number 174375-1
(For Pin Housing)



Part Number 174376-1
(For Receptacle Housing)

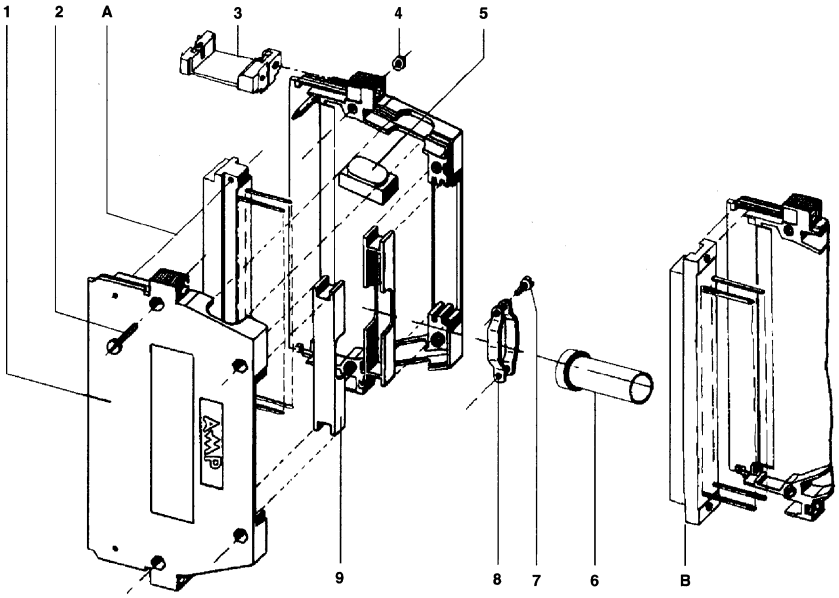
Two-Piece Cable Clamp Assemblies

Kit parts are packaged unassembled

Part Details

Item	Description
A; B	Pin Assembly; Receptacle Assembly (Shown for ref. only)
1	Cover (shell half)
2	Screw M 2.5 [.10] x ...DIN 84
3	Guide Bracket (not supplied in kit)
4	Hex nut M 2.5 [.10] DIN 439
5	Cable outlet closing plate
6	Cable Boot
7	Screw M 2.5 [.10] x ...DIN 84
8	Strain Relief Clamp
9	Fixture for 180° Cable outlet

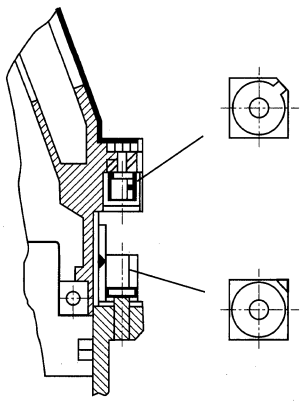
Kit includes strain relief clamp (Item 8) **Part No. 826199-6** and cable boot (Item 6) **Part No. 826199-5**. They may also be purchased separately.



Part Number 826196-1

Keying Kit

Kit includes two guide pins, and two keying plugs with screws.



Keying Kit
Part Number 827107-1

SOURCE: Catalog 82721

Specifications subject to change.

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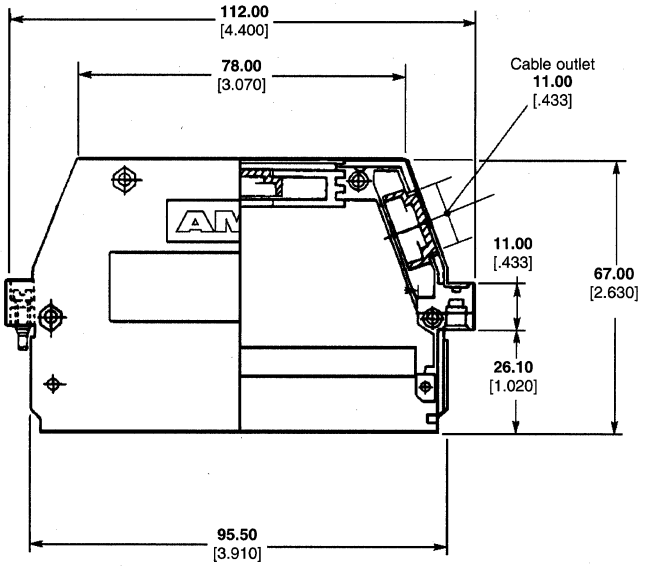
METRIC

Two-Piece Cable Clamp Assemblies
(Continued)

Cable Hood Kit, Type C and Type D

Part Number 826196-1

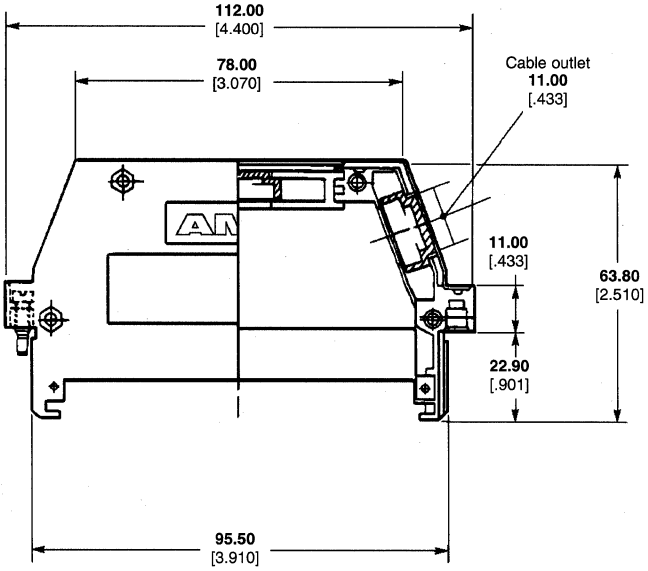
Kit includes covers, guide pins, covers for unused cable exits, strain relief clamp and all necessary hardware.



Cable Hood Kit, Type F

Part Number 826198-1

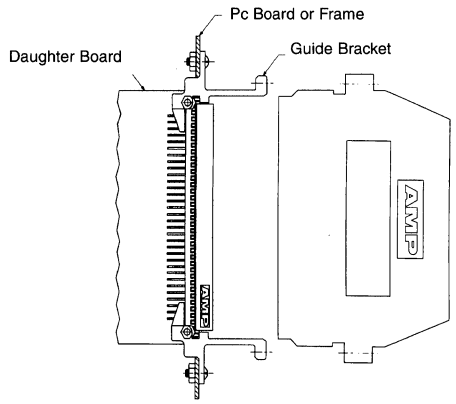
Kit includes covers, guide pins, covers for unused cable exits, strain relief clamp and all necessary hardware.



METRIC

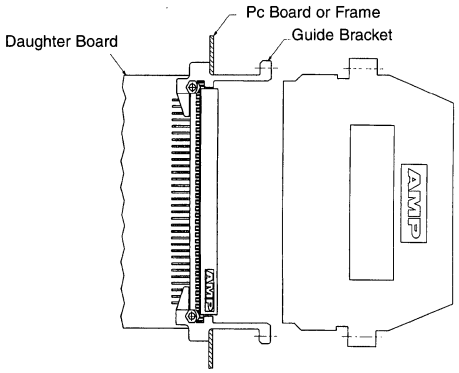
Guide Brackets

Front Mounting



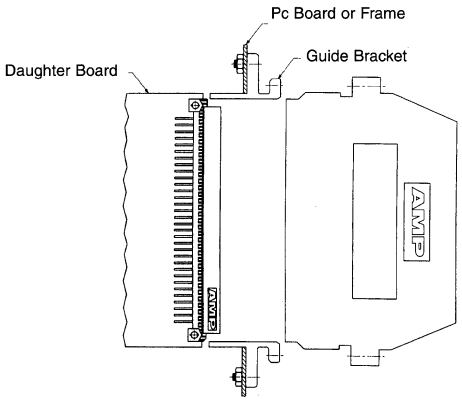
For Connector	Part Numbers
Type C, D	4-826199-0
Type F	5-826199-0*
Type F	6-826199-0*

*Suitable for variable rails, see customer drawing.



For Connector	Part Numbers
Type C, D	7-826199-0*
Type F	8-826199-0**

*Similar to Part No. 4-826199-0, except for method of mounting to board.
**Similar to Part No. 5-826199-0, except for method of mounting to board.



For Connector	Part Number
Type C, D, F	826199-1

SOURCE: Catalog 82721

Specifications subject to change.
1-800-522-6752
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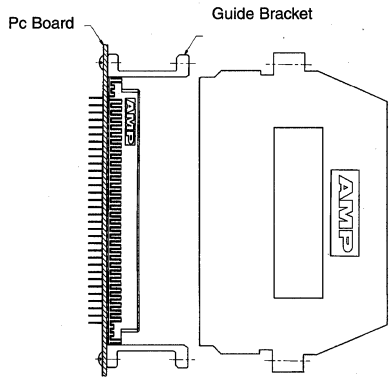
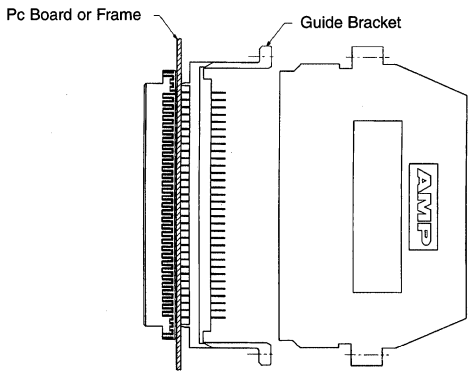
METRIC

Guide Brackets
(Continued)

Front Mounting
(Continued)



For Connector	Part Number
Type C, D	1-826199-0



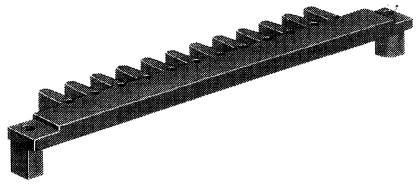
For Connector	Part Number
Type C	2-826199-8*

*For this application use receptacle assembly with tandem spring contacts only. (Refer to page 3325.)

METRIC

Keying Systems

Type B, C, D, F, R and Q Connector Keying

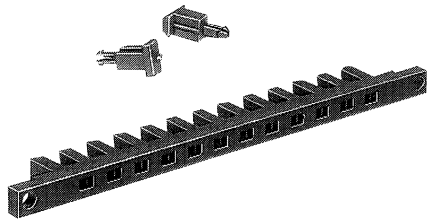


Note: Housing Dim. (Typ.)—93.50 [3.681] L x 16.00 [.630] W x 8.00 [.315] H

Pin Assembly Keying Strip

Connector Type	Part Numbers
C, D, F*, R	926495-1
C, D, R	926495-4

*For Type F cable mount only.



Note: Housing Dim. (Typ.)—95.00 [3.740] L x 10.50 [.413] W x 5.00 [.197] H

Receptacle Assembly Keying Strip

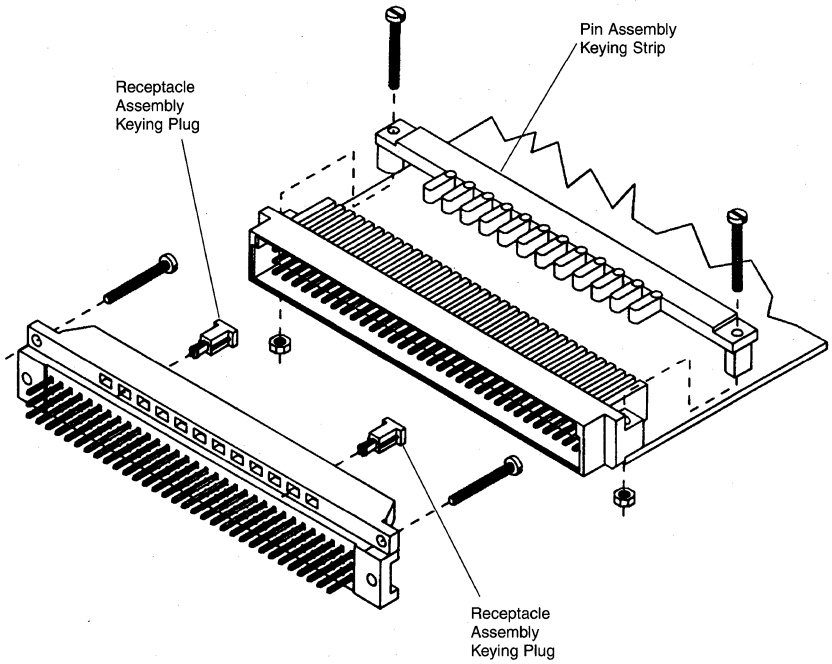
Connector Type	Part Number
B, C, D, F, Q, R	926495-2*

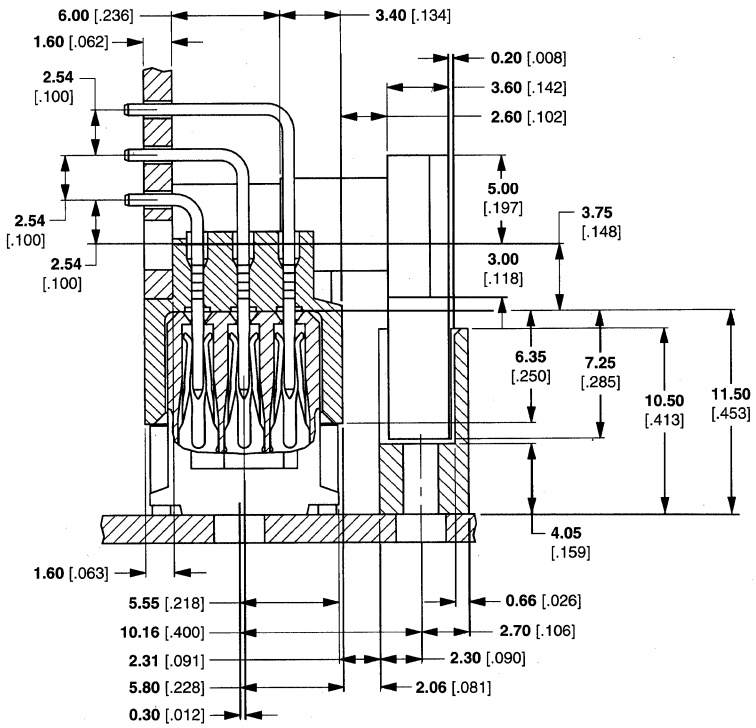
*Two Keying Plugs are moulded to the strip, additional quantities of plugs can be ordered separately (Keying Plug **Part Number 926495-3**).
Note: Due to product design and shipping, keying plugs may be separated from strip.

Specifications subject to change.
1-800-522-6752 Product Information Center/ AMP FAX Service
1-800-722-1111 Tooling/Technical Assistance Center

METRIC

Type B, C, D, F, R and Q Connector Keying
(Continued)





Mounting Specifications

SOURCE: Catalog 82721

METRIC

Application Tooling for Eurocard Connectors with ACTION PIN Contacts

Eurocard Connector Seating Tools

Connector		Receptacle Assembly		Pin Assembly
Type	Post Size	Standard Tools	Economy Tools	Standard Tools
B	**0.64 x 0.64** .025 x .025	432805-1	—	—
	0.30 x 0.61 .012 x .024	①	①	
C	**0.64 x 0.64** .025 x .025	432583-1	535072-1	—
	0.30 x 0.61 .012 x .024	①	①	
C (Half Size)	**0.64 x 0.64** .025 x .025	432582-1	—	—
	0.30 x 0.61 .012 x .024	①	①	
C (128 Position)	**0.64 x 0.64** .025 x .025	432584-1	—	—
C (160 Position)	**0.64 x 0.64** .025 x .025	432585-1	—	—
F	**0.64 x 0.64** .025 x .025	①	①	—
	1.00 x 1.00 .039 x .039			
G	**1.00 x 1.00** .039 x .039	①	①	—
M 78	**0.64 x 0.64** .025 x .025	432784-1	148090-1	—
M 60	**0.64 x 0.64** .025 x .025	432981-1	148090-2	—
M 42	**0.64 x 0.64** .025 x .025	432980-1	148090-3	—
M 24	**0.64 x 0.64** .025 x .025	432783-1	148090-4	—
Q	**0.56 x 0.56** .022 x .022	—	—	58171-5
Q (Half Size)	**0.56 x 0.56** .022 x .022	—	—	58171-6
R	**0.64 x 0.64** .025 x .025	—	—	768211-2
				768216-2②
R (Half Size)	**0.64 x 0.64** .025 x .025	—	—	768211-1
				768216-1②
R (120 Position)	**0.64 x 0.64** .025 x .025	—	—	768211-3
				768216-3②
R (150 Position)	**0.64 x 0.64** .025 x .025	—	—	768211-4
				768216-4②

① Flat rock assembly; tooling not required
② Programmable tooling for MFBL pin assemblies

Eurocard Connector Removal Tools

Connector Type	Tail Length	Removal Tool Part Numbers
C (96 Position, 3 Row)	**≤6.35** .250	534611-1
	12.70 .500	534611-2
	17.00 .669	534611-3
C (160 Position, 5 Row)	**4.00** .157	148042-1
	17.00 .669	148042-1
M (Power Contact)	—	106242-1

SOURCE: Catalog 82721

Specifications subject to change.
1-800-522-6752 Product Information Center/ AMP FAX Service
1-800-722-1111 Tooling/Technical Assistance Center

Micro-Strip Interconnection System

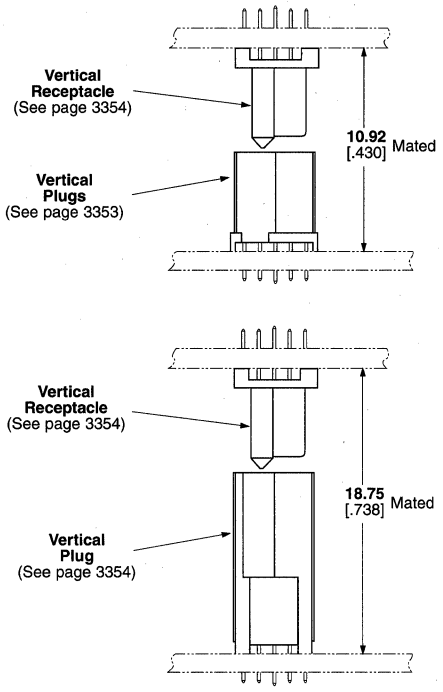
(1.27 x 2.54 [.050 x .100] Centerline)

METRIC

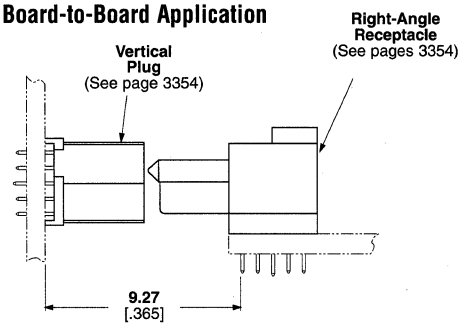
Product Facts

- Designed for high speed applications
- Provides controlled impedance
- Low inductance
- High density
- Superior electrical performance down to 250 picosecond rise times
- 40 high-speed signal lines per inch
- Daughtercard-to-motherboard stacking connectors available in sizes of 40 to 240 positions
- Daughtercards can be stacked on 12.7 [.500] centers
- Mezzanine stacking (10.92 [.430] to 38.94 [1.533]) from 40 through 200 positions
- Choice of stacking heights: 10.92 [.430], 18.75 [.738], 31.12 [1.225] and 38.94 [1.533]
- Cable-to-board system available in sizes of 40 to 100 positions
- Vertical and right-angle board mount receptacles for cable connectors
- Connector housings are polarized
- Latching and keying options available for cable connectors
- Board mount connectors are compatible with standard through-hole flow solder and vapor phase reflow solder processes
- Recognized under the Component Program of Underwriters Laboratories Inc., File No. E28476
- Certified by Canadian Standards Association, File No. LR 7189A

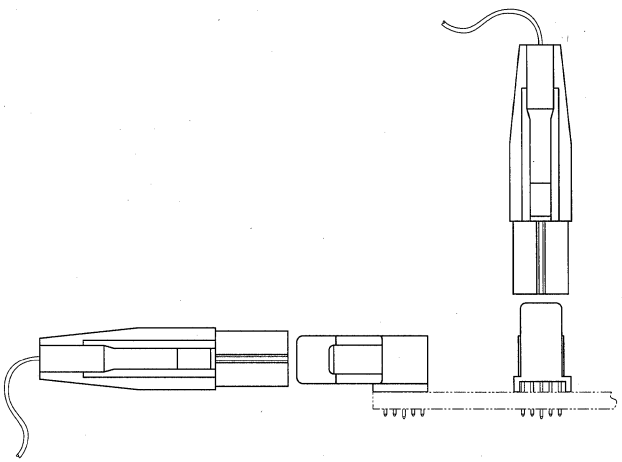
Vertical Board-to-Board Stacking Applications



Right-Angle Board-to-Board Application



Vertical and Right-Angle Cable-to-Board Applications (Ref. Catalog 65069)



AMP Micro-Strip connectors are a high density, controlled impedance connector family compatible with the requirements of high density and high speed data transmission technologies.

Each signal line within the mated connector is located at a specific distance from an integral, separable bus bar serving as a ground plane in a Micro-Strip configuration. The selection of housing dielectric, spacing from signal contact-to-ground plane and conductor geometry provides a specific characteristic impedance plus very low inductance and capacitance.

Discontinuities resulting from connector structure and solder interfaces are dimensionally small and therefore appear transparent to high speed signals. Both vertical and right-angle cable-to-board connector versions share a nominal impedance of 50 ohms.

Each 1-inch length of connector houses two electrically isolated high current contacts. When soldered to the pc board ground plane, that ground plane is extended through the mated connector.

Resistance is minimized by a large contact area and short electrical length, providing signal return paths with negligible ground loop voltages. Since signal return is via the bus bars, signal-ground-signal alternation, common to high speed applications, becomes unnecessary. All contacts can be dedicated to signal transmission, effectively doubling connector density.

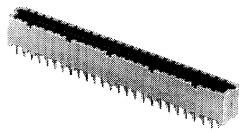
Typical applications include CPU/memory module interconnection, video board interconnection and interconnecting adjacent daughtercards.

SOURCE: Catalog 65194

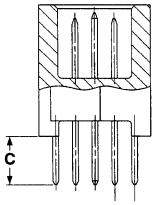
METRIC

Micro-Strip Vertical Plugs (Board-to-Board)

10.92 [.430] Stacking Height*



Mates with—Receptacles (Vertical, Right-Angle and Extended Vertical)

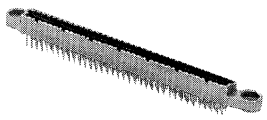


Note: 100 Pos. Housing Dim. (Typ.)—68.94 [2.714] L x 7.24 [.285] W x 8.64 [.340] H

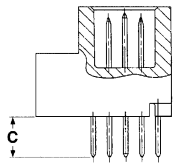
No. of Positions	Part Numbers		
	C=2.41 [.095]	C=3.18 [.125]	C=4.70 [.185]
40	536280-1	536272-1	536273-1
60	536280-2	536272-2	536273-2
80	536280-3	536272-3	536273-3
100	536280-4	536272-4	536273-4
120	536280-5	536272-5	536273-5
140	536280-6	536272-6	536273-6
160	536280-7	536272-7	536273-7
180	536280-8	536272-8	536273-8
200	536280-9	536272-9	536273-9

Micro-Strip Vertical Plugs with Guides (Board-to-Board)

10.92 [.430] Stacking Height*



Mates with—Right-Angle Receptacles with Guides



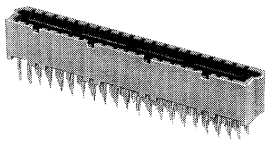
Note: 200 Pos. Housing Dim. (Typ.)—152.40 [6.000] L x 10.59 [.417] W x 8.64 [.340] H

No. of Positions	Part Numbers		
	C=2.41 [.095]	C=3.18 [.125]	C=4.70 [.185]
140	536302-1	536303-1	536305-1
160	536302-2	536303-2	536305-2
180	536302-3	536303-3	536305-3
200	536302-4	536303-4	536305-4
220	536302-5	536303-5	536305-5
240	536302-6	536303-6	536305-6

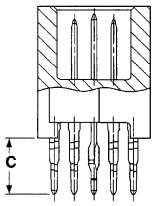
Note: Guide Pins must be purchased separately; order **Part Number 536304-2.**

Micro-Strip Vertical Plugs with ACTION PIN Contacts (Board-to-Board)

10.92 [.430] Stacking Height*



Mates with—Receptacles (Vertical, Right-Angle and Extended Vertical)

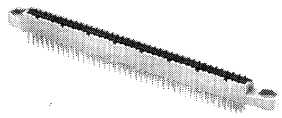


Note: 100 Pos. Housing Dim. (Typ.)—68.94 [2.714] L x 7.24 [.285] W x 8.64 [.340] H

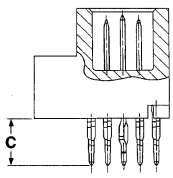
No. of Positions	Part Numbers	
	C=3.68 [.145]	C=4.83 [.190]
40	536274-1	536294-1
60	536274-2	536294-2
80	536274-3	536294-3
100	536274-4	536294-4
120	536274-5	536294-5
140	536274-6	536294-6
160	536274-7	536294-7
180	536274-8	536294-8
200	536274-9	536294-9

Micro-Strip Vertical Plugs with Guides and ACTION PIN Contacts (Board-to-Board)

10.92 [.430] Stacking Height*



Mates with—Right-Angle Receptacles with Guides



Note: 200 Pos. Housing Dim. (Typ.)—152.40 [6.000] L x 10.59 [.417] W x 8.64 [.340] H

No. of Positions	Part Numbers	
	C=3.68 [.145]	C=4.83 [.190]
140	536275-6	536276-6
160	536275-1	536276-1
180	536275-2	536276-2
200	536275-3	536276-3
220	536275-4	536276-4
240	536275-5	536276-5

Note: Guide Pins must be purchased separately; order **Part Number 536304-2.**

*10.92 [.430] is the minimum stacking height. Connector tolerances may increase the stacking height by as much as 0.76 [.030] in actual application.

SOURCE: Catalog 65194

Specifications subject to change.

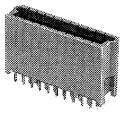
1-800-522-6752
Product Information Center/ AMP FAX Service

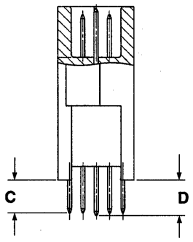
1-800-722-1111
Tooling/Technical Assistance Center

METRIC

Micro-Strip Vertical Plugs (Board-to-Board)

18.75 [.738] Stacking Height*





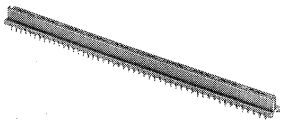
Mates with— Receptacles (Vertical, Right-Angle and Extended Vertical)

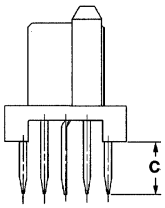
*18.75 [.738] is the minimum stacking height. Connector tolerances may increase the stacking height by as much as 0.76 [.030] in actual application.

Note: 100 Pos. Housing Dim. (Typ.)—68.94 [2.714] L x 7.24 [.285] W x 16.46 [.648] H

No. of Positions	Part Numbers	
	C=2.34 [.092] D=2.97 [.117]	C=3.12 [.123] D=3.76 [.148]
40	121354-1	1-121354-2
60	121354-2	1-121354-3
80	121354-3	1-121354-4
100	121354-4	1-121354-5
120	121354-5	1-121354-6
140	121354-6	1-121354-7
160	121354-7	1-121354-8
180	121354-8	1-121354-9
200	121354-9	2-121354-0

Micro-Strip Vertical Receptacles (Board-to-Board)





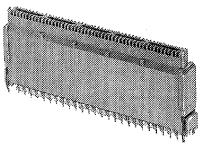
Mates with— Vertical Plugs (10.92 [.430] and 18.75 [.738] Stacking Height) and Vertical Plugs with ACTION PIN Contacts

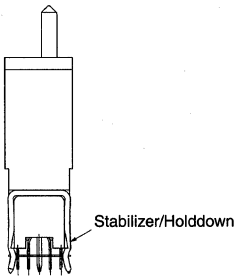
Note: 100 Pos. Housing Dim. (Typ.)—67.06 [2.640] L x 7.24 [.285] W x 8.11 [.320] H

No. of Positions	Part Numbers		
	C=2.41 [.095]	C=3.18 [.125]	C=4.57 [.180]
40	536279-1	536254-1	536255-1
60	536279-2	536254-2	536255-2
80	536279-3	536254-3	536255-3
100	536279-4	536254-4	536255-4
120	536279-5	536254-5	536255-5
140	536279-6	536254-6	536255-6
160	536279-7	536254-7	536255-7
180	536279-8	536254-8	536255-8
200	536279-9	536254-9	536255-9

Micro-Strip Extended Vertical Receptacle (Board-to-Board)

Part Number 121496-4 (100 Positions)

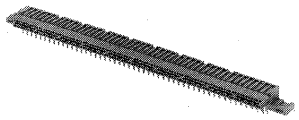


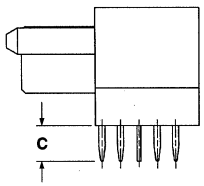


Notes: 1. This receptacle is available in 100-position size only. Housing Dim. (Typ.)— 70.48 [2.775] L x 7.87 [.310] W x 27.31 [1.075] H
2. Stacking heights of 31.12 [1.225] and 38.94 [1.533] can be obtained by using receptacle **Part No. 121496-4** with the 100-position vertical plugs (without guides) shown above and on page 3353.

Mates with—Vertical Plugs (10.92 [.430] and 18.75 [.738] Stacking Height) and Vertical Plugs with ACTION PIN Contacts (10.92 [.430] Stacking Height)

Micro-Strip Right-Angle Receptacles (Board-to-Board)



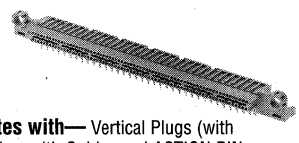


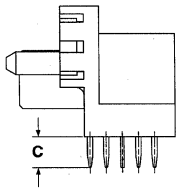
Mates with— Vertical Plugs (10.92 [.430] and 18.75 [.738] Stacking Height) and Vertical Plugs with ACTION PIN Contacts

Note: 100 Pos. Housing Dim. (Typ.)—81.28 [3.200] L x 13.20 [.520] W x 8.00 [.315] H

No. of Positions	Part Numbers	
	C=2.41 [.095]	C=3.18 [.125]
40	536295-1	536297-1
60	536295-2	536297-2
80	536295-3	536297-3
100	536295-4	536297-4
120	536295-5	536297-5
140	536295-6	536297-6
160	536295-7	536297-7
180	536295-8	536297-8
200	536295-9	536297-9

Micro-Strip Right-Angle Receptacles with Guides (Board-to-Board)





Mates with— Vertical Plugs (with Guides; with Guides and ACTION PIN Contacts)

Note: 200 Pos. Housing Dim. (Typ.)—149.86 [5.900] L x 13.20 [.520] W x 8.00 [.315] H

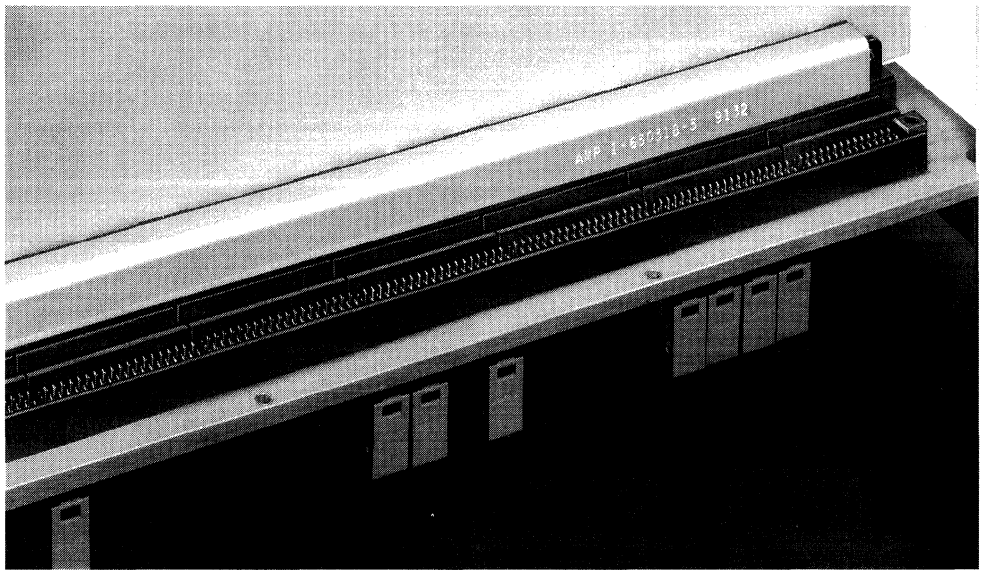
No. of Positions	Part Numbers	
	C=2.41 [.095]	C=3.18 [.125]
140	536296-3	536298-3
160	536296-4	536298-4
180	536296-5	536298-5
200	536296-6	536298-6
240	536296-8	536298-8

SOURCE: Catalog 65194

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

METRIC

Z-PACK Stripline 100 Interconnection System (2.54 x 2.54 [.100 x .100]) Centerline

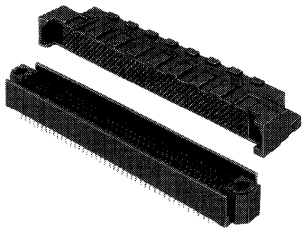


Product Facts

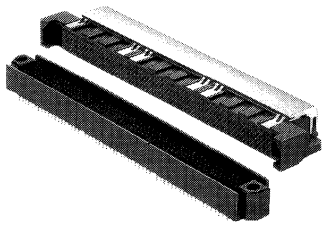
- **High performance system with backplane and cable interconnects**
- **Optimized cost/performance solutions offered with Tiers 1, 2 and 3**
- **Superior electrical performance down to 250 picosecond rise times**
- **Stripline technology for controlled impedance**
- **40 high-speed signal lines per inch**
- **High density; signal pins not used as ground reference**
- **Receptacle contact leads blanked at 45° angles to minimize skew**
- **Modular design with 60 and 80 position modules; one-piece molded housings in sizes of 60 to 280 positions**
- **Daughtercards can be stacked on 20.32 [.800] centers**
- **Receptacle modules preassembled to stiffener for modular design**
- **Compatible with current board manufacturing techniques**
- **Sequencing of ground, power and signal contacts**

Z-PACK Stripline 100 connectors offer a system solution for daughtercard-to-backplane, card extender/co-planar, and high speed cable-to-backplane applications. They are available in three performance levels: Tier 3*, Tier 2* and Tier 1*.

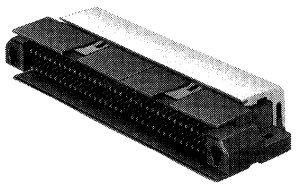
As the product name applies, Z-PACK Stripline 100 connectors employ stripline technology within a board-to-board interconnect providing excellent electrical performance and interconnection density. The design has been optimized with extensive electrical simulation and mechanical modeling. Ears on the pin connectors and extended ears on the receptacle connectors provide [1.27] .050 lead-in and guidance. Guide pins, power pins and keys also are available for use in the connector ears.



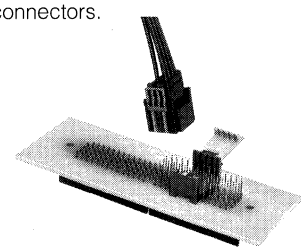
The discretely molded version is available in sizes of 60 through 280 positions. These connectors are referred to as **Tier 3*** connectors.



The modular version, used for larger size connectors (120 through 820 positions), employs receptacle modules preassembled on an aluminum stiffener. The stiffener can be screwed down to the daughtercard adding rigidity. Modules can be selectively loaded on the stiffener to allow for clearance on the backplane. Pin modules then are press fitted into the backplane to match the mating receptacle. These modular connectors are referred to as **Tier 2* and Tier 1*** connectors.



Right-angle pin assemblies are available in sizes of 120 through 820 positions. These **Tier 1*** connectors are ideal for card extender and co-planar applications.



High performance cable assemblies utilize a stripline construction similar to the board-to-board product, providing a high speed interconnect from the daughtercard through the backplane through the cabling.

Tier Performance Levels

Tier	Durability (Tested to)	Power/Ground Contact Current Rating (Continuous, Fully Derated)
1	100 Cycles	5.7 Amperes
2	50 Cycles	2.5 Amperes
3	50 Cycles	2.5 Amperes

*Tiers 3, 2 and 1 refer to the combination of contact plating, durability and power/ground current rating of the connectors.

SOURCE: Catalog 65194

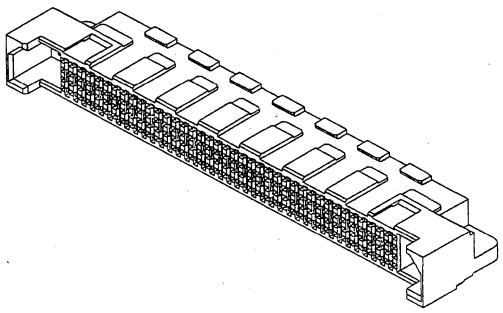
Specifications subject to change.

1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

METRIC

Z-PACK Stripline 100 Discretely Molded Receptacle Assemblies (Tier 3)



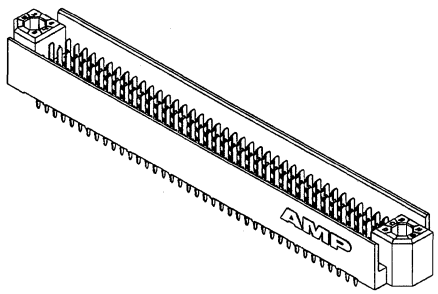
Mates with—Discretely Molded Pin Assemblies

Note: 180 Pos. Housing Dim. (Typ.)—
137.16 [5.400] L x 12.55 [.494] H

Receptacle Assembly — 4.19 [.165] Solder Leads

No. of Positions	Part Numbers (Tier 3)
60	646243-1
100	646243-2
140	646243-3
180	646243-4
220	646243-5
240	646243-6
280	646243-7

Z-PACK Stripline 100 Discretely Molded Pin Assemblies (Tier 3)



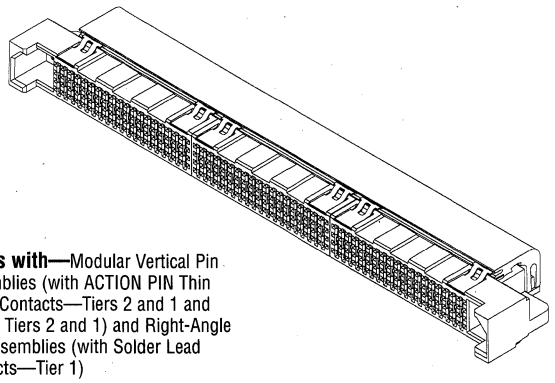
Mates with—Discretely Molded Receptacle Assemblies

Note: 180 Pos. Housing Dim. (Typ.)—
134.11 [5.280] L x 16.51 [.650] W

Pin Assembly — 3.68 [.145] ACTION PIN Contact and Solder Leads

No. of Positions	Part Numbers (Tier 3)	
	ACTION PIN Contact Leads	Solder Leads
60	646244-1	646245-1
100	646244-2	646245-2
140	646244-3	646245-3
180	646244-4	646245-4
220	646244-5	646245-5
240	646244-6	646245-6
280	646244-7	646245-7

Z-PACK Stripline 100 Modular Receptacle Assemblies (Tiers 2 and 1)



Mates with—Modular Vertical Pin Assemblies (with ACTION PIN Thin Stock Contacts—Tiers 2 and 1 and Tier 1; Tiers 2 and 1) and Right-Angle Pin Assemblies (with Solder Lead Contacts—Tier 1)

Note: 420 Pos. Housing Dim. (Typ.)—
289.56 [11.400] L

Receptacle Assembly—4.19 [.165] Solder Lead Length*

No. of Positions	Part Numbers	
	Tier 2	Tier 1
120	3-646236-1	3-650318-1
140	3-646236-5	3-650318-5
160	3-646236-2	3-650318-2
180	3-646236-6	3-650318-6
200	3-646236-3	3-650318-3
220	3-646236-4	3-650318-4
240	646236-1	—
260	646236-2	650318-2
280	646236-3	—
300	646236-4	650318-4
320	646236-5	—
340	646236-6	650318-6
360	646236-7	—
380	646236-8	650318-8
400	646236-9	650318-9
420	1-646236-0	—
440	1-646236-1	—
460	1-646236-2	—

No. of Positions	Part Numbers	
	Tier 2	Tier 1
480	1-646236-3	—
500	1-646236-4	—
520	1-646236-5	1-650318-5
540	1-646236-6	—
560	1-646236-7	—
580	1-646236-8	—
600	1-646236-9	—
620	2-646236-0	—
640	2-646236-1	—
660	2-646236-2	—
680	2-646236-3	—
700	2-646236-4	2-650318-4
720	2-646236-5	—
740	2-646236-6	—
760	2-646236-7	—
780	2-646236-8	—
800	2-646236-9	—
820	3-646236-0	—

*4.95 [.195] and 6.48 [.255] solder lead lengths available

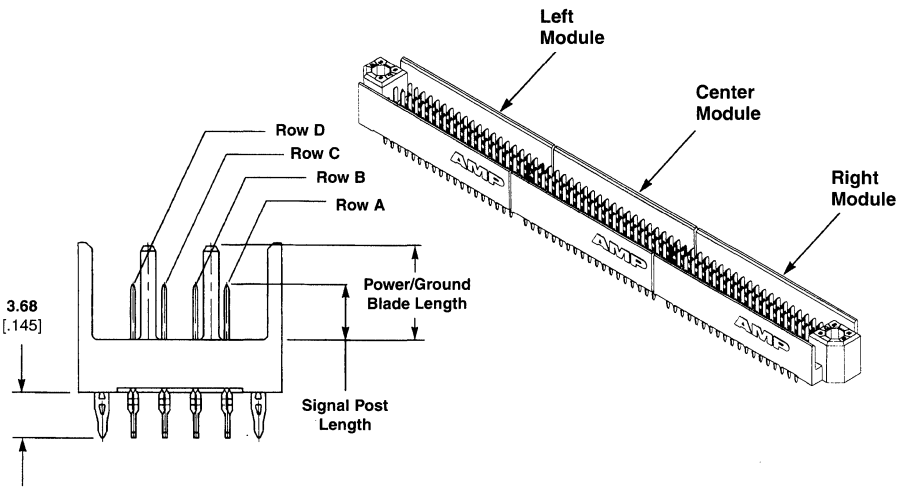
SOURCE: Catalog 65194

METRIC

Z-PACK Stripline 100 Modular Vertical Pin Assemblies with ACTION PIN Thin Stock Contacts (Tiers 2 and 1)

3.68 [.145] Lead Length

Mates with—Modular Receptacle Assemblies (Tiers 2 and 1)



Note: 420 Pos. Housing Dim. (Typ.)—286.51 [11.28] L x 16.50 [.650] W

Tier	Signal Post Length		Power/Ground Blade Length*	Module Selection					
				Left Module		Center Module		Right Module	
	Rows B&C	Rows A&D		60 Pos.	80 Pos.	60 Pos.	80 Pos.	60 Pos.	80 Pos.
2	**4.45** .175	**4.45** .175	**6.02** .237	646239-1	646239-2	646238-1	646238-2	646237-1	646237-2
1	**4.45** .175	**4.45** .175	**6.02** .237	650573-1	650573-2	650572-1	650572-2	650571-1	650571-2

Number of Positions	Number of Modules (Listed Above)					
120	1				1	
140		1			1	
160		1				1
180	1		1		1	
200	1			1	1	
220		1		1	1	
240		1		1		1
260		1	2		1	
280		1	2			1
300	1			2		1
320		1		2		1
340		1	3			1
360	1			3	1	
380		1		3	1	
400		1		3		1
420	1		5		1	
440	1			4	1	
460		1		4	1	
480		1		4		1
500		1	6		1	
520	1			5	1	
540		1		5	1	
560		1		5		1
580		1	7			1
600	1			6	1	
620		1		6	1	
640		1		6		1
660	1		9		1	
680	1			7	1	
700		1		7	1	
720		1		7		1
740		1	10		1	
760	1			8	1	
780		1		8	1	
800		1		8		1
820		1	11			1

*7.59 [.299] power/ground blade length available.

Note: Sequencing available upon request.

SOURCE: Catalog 65194

Specifications subject to change.

1-800-522-6752
Product Information Center/ AMP FAX Service

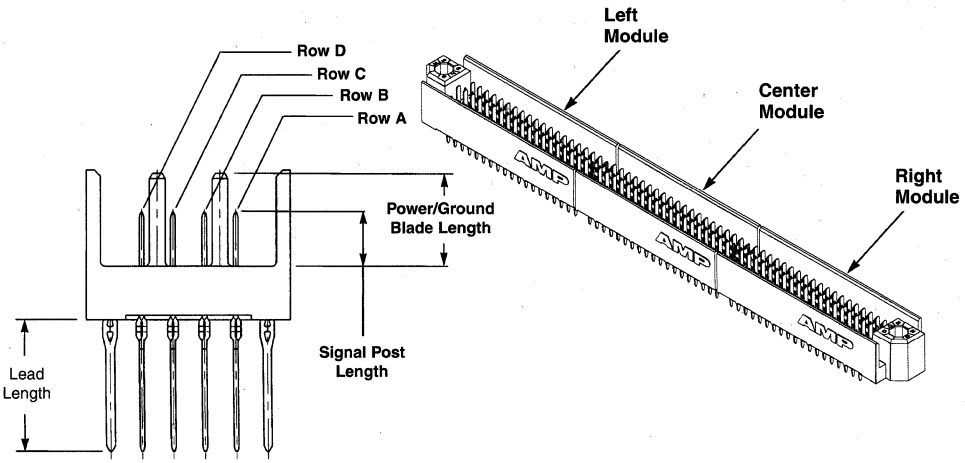
1-800-722-1111
Tooling/Technical Assistance Center

METRIC

Z-PACK Stripline 100 Modular Vertical Pin Assemblies with ACTION PIN Thin Stock Contacts (Tier 1)

(Used with High Performance Cable Assemblies)

10.80 [.425] and 13.59 [.535] Lead Lengths



Mates with—Modular Receptacle Assemblies (Tiers 2 and 1)

Note: 420 Pos. Housing Dim. (Typ.)—286.51 [11.28] L x 16.50 [.650] W

Tier	Lead Length	Signal Post Length		Power/Ground Blade Length	Module Selection					
					Left Module		Center Module		Right Module	
		Rows B&C	Rows A&D		60 Pos.	80 Pos.	60 Pos.	80 Pos.	60 Pos.	80 Pos.
1	**10.80** .425	**4.45** .175	**4.45** .175	**6.02** .237	650579-1	650579-2	650578-1	650578-2	650577-1	650577-2
1	**13.59** .535	**4.45** .175	**4.45** .175	**6.02** .237	646189-1	646189-2	646188-1	646188-2	646187-1	646187-2

Number of Positions	Number of Modules (Listed Above)					
120	1				1	
140		1			1	
160		1				1
180	1		1		1	
200	1			1	1	
220		1		1	1	
240		1		1		1
260		1	2		1	
280		1	2			1
300	1			2		1
320		1		2		1
340		1	3			1
360	1			3	1	
380		1		3	1	
400		1		3		1
420	1		5		1	
440	1			4	1	
460		1		4	1	
480		1		4		1
500		1	6		1	
520	1			5	1	
540		1		5	1	
560		1		5		1
580		1	7			1
600	1			6	1	
620		1		6	1	
640		1		6		1
660	1		9		1	
680	1			7	1	
700		1		7	1	
720		1		7		1
740		1	10		1	
760	1			8	1	
780		1		8	1	
800		1		8		1
820		1	11			1

SOURCE: Catalog 65194

Specifications subject to change.

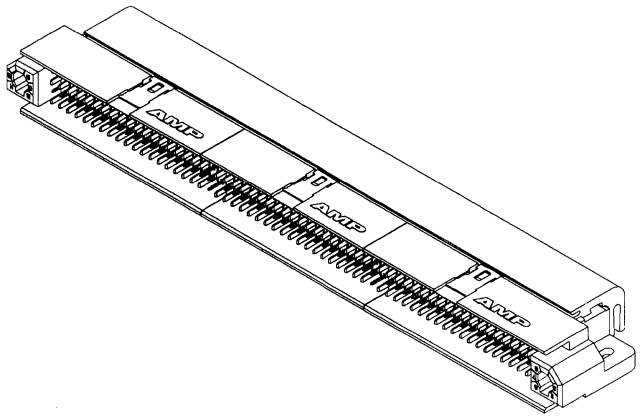
1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

METRIC

Z-PACK Stripline 100 Right-Angle Pin Assemblies with Solder Lead Contacts (Tier 1)

4.19 [.165] Lead Length



Mates with—Modular Receptacle Assemblies (Tiers 2 and 1)

Note: 420 Pos. Housing Dim. (Typ.)— 286.51 [11.28] L

Number of Positions	Part Numbers
120	3-646166-1
140	3-646166-5
160	3-646166-2
180	3-646166-6
200	3-646166-3
220	3-646166-4
240	646166-1
260	646166-2
280	646166-3
300	646166-4
320	646166-5
340	646166-6
360	646166-7
380	646166-8
400	646166-9
420	1-646166-0
440	1-646166-1
460	1-646166-2

Number of Positions	Part Numbers
480	1-646166-3
500	1-646166-4
520	1-646166-5
540	1-646166-6
560	1-646166-7
580	1-646166-8
600	1-646166-9
620	2-646166-0
640	2-646166-1
660	2-646166-2
680	2-646166-3
700	2-646166-4
720	2-646166-5
740	2-646166-6
760	2-646166-7
780	2-646166-8
800	2-646166-9
820	3-646166-0

SOURCE: Catalog 65194

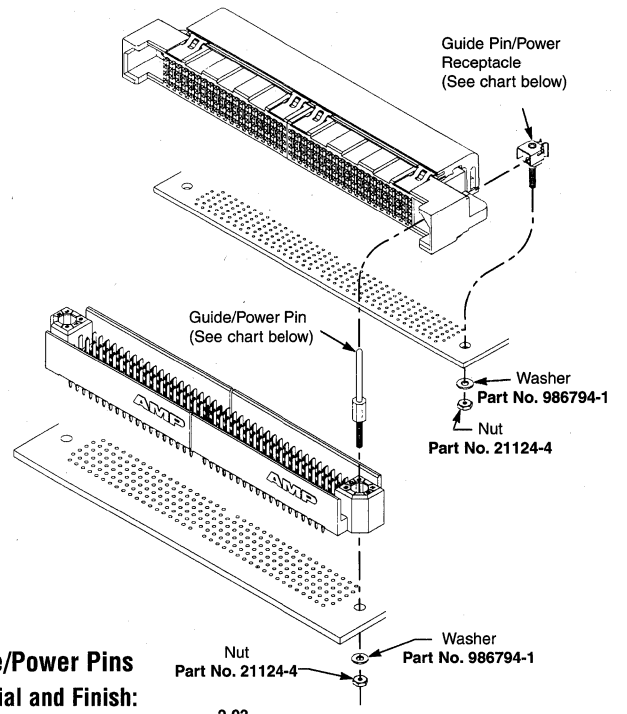
Specifications subject to change.

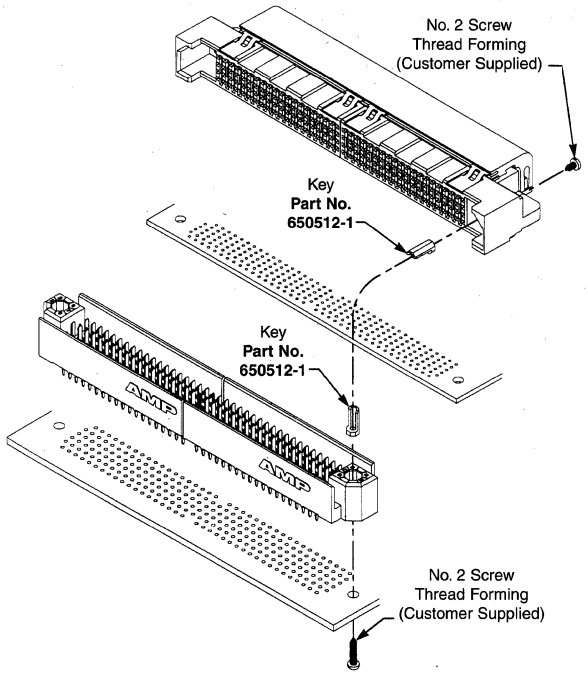
1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

Z-PACK Stripline 100 Guidance, Power and Keying Hardware and Applications

METRIC





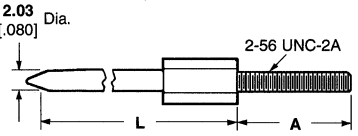
Guide/Power Pins

Material and Finish:

Brass, plated as follows:

A — 0.00076 [.000030] gold over 0.00127 [.000050] min. nickel

B — 0.00127 (.000050] gold over 0.00127 [.000050] min. nickel

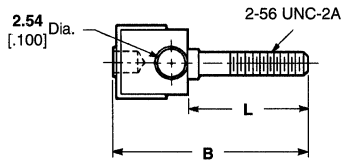


Dimensions A mm	Dimensions A inch	Dimensions L mm	Dimensions L inch	Finish	Part Numbers
9.52	.375	26.04	1.025	None	533082-1
		30.35	1.195	None	533082-2
		26.04	1.025	A	533082-3
		30.35	1.195	A	533082-4
		26.04	1.025	B	533082-5
12.06	.475	30.35	1.195	A	533082-6
				None	533082-7
12.06	.475	26.04	1.025	None	533082-8
				A	533082-9
14.22	.560	26.04	1.025	None	1-533082-0
				A	1-533082-1

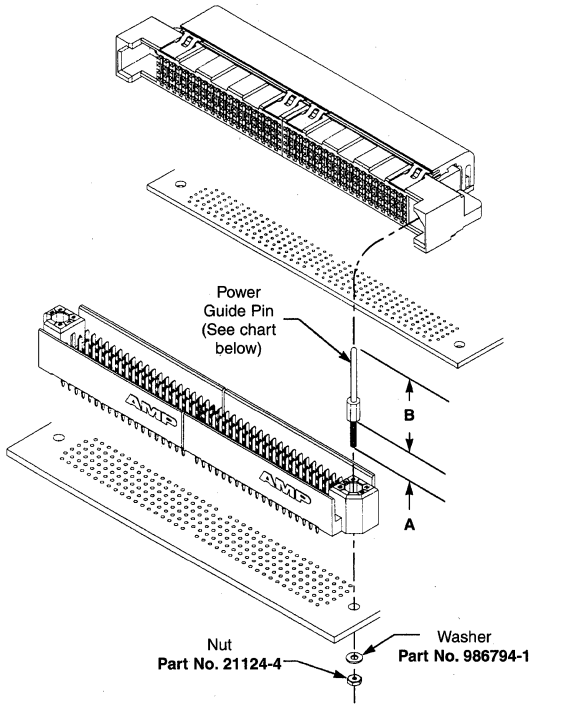
Guide Pin/Power Receptacles

Material and Finish:

Brass, plated 0.00076 [.000030] gold in contact area and gold flash on remainder, with entire contact underplated 0.00127 [.000050] min. nickel



Dimensions B mm	Dimensions B inch	Dimensions L mm	Dimensions L inch	Part Numbers
17.22	.678	10.80	.425	532924-1
14.68	.578	8.26	.325	532924-3
13.67	.538	7.25	.285	532924-4



Power Guide Pins

Dimensions A mm	Dimensions A inch	Dimensions B mm	Dimensions B inch	Part Numbers
9.25	.375	26.04	1.025	533082-3
		30.35	1.195	533082-4
12.06	.475	26.04	1.025	533082-9
		30.35	1.195	533082-6
14.22	.560	26.04	1.025	1-533082-1

SOURCE: Catalog 65194

METRIC

Z-PACK Stripline 100 High Performance Cable Assemblies

Product Facts

- **Connects high performance cables to post leads of AMP Z-PACK Stripline 100 pin assemblies**
- **Completes a controlled impedance interconnection from daughtercard through backplane through cabling**
- **Signal sizes 4 through 80 (high speed signal lines)**
- **Twin beam contact receptacle for increased reliability**
- **Resistance welded terminations of conductors**
- **Straight 180° cable exit**
- **Stackable end-to-end on a pin field**
- **End-to-end stackable pin field shroud available to protect pins (20 position)**
- **Latching**
- **Keying**
- **Polarization**

Performance Characteristics

Cycle Life: Tested to 100

Mating Force: 0.83 N [3.0 oz] Max. per contact

Unmating Force: 0.11 N [0.4 oz] Min. per contact

Contact Current Rating: Wire dependent

Technical Specifications

Mates With: 2.54 [.100] centerline offset grid of Z-PACK Stripline 100 pin assemblies with 0.38 [.015] square post leads

Contact Type: Twin beam receptacle

Point of Contact: 1.91 [.075] (from mating face)

Contact Termination: Resistance welded

Cable Styles: High-speed coax (foil with drain wire), Shielded parallel pair (foil with drain wire)

Impedance (Single Ended): 50, 60, 65, 75, 90, 100 ohms

Impedance (Differential): 100, 120 ohms

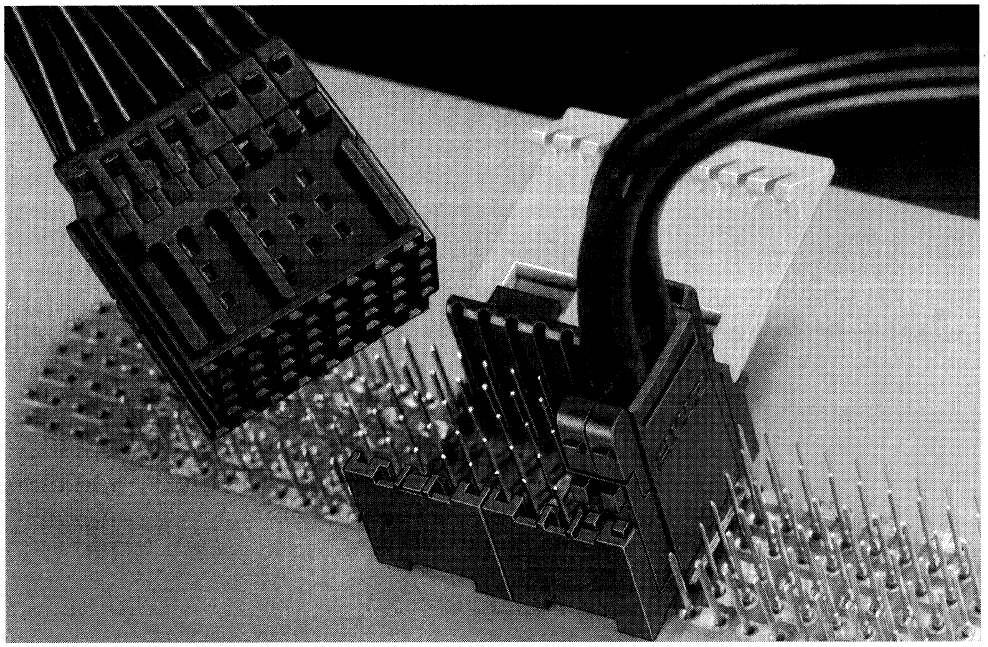
Maximum O.D.: 1.9 [.075]

Wire Range: 0.02 thru 0.13 mm² [34 thru 26 AWG]

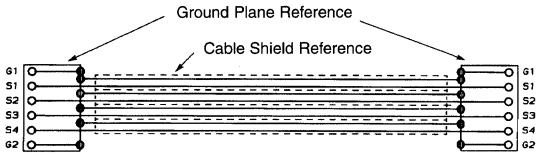
Dielectric: Various, PTFE (Vp = 3.90 ns/m [1.19 ns/ft] Foamed Polypropylene (Vp = 4.39 ns/m [1.34 ns/ft]

Note: See page 3262 for Cable Selection Guide.

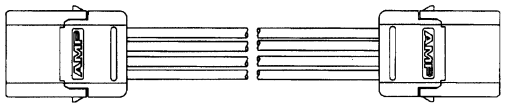
SOURCE: Catalog 65194



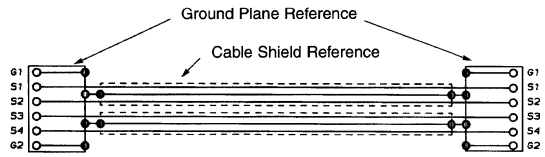
Coaxial Cable Assembly



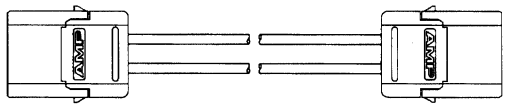
Typical One-Row Wiring Scheme



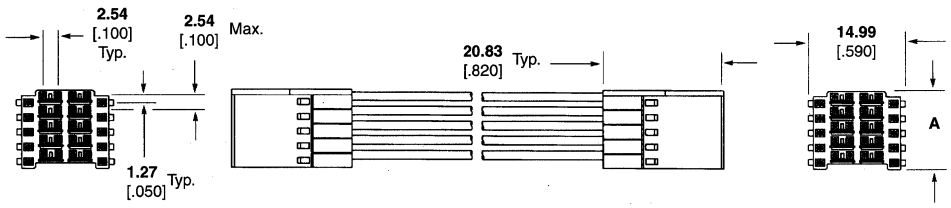
Shielded Differential Pair Cable Assembly



Typical One-Row Wiring Scheme



Ground Circuits	Signal Circuits	Dimension A	
		mm	inch
2	4	**3.43**	.135
4	8	**5.97**	.235
6	12	**8.51**	.335
8	16	**11.05**	.435
10	20	**13.59**	.535
12	24	**16.13**	.635
14	28	**18.67**	.735
16	32	**21.21**	.835
18	36	**23.75**	.935
20	40	**26.29**	1.035
22	44	**28.83**	1.135
24	48	**31.37**	1.235
26	52	**33.91**	1.335
28	56	**36.45**	1.435
30	60	**38.99**	1.535
32	64	**41.53**	1.635
34	68	**44.07**	1.735
36	72	**46.64**	1.835
38	76	**49.15**	1.935
40	80	**51.69**	2.035



Specifications subject to change.

1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

METRIC

Z-PACK Stripline 100 Shroud Assembly (20 Positions) and Cable Selection Guide

Part Numbers

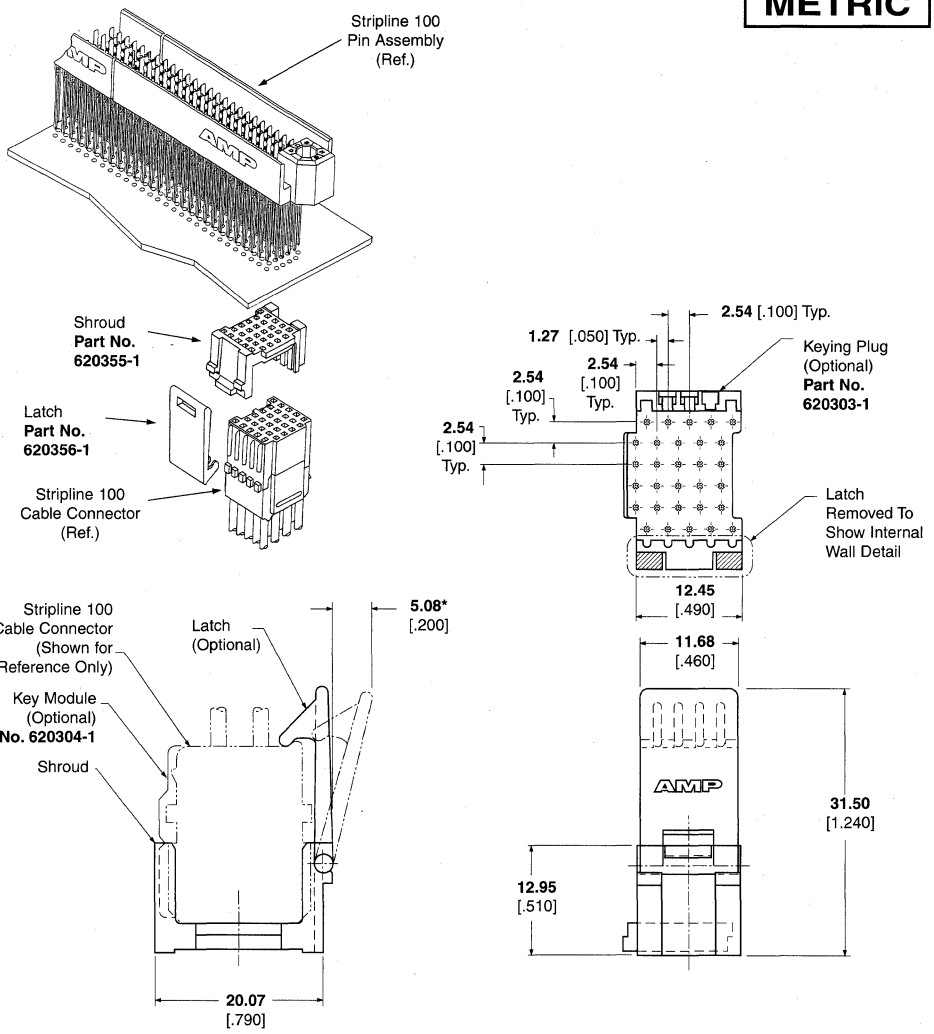
Shroud—Part No. 620355-1 (20 Position)

Latch—Part No. 620356-1

Keying Plug—Part No. 620303-1

Key Module—Part No. 620304-1

Note: Individual components are sold separatley; minimum order quantity is 100.



* Minimum latch rotation for cable connector extraction.

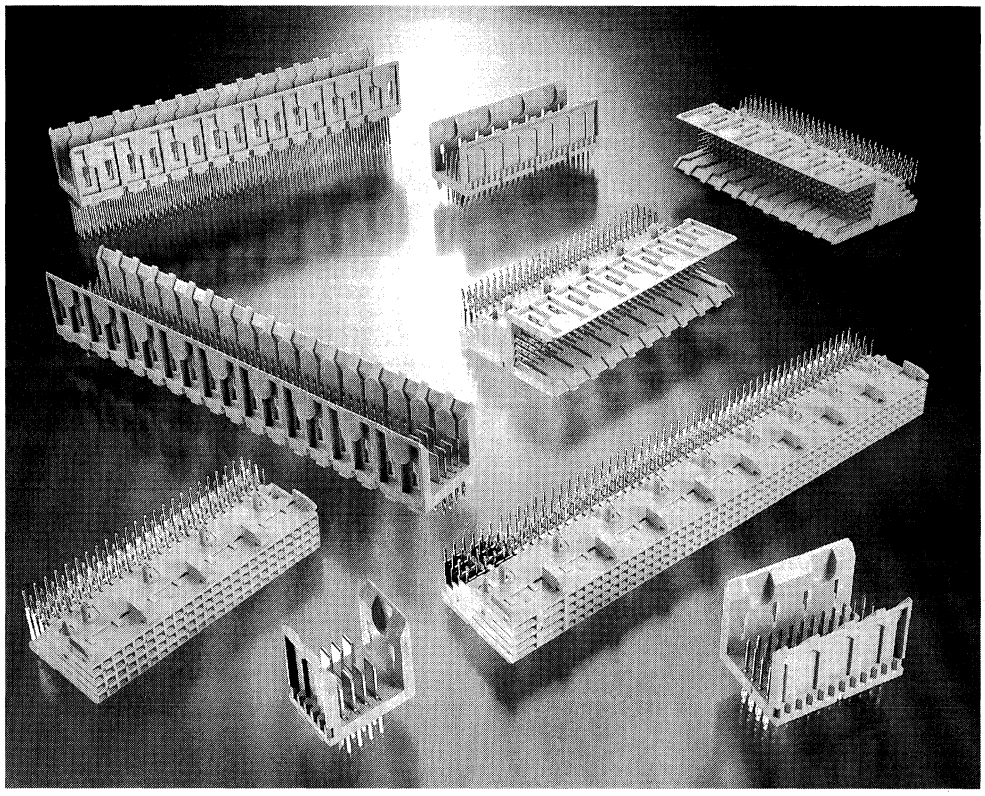
Cable Selection Guide

	Coaxial**										Shielded Parallel Pair**		
Impedance (Ohms)	50 ± 3	50 ± 3	60 ± 5	65 ± 3	65 ± 3	75 ± 4	75 ± 4	90 ± 5	90 ± 5	100 ± 5	100 ± 5	100 ± 5	120 ± 6
Propagation Delay (ns/m over ns/ft)	**3.90** 1.19	**4.39** 1.34	**4.52** 1.38	**3.90** 1.19	**4.39** 1.34	**3.90** 1.19	**4.39** 1.34	**3.90** 1.19	**4.39** 1.34	**3.90** 1.19	**3.90** 1.19	**4.39** 1.34	**4.39** 1.34
Wire Size (mm^2 over AWG)	**0.05** 30	**0.05** 30	**0.05** 30	**0.05** 30	**0.05** 30	**0.05** 30	**0.03** 32	**0.03** 32	**0.03** 33	**0.03** 32	**0.05** 30	**0.05** 30	**0.05** 30
DC Resistance, Max. (Ohms/304.8m [1000 ft])	108	108	108	108	108	108	172	172	217	172	108	108	108
Jacket Color	Blue	Dark Blue	Black	Gray	Dark Gray	Green	Dark Green	Orange	Brown	Red	Blue	Black	Black
Nominal O.D. (mm over inches)	**1.32 x 1.57** .052 x .062	**1.32 x 1.57** .052 x .062	**1.52 x 1.78** .060 x .070	**1.60 x 1.85** .063 x .073	**1.60 x 1.85** .063 x .073	**1.65 x 1.90** .065 x .075	**1.65 x 1.85** .065 x .073	**1.80 x 2.01** .071 x .079	**1.83 x 2.01** .072 x .079	**1.80 x 2.01** .071 x .079	**1.40 x 1.85** .055 x .073	**1.40 x 2.03** .055 x .080	**1.40 x 2.24** .055 x .088

**Jacket Material — PVC; Shield Type — Foil with Drain Wire

Z-PACK 2 mm FB (Futurebus+) Connectors

METRIC



Product Facts

- **High-density connections; four-row, 2 mm x 2 mm [.079 x .079] circuit grid**
- **Modular design for signal and power connections**
- **Designed to meet International Specifications IEC 1076-4-0X(48B) and EIA SP3179**
- **Module assemblies are end-to-end stackable**
- **"Monoblock" styles available**
- **Choice of solder leads or compliant press-fit leads**
- **Flat rock receptacle tooling**
- **Unique "cold hold" receptacle retention feature for low applied cost**
- **Integral receptacle lead organizer**
- **Bellcore approved (Contact AMP for specific part numbers)**
- **Recognized under the Component Program of Underwriters Laboratories Inc., File No. E28476**
- **Certified by Canadian Standards Association, File No. LR7189**
- **Produced under a Quality Management System certified to ISO 9001**

A copy of the certificate is available upon request.

The AMP Z-PACK 2 mm FB two-piece connector system uses a modular concept and a 2 mm [.079] contact pitch to provide high-density, high-speed signal and power connections for Futurebus+ and Futurebus+ "like" applications. These versatile connectors are designed to meet the requirements of International Specification IEC 1076-4-0X(48B) with applications that include workstations, personal computers, process controllers and telecommunications equipment.

Signal and power modules are available in pin and receptacle assemblies with a choice of either solder leads or compliant press-fit leads. Compliant press-fit leads offer fast, solderless application to printed circuit boards. Pin and receptacle housings are made of a high temperature liquid crystal polymer. Contacts are duplex plated gold flash over palladium-nickel on the mating surfaces and tin-lead on the leads for performance and reliability. The signal modules are end-to-end stackable, providing 88 signal lines per cm [50.8 signal lines per inch].

Signal pin and receptacle modules are available in position sizes of 24 through 264 in increments of 24 positions, as well as 504 positions. Power pin and receptacle modules are available in an 8-position size with compatible footprints. Signal and power modules are available in integrally molded Monoblock configurations for added versatility.

SOURCE: Catalog 65358

Specifications subject to change.

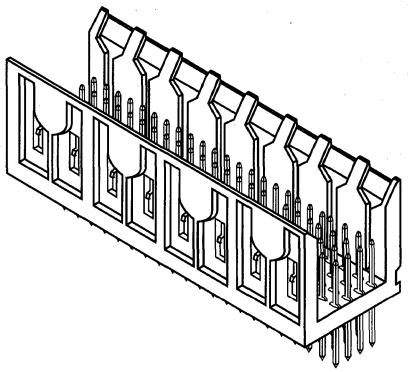
1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

METRIC

Signal Modules, Vertical Pin Assemblies (Fixed-Board Connector), 2 mm x 2 mm [.079 x .079] Circuit Grid

16 mm [.630] Wide Body Pin Assemblies with Solder Leads and Compliant Press-Fit Leads



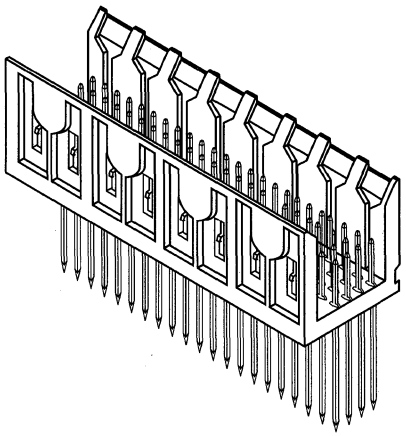
Note: 48 Pos. Housing Dim. (Typ.)—23.88 [.940] L x 15.80 [.622] W x 17.00 [.670] H, Lead Length 4.25 [.167]

No. of Positions	Vertical Pin Assemblies Part Numbers			
	Mating Post Length			
	With Solder Leads		With Press-Fit Leads	
	6.5 [.256]	5 [.197]	6.5 [.256]	5 [.197]
24	536501-1	536513-1	536504-1	536514-1
48	536501-2	536513-2	536504-2	536514-2
72	1-536501-1	—	1-536504-2	—
96	536501-3	536513-3	536504-3	536514-3
120	536501-6	—	536504-6	—
144	536501-5	536513-5	536504-8	536514-5
168	536501-7	—	536504-5	—
192	536501-4	536513-4	536504-4	536514-4
216	536501-9	—	1-536504-0	—
240	536501-8	—	536504-9	—
264	1-536501-0	—	1-536504-1	—

Notes: 1. Sequencing of mating post lengths is available.
2. Please contact AMP for sizes up to 504 positions.

Signal Modules, Vertical Feed Through Pin Assemblies (Fixed-Board Connector), 2 mm x 2 mm [.079 x .079] Circuit Grid

16 mm [.630] Wide Body Pin Assemblies with Feed-Through Compliant Press-Fit Leads



Note: 48 Pos. Housing Dim. (Typ.)—28.88 [.940] L x 15.80 [.622] W x 17.00 [.670] H

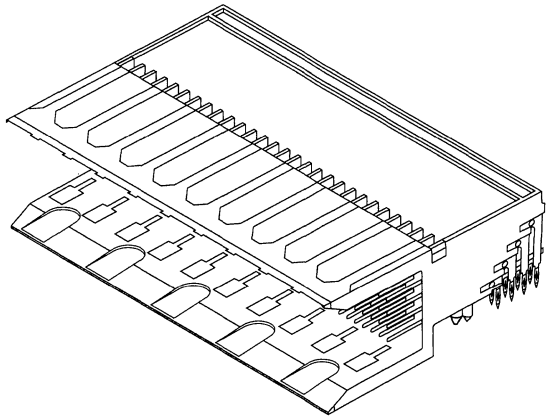
Positions	Vertical Feed-Through Pin Assembly Part Numbers			
	Mating Post Length			
	5.00 [.197]	5.75 [.226]	6.50 [.256]	7.25 [.285]
	Press-Fit Lead Length			
	11.80 [.465]	17.00 [.669]	13.60 [.535]	15.60 [.614]
24	536531-1	536532-1	536526-1	536533-1
48	536531-2	536532-2	536526-2	536533-2
96	536531-3	536532-3	536526-3	536533-3
192	536531-4	536532-4	536526-4	536533-4

Note: For feed-through shroud availability, contact AMP.

METRIC

Signal Modules, Right-Angle Pin Assemblies (Free-Board Connector), 2 mm x 2 mm [.079 x .079] Circuit Grid

16 mm [.630] Wide Body Right-Angle Pin Assemblies with Solder Leads and Compliant Press-Fit Leads

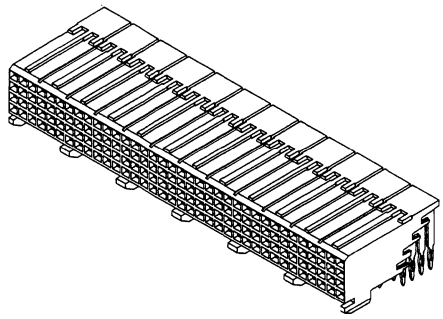


Note: 120 Pos. Housing Dim. (Typ.)—59.88 [2.357] L x 32.00 [1.259] W x 15.80 [.622] H

No. Positions	Right-Angle Pin Assembly Part Numbers	
	With Solder Leads	With Press-Fit Leads
24	223513-1	223514-1
48	223513-2	223514-2
96	223513-3	223514-3
120	523513-6	223514-6
144	223513-5	223514-5
192	223513-4	223514-4

Signal Modules, Right-Angle Receptacle Assemblies (Free-Board Connector), 2 mm x 2 mm [.079 x .079] Circuit Grid

Receptacle Assemblies with Solder Leads and Compliant Press-Fit Leads



Note: 120 Pos. Housing Dim. (Typ.)—59.88 [2.357] L x 20.45 [.805] W x 11.30 [.445] H

No. of Positions	Receptacle Assembly Part Numbers		
	With Solder Leads		With Press-Fit Leads 2.92 [.115]
	2.73 [.107] Lead Length	3.53 [.139] Lead Length	
24	536507-1	536510-1	536511-1
48	536507-2	536510-2	536511-2
72	1-536507-1	—	1-536511-2
96	536507-3	536510-3	536511-3
120	536507-6	536510-6	536511-6
144	536507-7	536510-5	536511-5
168	536507-5	536510-7	536511-8
192	536507-4	536510-4	536511-4
216	536507-9	536510-9	1-536511-0
240	536507-8	536510-8	536511-9
264	1-536507-0	1-536510-0	1-536511-1

Notes: Please contact AMP for sizes up to 504 positions.

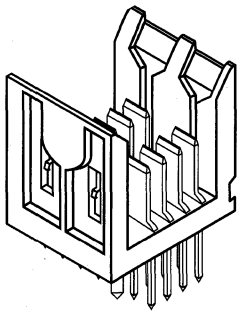
SOURCE: Catalog 65358

Specifications subject to change.
1-800-522-6752 Product Information Center/ AMP FAX Service
1-800-722-1111 Tooling/Technical Assistance Center

METRIC

Power Modules, Vertical Pin Assemblies (Fixed-Board Connector), 2 mm x 2 mm [.079 x .079] Circuit Grid

16 mm [.630] Wide Body Pin Assemblies with Solder Leads and Compliant Press-Fit Leads (8 Positions)



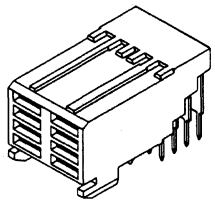
Note: 8 Pos. Housing Dim. (Typ.)—15.80 [.622] L x 11.83 [.466] W x 17.00 [.670] H

No. of Positions	Mating Post Length				Vertical Pin Assembly Part Numbers		
					With Solder Leads	With Press-Fit Leads	
	Row A	Row B	Row C	Row D	6.5 [.256] Lead Length	6.5 [.256] Lead Length	8.0 [.315] Lead Length
8	**6.5** .256	**6.5** .256	**6.5** .256	**6.5** .256	536600-1	536603-1	536620-1
	6.5 .256	**8.0** .315	**6.5** .256	**6.5** .256	—	536606-1[1]	—
	8.0 .315	**7.25** .285	**6.5** .256	**6.5** .256	—	536619-1[1]	—

[1]MFBL (Make First/Break Last) posts.

Power Modules, Right-Angle Receptacle Assemblies (Free-Board Connector), 2 mm x 2 mm [.079 x .079] Circuit Grid

Receptacle Assemblies with Solder Leads and Compliant Press-Fit Leads (8 Positions)



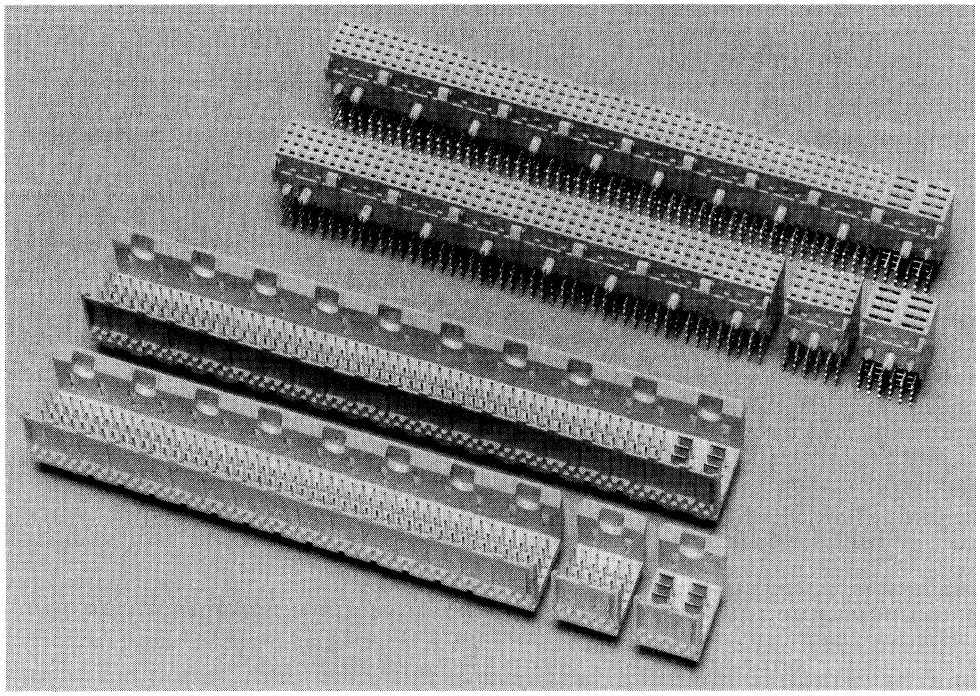
Note: 8 Pos. Housing Dim. (Typ.)—11.88 [.468] L x 20.45 [.805] W x 11.30 [.445] H

No. of Positions	Receptacle Assembly Part Numbers		
	With Solder Leads		With Press-Fit Leads
	2.73 [.107] Lead Length	3.53 [.139] Lead Length	
8	536607-1	536613-1	536614-1

SOURCE: Catalog 65358

METRIC

Monoblock Hybrid Connectors



Configuration[1]	Part Numbers		
	Pin Assembly[2]	Receptacle Assembly	
	Press-Fit Leads	Solder Leads	
	4.25 [.167] Lead Length	2.73 [.107] Lead Length	3.53 [.139] Lead Length
8-144	536708-3	536721-3	536714-3
8-192	536708-1	536721-1	536714-1
8-216	536708-2	536721-2	536714-2
144-8	536710-3	—	536712-3
192-8	536710-1	—	536712-1
216-8	536710-2	—	536712-2
48-8-48	536716-1	536718-1	—
48-8-96	536716-2	536718-2	—
8-192-8	536728-1	536724-1	—
8-192-8-24	536726-1	536722-1	—

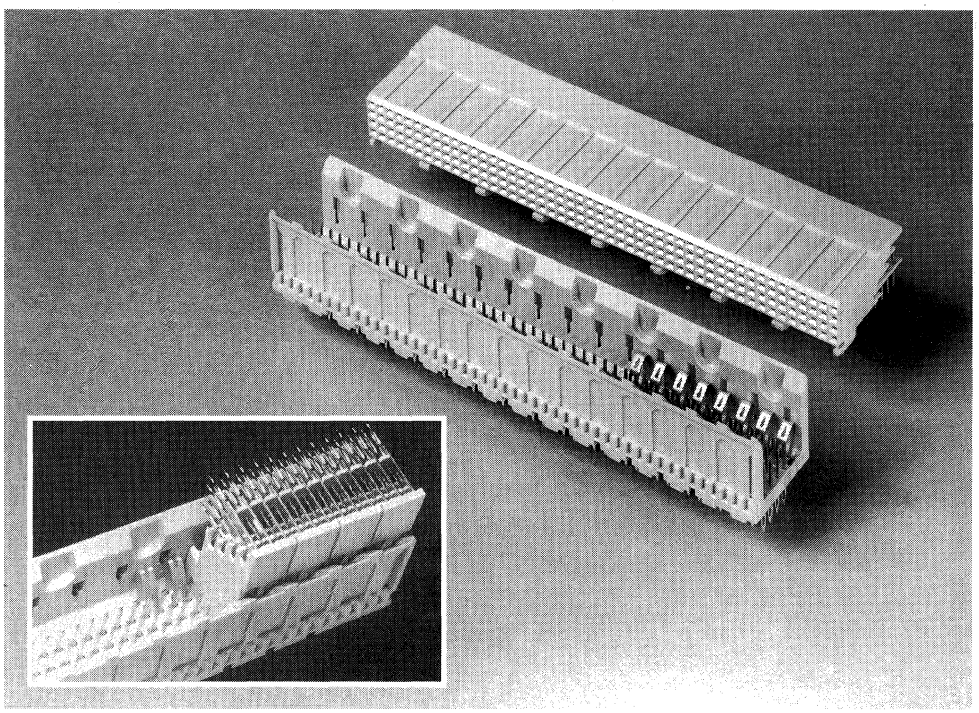
[1]An 8 signifies a power section. Pin A1 would be the first configuration of the part number. For example, 8-192-8 signifies the 8 power positions starting at Pin A1, followed by 192 signal positions, followed by 8 power positions. Contact AMP for other configurations.
[2]Pin assemblies have 6.5 [.256] mating post length.
Note: For dimensional data see pages 3364-3366.
Application Tooling: Press-Fitting Monoblock pin assemblies to Pc boards requires special seating tools. For tooling information, call the Tooling/Technical Assistance Center.

SOURCE: Catalog 65358

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

METRIC

Z-PACK 2 mm FB (Futurebus+) Shunted Pin Header



Product Facts

- High-density connections; four-row, 2 mm x 2 mm [.079 x .079] circuit grid
- Shunting accomplished through use of connector rather than logic or other means for reduced cost
- Mechanical shunts capable of electrically commoning pairs of contacts
- Shunt design maintains contact integrity through numerous actuations
- Shunted pin header uses standard header pc board hole layout; no additional mounting holes required
- Shunted pin header mates with standard receptacles
- Choice of solder leads or compliant press-fit leads
- Shunts can be selectively loaded
- Applications include networking, industrial controllers and telephone switching systems
- Produced under a Quality Management System certified to ISO 9001

A copy of the certificate is available upon request.

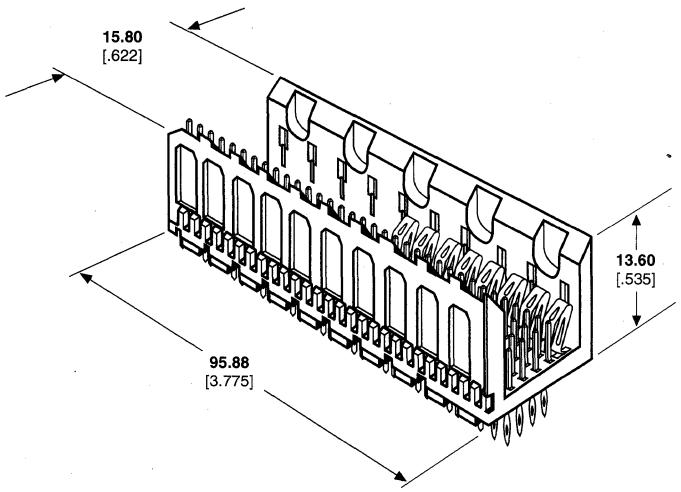
ISO 9001 Certified

192-Position Shunted Pin Header with Compliant Press-Fit Leads* (2 mm x 2 mm [.079 x .079] Circuit Grid)

Part Number 536707-1

Mates with—
Z-PACK 2 mm FB Receptacle Assemblies (Signal Modules)

*Other header sizes (24, 48 and 96 positions) are available, as well as headers with solder leads, consult AMP.



(8 Shunts, Positions A1-A2 thru A15-A16 Shunted)

SOURCE: Catalog 65358

Specifications subject to change.
1-800-522-6752
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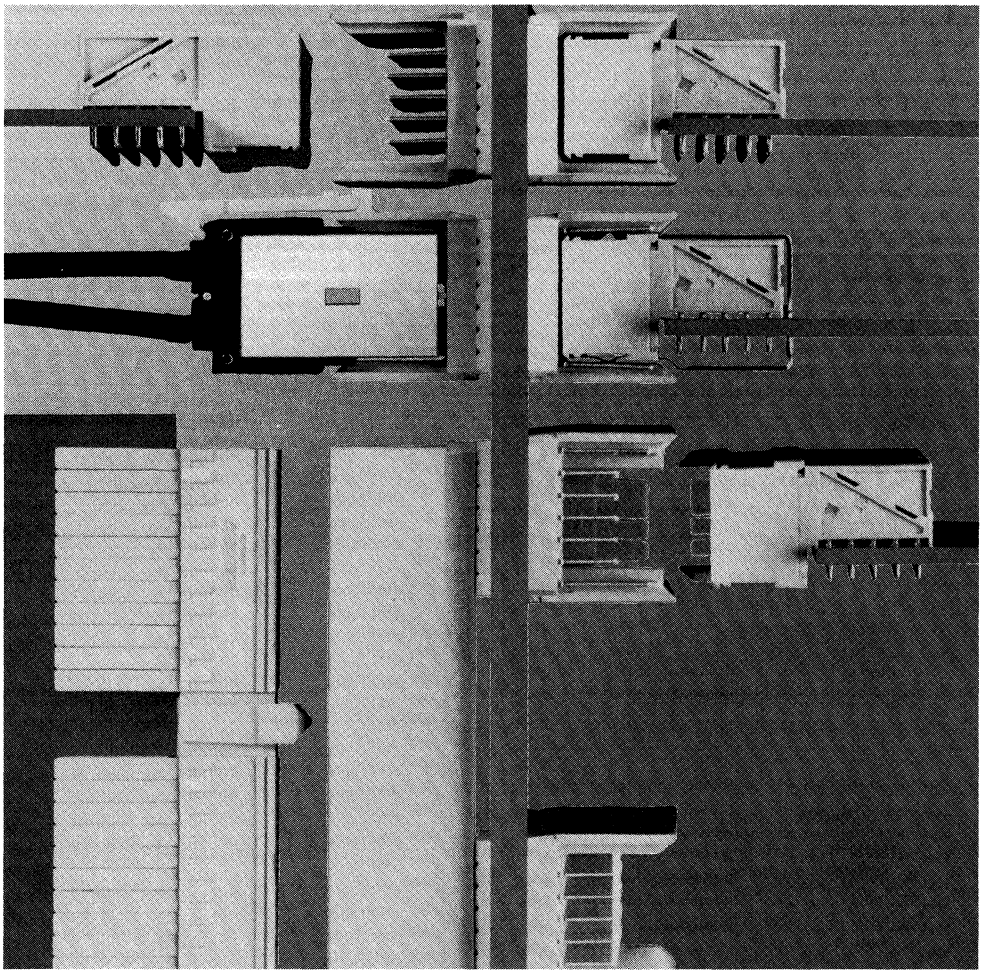
METRIC

AMP Z-PACK 2 mm HM Interconnection System



Product Facts

- Hard Metric 2 mm signal contact pitch according to IEC 917
- Complete modular system, board-to-board and cable-to-board
- Scalable performance for contact density and electrical performance
- Signal rise times in sub-nanosecond range for telecommunications, high performance data processing, industrial process controls, medical systems, avionics, and instrumentation
- Signal contacts rated at 1.5 A (+70°C)
- Wide range of standard options for economy
- Special options for customized connections to match virtually any circuit design requirement
- Unshielded and shielded, low and high frequency cable assemblies
- Custom cable assemblies produced by AMP to specific high performance requirements
- Supported by system characterization modeling services from AMP
- AMP ACTION PIN press-in contact assembled onto free and fixed boards, by hand or automatic methods
- Overall reduced costs for high quality system interconnections, coupled with exceptional application flexibility
- Free 3D and 2D CAD images— See page 56.

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Approvals

- Qualified under Bellcore TR-NWT-001217, Generic Requirements for Separable Connectors Used in Telecommunications Hardware
- Designed in compliance with IEC 917 (DIN 43355) and IEC 1076-4-101
- Substantial space saving within Hard Metric equipment practices (DIN 43356 and IEEE 1301)
- Recognized under the Component Program of Underwriters Laboratories Inc., File No. E28476
- Certified by Canadian Standards Association, File No. LR 7189

SOURCE: Catalog 65911

Specifications subject to change.
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1-800-722-1111
Tooling/Technical Assistance Center

METRIC

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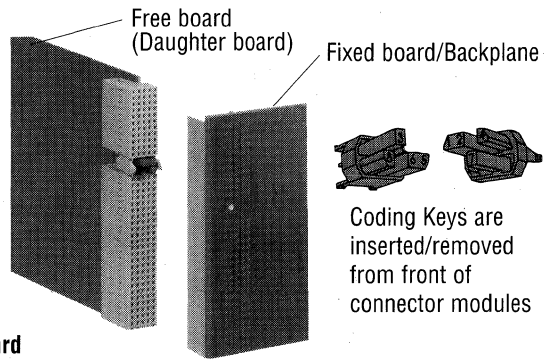
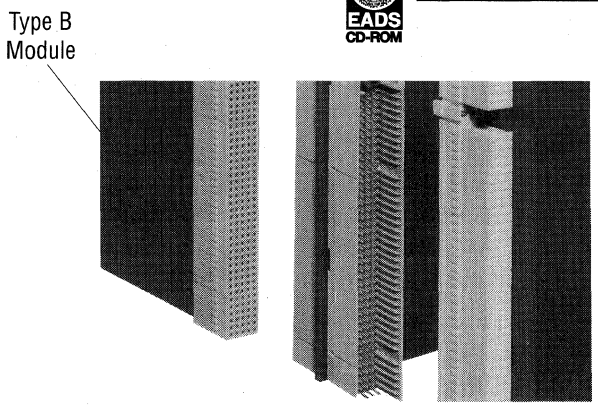
Connector Arrangements

Ground Return Shields or EMI Shielding are available when required



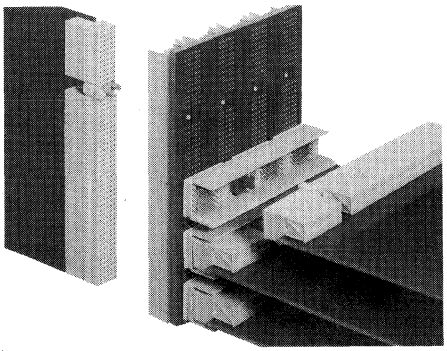
Front Board

Type A Connector shown, using Coding Keys in Multi-Purpose Centers (MPC) of both modules to prevent incorrect location of free boards. Guide lugs on female module also provide polarized mating. See page 3372 for examples of use in end-to-end stacked modules.



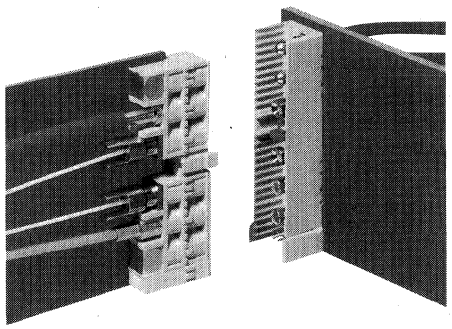
Midplane Vertical Arrangement

Front male connector has through posts for rear mating, using a Male Shroud. Rear female connectors of all types can be mounted as shown to provide symmetrical (row a to a) or asymmetrical (row e to a) mating. Type B Connector, illustrated here, is used between other connector types to gain optimum contact density.



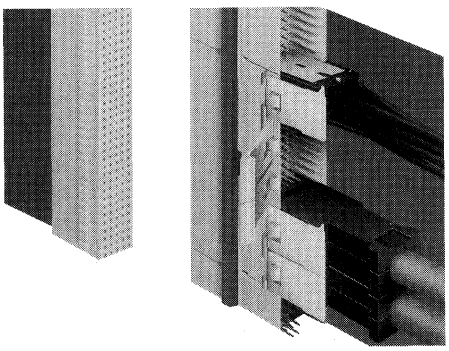
Midplane Rear Crossconnect Arrangement

Vertical stacking of modules on the front of the backplane can be used with rear horizontal stacking. Through board matrices of 5 x 5 contacts can be achieved, bringing valuable opportunities for circuit design.



High Current, Coaxial, Fiber Optic Contacts

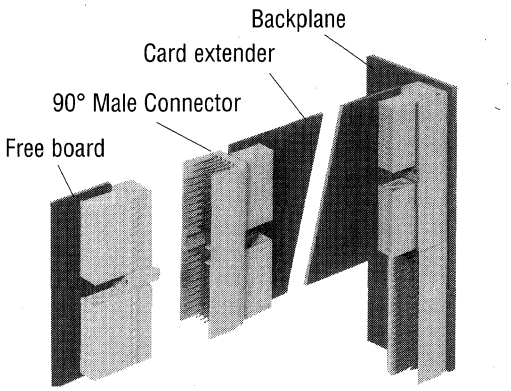
Type L Connector illustrated, also Types M and N, have 4.8 mm [.189] diameter cavities for standard DIN contacts. High current and coaxial high frequency connections can be cable-to-cable or cable-to-free board. Standard and new MSC Fiber Optic Contacts also available.



Cable-to-Board System

AMP supplies a complete system range of cable assemblies, connectors and shrouds, specializing in custom high-performance cable assemblies with "state-of-the-art" termination techniques. Shown above are both high and low frequency cables.

SOURCE: Catalog 65911



90° Free Board Male Connector/Card Extender

AMP provides 90° Male Connectors as Types A, B or C, allowing a card extender to be placed between the backplane and a free board, giving access to the latter for testing. They can also be used for cable connectors at the front edge of a free board.

Specifications subject to change.

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Stackable System Modules

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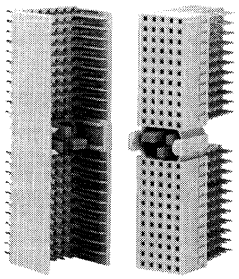
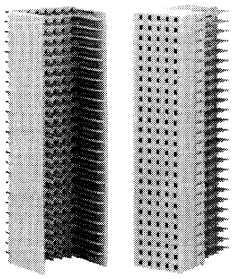


Type A

Male Part No. 100143-1
Female Part No. 100147-1

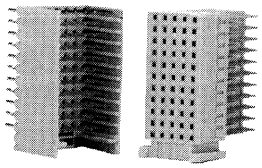
110 signal contacts, 50 mm [1.969] Modules with integral guide lugs for polarized mating, also Multi-Purpose Center (MPC) for Coding Keys.



Type B

Male Part No.100141-1
Female Part No. 100145-1

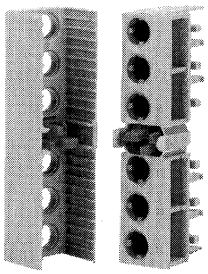
125 signal contacts, 50 mm [1.969] Modules. Used between Type A, C, L, M or N Modules with polarizing guide lugs.



Type C

Male Part No. 100159-1
Female Part No. 100161-1

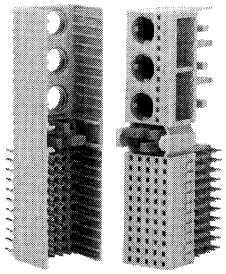
55 signal contacts, 25 mm [.984] Modules with guide lugs for polarized mating. Used at end of stacked modules.



Type L

Male Part No. 100745-1
Female Part No. 100746-1

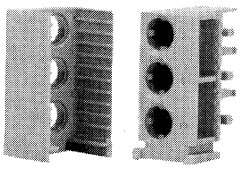
Six 4.8 mm [.189] diameter cavities for DIN standardized high current, coaxial or fiber optic contacts. 50 mm [1.969] Modules with polarized guide lugs, also Multi-Purpose Center for Coding Keys.



Type M

Male Part No. 100749-1
Female Part No. 100750-1

Three 4.8 mm [.189] diameter cavities and 55 signal contact positions. 50 mm [1.969] Modules with polarized guide lugs, also Multi-Purpose Center for Coding Keys.



Type N

Male Part No. 100751-1
Female Part No. 100752-1

Three 4.8 mm [.189] diameter cavities. 25 mm [.984] Modules, with guide lugs for polarized mating. Used at end of stacked modules.

SOURCE: Catalog 65911

Specifications subject to change.

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Tooling/Technical Assistance Center

System Modularity

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AMP Z-PACK 2 mm HM modules deliver helpful versatility for optimizing signal contact density, in combination with any required length current, coaxial or fiber optic connections.

Stacking can be arranged from 50 mm [1.969], using Type A module, increasing in 25 mm [.984] steps to lengths of 400 mm [15.748] as shown here, or longer if required.

Type A, L, or M modules with polarized guide lugs and Multi-Purpose Centers (MPC) are always used at the top of any column. Type B with 125 signal contact positions is used between any other modules.

Type C and N 25 mm [.984] modules have polarized guide lugs, and are used at the end of columns.

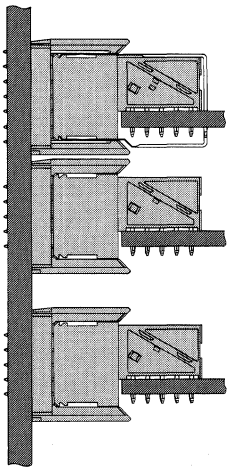
Correct mating is provided by use of polarized guide lugs, in combinations with Coding Keys used in MPCs of Type A, L and M Modules.

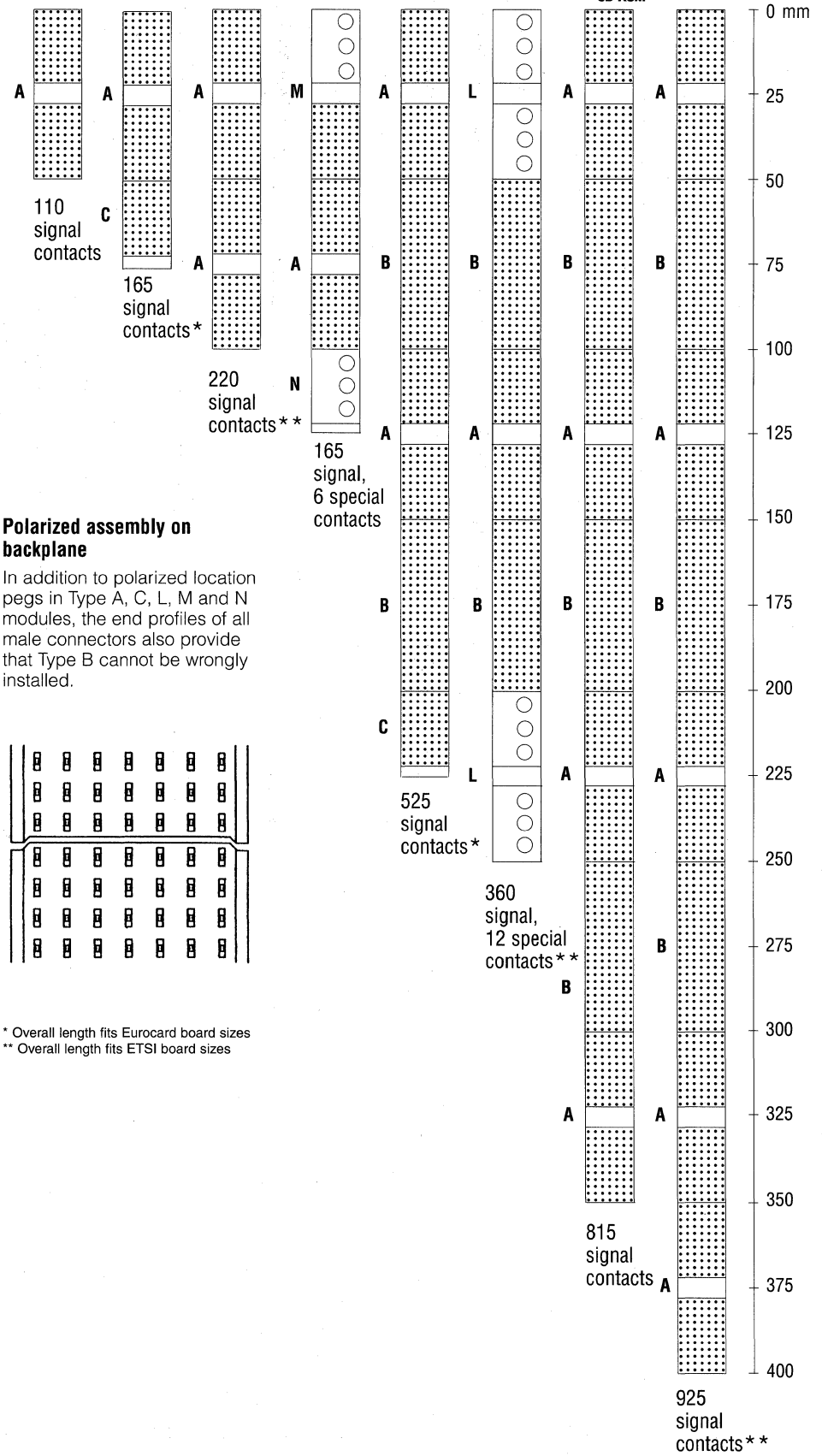
Incorrect mating is mechanically prevented.

Free board pitch

Free board pitch can be from 16 mm [.63] and upwards to make optimum use of backplane space.

For Hard Metric Practice, according to DIN 43356, this pitch will be min. 20 mm [.781]. This distance can be regarded as the minimum to allow efficient cooling under normal equipment conditions.





Polarized assembly on backplane

In addition to polarized location pegs in Type A, C, L, M and N modules, the end profiles of all male connectors also provide that Type B cannot be wrongly installed.

* Overall length fits Eurocard board sizes
** Overall length fits ETSI board sizes

SOURCE: Catalog 65911

Specifications subject to change.

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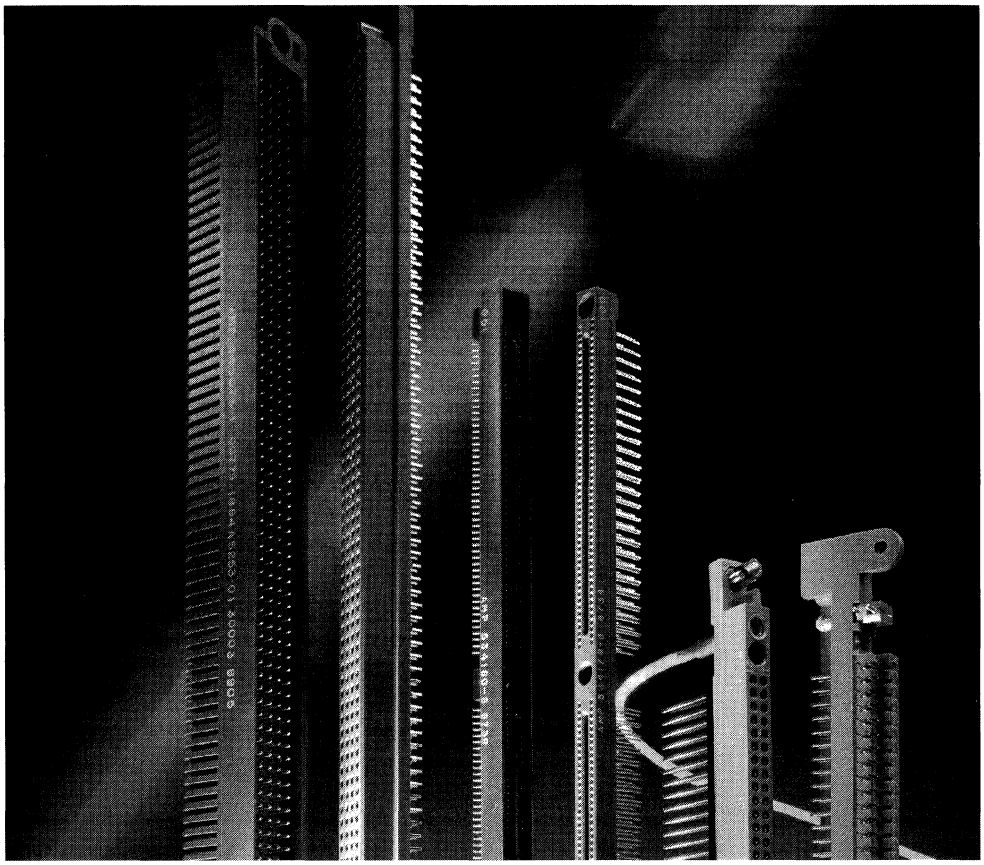
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

Box Contact Connectors



Product Facts

- Choice of three centerlines provides packaging density selection
- Box receptacle contact for board-to-board applications has four elliptical spring beams to provide four areas of redundant electrical contact
- Low mating force
- Receptacle contacts accept wide margin of pin misalignment without damage
- Receptacle tail configurations available in various styles
- Receptacle housing prevents overstressing of contacts
- Individual pin and receptacle contacts can be extracted for replacement in most styles
- Military connectors are qualified to the latest edition of MIL-C-55302
- Housings are polarized
- External key system allows up to 64 positions without loss of contact use. Alphanumeric identification
- Low insertion and extraction force
- Pc board to wire I/O capability and wire-to-wire capability with crimp pins and receptacles
- Connectors with coaxial, high voltage and box contacts are available

Box Contact Connectors are two-piece interconnects for systems requiring large numbers of contacts per connection. Featuring latched-in pin and receptacle contacts, these high density connectors offer low applied cost while maintaining high performance and reliability.

For board-to-board applications, a unique four-beam box design receptacle contact accepts square, rectangular, round and formed-channel pins. The box contact allows right-angle and straight-through pin headers to be used without changing receptacle contacts. Also, the box design eases mating of misaligned pins and provides redundant contact in four areas, an important feature for applications subject to vibration.

There are four receptacle contact tail styles: various length posts for pc board insertion; solder eyelet; posts for up to three wrap-type terminations; and crimp type for wires from 26 to 22 AWG [0.12 to 0.4 mm^2] for receptacle contacts.

Connectors are also available with a mix of box contacts and hybrid contact cavities. Crimp snap-in and printed circuit board mount coaxial contacts are available for these connectors.

SOURCE: Catalog 82015

Specifications subject to change.

1-800-522-6752
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1-800-722-1111
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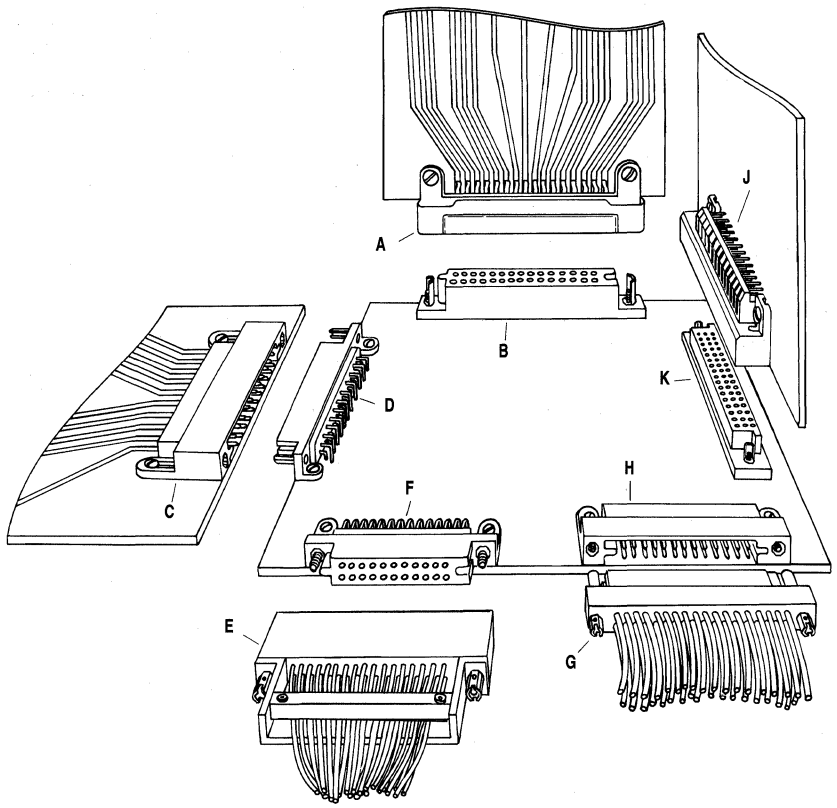
Typical Applications



A—Straddle Mount Pin Header Assembly: .100 [2.54] Centerline, .075 [1.91] Centerline, .050 [1.27] Centerline

B—Receptacle Assembly: .100 [2.54] Centerline—Available with various types of flow solder contacts, solder eyelet contacts, card extender contacts, wrap-type posted contacts for rack mounting and wrap-type posted contacts for pc solder mounting. .075 [1.91] Centerline—Available with two types of flow solder contacts, solder eyelet contacts and card extender contacts. .050 [1.27] Centerline Mini-Box—Flow solder contact.

C—Right-Angle Pin Header Assembly: .100 [2.54] Centerline—Flow solder contacts and wrap-type posted contacts. .075 [1.91] Centerline, .050 [1.27] Centerline Mini-Box.

D—Right-Angle Receptacle Assemblies: .100 [2.54] Centerline—Wrap-type posted contacts.

E—Pin Assembly: .100 [2.54] Centerline—Crimp snap-in contacts.

F—Right-Angle Receptacle Assembly: .100 [2.54] Centerline—Wrap-type posted contacts.

G—Receptacle Assembly: .100 [2.54] Centerline—Crimp snap-in contacts. .100 [2.54] Centerline 3-Row-Crimp snap-in contacts.

H—Right-Angle Pin Header Assembly: .100 [2.54] Centerline—Flow solder contacts and wrap-type posted contacts.

J—Right-Angle Pin Header Assembly: .100 [2.54] Centerline 3-Row—Flow solder contacts and wrap-type posted contacts.

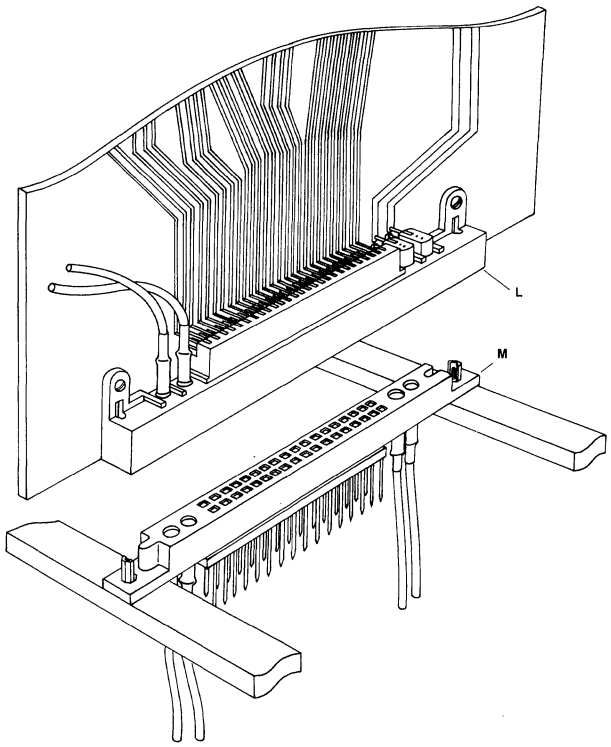
K—Receptacle Assembly: .100 [2.54] Centerline 3-Row—Flow solder contacts, solder eyelet contacts and wrap-type posted contacts.

SOURCE: Catalog 82015

Typical Applications
(Continued)

L—Right-Angle Pin Header Assembly with Coaxial Contacts: .100 [2.54] Centerline—Flow solder box contacts with coaxial contacts.

M—Receptacle Assembly with Coaxial Contacts: .100 [2.54] Centerline—Flow solder, solder eyelet and wrap-type posted box contacts with coaxial contacts.



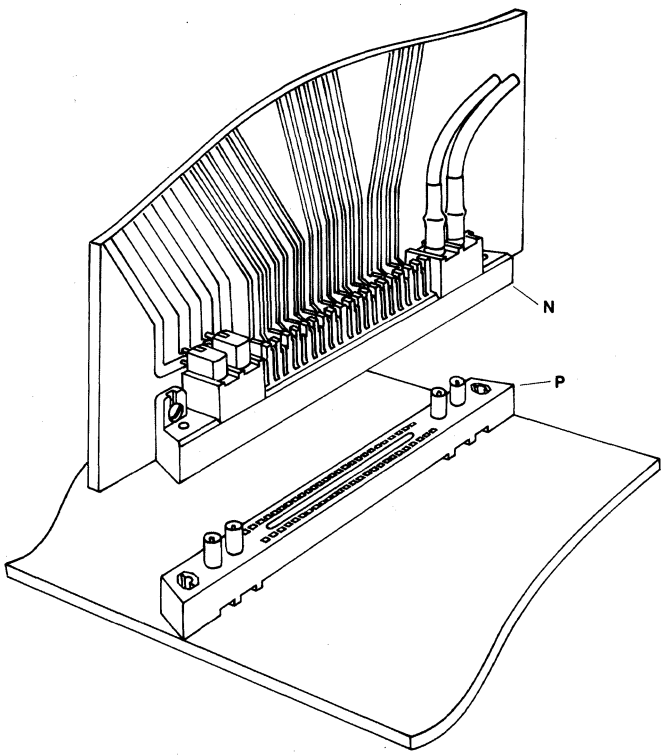
SOURCE: Catalog 82015

Specifications subject to change.
1-800-522-6752 Product Information Center/ AMP FAX Service
1-800-722-1111 Tooling/Technical Assistance Center

Typical Applications
(Continued)

N—Right-Angle Pin Header Assembly with Coaxial Contacts: .050 [1.27] Centerline Mini-Box—Flow solder box contacts with coaxial contacts.

P—Receptacle Assembly with Coaxial Contacts: .050 [1.27] Centerline Mini-Box—Flow solder box contacts with coaxial contacts.



SOURCE: Catalog 82015

Specifications subject to change.

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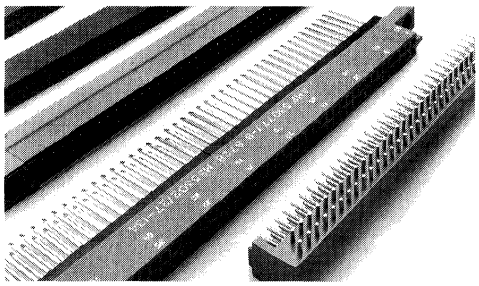
1-800-722-1111
Tooling/Technical Assistance Center

.100 [2.54] Centerline Connectors

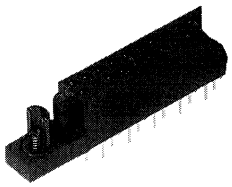


Product Facts

- Contacts are on .100 x .100 [2.54 x 2.54] centers
- Straddle mount pin headers have pretinned tabs for connection to daughter boards
- Pin headers are provided with pin protectors
- Straddle mount pin headers have replaceable contacts
- Box receptacle contacts are available in flow solder, solder eyelet, straddle mount, wrap-type and crimp styles
- Pin header assemblies are available in right-angle, straddle mount and crimp styles
- Solder tails are tin-lead plated for solderability
- Connectors with coaxial, high voltage and box contacts available

The .100 [2.54] Box Contact Connector series is available in 2-, 3- and 4-row configurations with pin counts up to 300 positions. Each configuration uses the unique, four-beam box design which offers low applied cost while maintaining high performance and reliability. The ability to choose different sizes; housing materials; terminations; sealed versions; hybrids; etc. provides one with needed versatility in designing a system.

Receptacle Assemblies



Mates with—Pin Headers Assemblies, Pages 3379 and 3380

Commercial Receptacle Assemblies

Note: 90 Pos. Housing Dim. (Typ.)—5.355 [136.02] L x .248 [6.3] W x .400 [10.16] H

No. of Positions	Rolled Solder Tail Contacts	.014 x .019 [0.36 x 0.48] Channel Contacts	.010 x .020 [0.25 x 0.51] Posted Contacts	Solder Eyelet Contacts	Card Extender Contacts
	AMP Part No.	AMP Part No.	AMP Part No.	AMP Part No.	AMP Part No.
140	1-533603-3	1-531832-3	—	—	1-531835-3
134	1-533603-2	—	—	1-531833-2	—
130	1-533603-1	1-531832-1	—	1-531833-1	1-531835-1
120	1-533603-0	—	—	—	—
110	533603-9	531832-9	—	531833-9	531835-9
100	533603-8	531832-8	531834-8	531833-8	531835-8
90	533603-7	531832-7	—	—	531835-7
80	533603-6	531832-6	531834-6	531833-6	531835-6
70	533603-5	531832-5	—	531833-5	—
60	533603-4	531832-4	—	531833-4	—
50	533603-3	531832-3	—	—	531835-3
40	533603-2	531832-2	531834-2	531833-2	—
30	533603-1	531832-1	—	531833-1	—

Note: Order customer drawing for post length.

Military Receptacle Assemblies

Note: 90 Pos. Housing Dim. (Typ.)—5.355 [136.02] L x .248 [6.3] W x .400 [10.16] H

No. of Positions	.014 x .019 [0.36 x 0.48] Channel Contacts		Solder Eyelet Contacts		.010 x .020 [0.25 x 0.51] Posted Contacts		Card Extender Contacts	
	MIL-Part No. M55302/	AMP Part No.	MIL-Part No. M55302/	AMP Part No.	MIL-Part No. M55302/	AMP Part No.	MIL-Part No. M55302/	AMP Part No.
140	27-193	2-530340-2	27-197	1-530758-3	27-201	1-530776-3	27-229	1-530782-3
134	27-192	2-530340-1	27-196	1-530758-2	27-200	1-530776-2	27-228	1-530782-2
130	27-191	2-530340-0	27-195	1-530758-1	27-199	1-530776-1	27-227	1-530782-1
120	27-190	1-530340-9	27-194	1-530758-0	27-198	1-530776-0	27-226	1-530782-0
110	27-99	530340-9	27-108	530758-9	27-117	530776-9	27-180	530782-9
100	27-98	530340-8	27-107	530758-8	27-116	530776-8	27-179	530782-8
90	27-97	530340-7	27-106	530758-7	27-115	530776-7	27-178	530782-7
80	27-96	530340-6	27-105	530758-6	27-114	530776-6	27-177	530782-6
70	27-95	530340-5	27-104	530758-5	27-113	530776-5	27-176	530782-5
60	27-94	530340-4	27-103	530758-4	27-112	530776-4	27-175	530782-4
50	27-93	530340-3	27-102	530758-3	27-111	530776-3	27-174	530782-3
40	27-92	530340-2	27-101	530758-2	27-110	530776-2	27-173	530782-2
30	27-91	530340-1	27-100	530758-1	27-109	530776-1	27-172	530782-1

Note: Order customer drawing for post length.

SOURCE: Catalog 82015

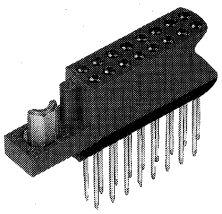
Specifications subject to change.

1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

Receptacle Assemblies for Rack Mounting with Posted Contacts (Wrap-Type)

Mates with—Pin Header Assemblies, Pages 3379 and 3380



Commercial Receptacle Assemblies

Note: 90 Pos. Housing Dim. (Typ.)—5.355 [136.02] L x .248 [6.3] W x .400 [10.16] H

No. of Positions	No. of Terminations Per Post		
	1 High	2 High	3 High
	AMP Part No.	AMP Part No.	AMP Part No.
120	—	1-531837-0	1-531838-0
110	—	—	531838-9
100	—	531837-8	531838-8
90	531836-7	—	—
80	—	531837-6	531838-6
70	—	—	531838-5
60	—	—	531838-4
50	531836-3	—	531838-3
40	531836-2	531837-2	—
30	—	—	531838-1

Post Length—1 High, .405 [10.29]; 2 High, .565 [14.35]; 3 High, .725 [18.42]

Military Receptacle Assemblies

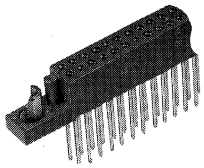
Note: 90 Pos. Housing Dim. (Typ.)—5.355 [136.02] L x .248 [6.3] W x .400 [10.16] H

No. of Positions	No. of Terminations Per Post					
	1 High		2 High		3 High	
	MIL-Part No.	AMP Part No.	MIL-Part No.	AMP Part No.	MIL-Part No.	AMP Part No.
140	M55302/27-213	—	M55302/27-209	1-530777-3	M55302/27-205	1-530763-3
134	M55302/27-212	1-530778-2	M55302/27-208	1-530777-2	M55302/27-204	1-530763-2
130	M55302/27-211	1-530778-1	M55302/27-207	1-530777-1	M55302/27-203	1-530763-1
120	M55302/27-210	1-530778-0	M55302/27-206	1-530777-0	M55302/27-202	1-530763-0
110	M55302/27-144	530778-9	M55302/27-135	530777-9	M55302/27-126	530763-9
100	M55302/27-143	530778-8	M55302/27-134	530777-8	M55302/27-125	530763-8
90	M55302/27-142	530778-7	M55302/27-133	530777-7	M55302/27-124	530763-7
80	M55302/27-141	530778-6	M55302/27-132	530777-6	M55302/27-123	530763-6
70	M55302/27-140	530778-5	M55302/27-131	530777-5	M55302/27-122	530763-5
60	M55302/27-139	530778-4	M55302/27-130	530777-4	M55302/27-121	530763-4
50	M55302/27-138	530778-3	M55302/27-129	530777-3	M55302/27-120	530763-3
40	M55302/27-137	530778-2	M55302/27-128	530777-2	M55302/27-119	530763-2
30	M55302/27-136	530778-1	M55302/27-127	530777-1	M55302/27-118	530763-1

Post Length—1 High, .405 [10.29]; 2 High, .565 [14.35]; 3 High, .725 [18.42]

Receptacle Assemblies for Pc Solder Mount with Posted Contacts (Wrap-Type)

Mates with—Pin Header Assemblies, Pages 3379 and 3380



Commercial Receptacle Assemblies

Note: 90 Pos. Housing Dim. (Typ.)—5.355 [136.02] L x .248 [6.3] W x .400 [10.16] H

No. of Positions	No. of Terminations Per Post
	3 High
	AMP Part No.
120	1-531839-0
110	531839-9
100	531839-8
90	531839-7
80	531839-6
50	531839-3

Post Length—3 High, .725 [18.42]

Military Receptacle Assemblies

Note: 90 Pos. Housing Dim. (Typ.)—5.355 [136.02] L x .248 [6.3] W x .400 [10.16] H

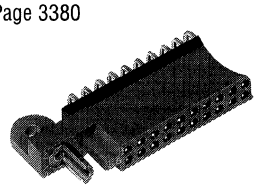
No. of Positions	No. of Terminations Per Post					
	1 High		2 High		3 High	
	MIL-Part No.	AMP Part No.	MIL-Part No.	AMP Part No.	MIL-Part No.	AMP Part No.
140	M55302/27-225	—	M55302/27-221	1-530780-3	M55302/27-217	1-530779-3
134	M55302/27-224	—	M55302/27-220	1-530780-2	M55302/27-216	1-530779-2
130	M55302/27-223	1-530781-1	M55302/27-219	1-530780-1	M55302/27-215	1-530779-1
120	M55302/27-222	—	M55302/27-218	1-530780-0	M55302/27-214	1-530779-0
110	M55302/27-171	530781-9	M55302/27-162	530780-9	M55302/27-153	530779-9
100	M55302/27-170	530781-8	M55302/27-161	530780-8	M55302/27-152	530779-8
90	M55302/27-169	530781-7	M55302/27-160	530780-7	M55302/27-151	530779-7
80	M55302/27-168	530781-6	M55302/27-159	530780-6	M55302/27-150	530779-6
70	M55302/27-167	530781-5	M55302/27-158	530780-5	M55302/27-149	530779-5
60	M55302/27-166	—	M55302/27-157	530780-4	M55302/27-148	530779-4
50	M55302/27-165	530781-3	M55302/27-156	530780-3	M55302/27-147	530779-3
40	M55302/27-164	530781-2	M55302/27-155	530780-2	M55302/27-146	530779-2
30	M55302/27-163	530781-1	M55302/27-154	530780-1	M55302/27-145	530779-1

Post Length—1 High, .405 [10.29]; 2 High, .565 [14.35]; 3 High, .725 [18.42]

SOURCE: Catalog 82015

Right-Angle Receptacle Assemblies with Posted Contacts (Wrap-Type)

Mates with—Pin Header Assemblies, See below and Page 3380

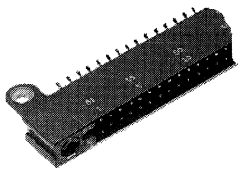


Note: 90 Pos. Housing Dim. (Typ.)—5.355 [136.02] L x .690 [17.53] W x .248 [6.3] H

No. of Positions	AMP Part No.
130	1-532469-1
120	532469-4
110	1-532469-0
100	532469-9
90	532469-3
80	532469-8
70	532469-7
60	532469-2
50	532469-1
40	532469-6
30	532469-5

Straddle Mount Pin Header Assemblies with Anodized Pin Protectors

Mates with—Receptacle Assemblies, Pages 3377 and 3378

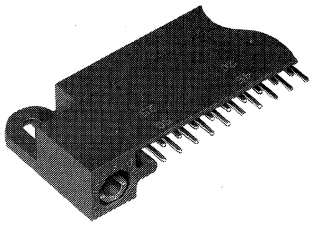


Note: 90 Pos. Housing Dim. (Typ.)—5.355 [136.02] L x .310 [7.87] W x .470 [11.94] H

No. of Positions	Commercial Part No.	Military	
		MIL Part No.	AMP Part No.
140	—	M55302/26-22	1-530761-5
134	—	M55302/26-21	530761-3
130	—	M55302/26-20	1-530761-4
120	—	M55302/26-19	1-530761-3
110	—	M55302/26-18	530761-5
100	531842-8	M55302/26-17	530761-6
90	531842-7	M55302/26-16	530761-7
80	531842-6	M55302/26-15	530761-4
70	531842-5	M55302/26-14	530761-8
60	531842-4	M55302/26-13	530761-9
50	531842-3	M55302/26-12	1-530761-0
40	531842-2	M55302/26-11	1-530761-1
30	—	M55302/26-10	1-530761-2

Right-Angle Pin Header Assemblies for Flow Soldering

Mates with—Receptacle Assemblies, Pages 3377, 3378 and 3382

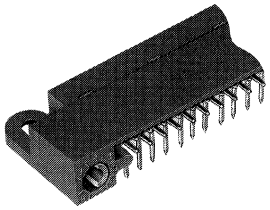


Note: 90 Pos. Housing Dim. (Typ.)—5.355 [136.02] L x .770 [19.56] W x .330 [8.38] H

No. of Positions	Standard Housing			Housing with Interfacial Gasket	
	Commercial Part No.	MIL-Part No. M55302/	AMP Part No.	MIL-Part No. M55302/	AMP Part No.
140	1-530942-3	110-31	1-531721-3	110-35	1-531722-3
134	1-530942-2	110-30	1-531721-2	110-34	1-531722-2
130	—	110-29	1-531721-1	110-33	1-531722-1
120	1-530942-0	110-28	1-531721-0	110-32	1-531722-0
110	530942-9	110-18	531721-9	110-27	531722-9
100	530942-8	110-17	531721-8	110-26	531722-8
90	530942-7	110-16	531721-7	110-25	531722-7
80	530942-6	110-15	531721-6	110-24	531722-6
70	530942-5	110-14	531721-5	110-23	531722-5
60	530942-4	110-13	531721-4	110-22	531722-4
50	530942-3	110-12	531721-3	110-21	531722-3
40	530942-2	110-11	531721-2	110-20	531722-2
30	530942-1	110-10	531721-1	110-19	531722-1

Right-Angle Pin Header Assemblies with Posted Contacts (Wrap-Type)

Mates with—Receptacle Assemblies, Pages 3377, 3378 and 3382



Note: 80 Pos. Housing Dim. (Typ.)—4.855 [123.32] L x .770 [19.56] W x .330 [8.38] H

No. of Positions	AMP Part No.
110	532488-9
90	532488-7
80	532488-6
70	532488-5
30	532488-1

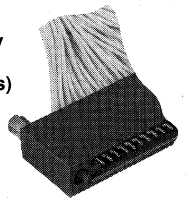
SOURCE: Catalog 82015

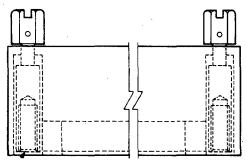
Specifications subject to change.
1-800-522-6752 Product Information Center/ AMP FAX Service
1-800-722-1111 Tooling/Technical Assistance Center

Pin Housings and Assemblies for Crimp Contacts

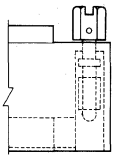
Mates with—Receptacle Assemblies, pages 3377, 3378 and 3382

Housing Assembly (includes turnable jackscrews)





Standard Housing



Housing With Gasket

Standard Housing

Note: 70 Pos. Housing Dim. (Typ.)—4.355 [110.62] L x .800 [20.32] W x .400 [10.16] H

No. of Positions	Housing Part Nos.		Turnable Jackscrew Combinations		Housing Assembly Part Nos.[1]		Kit Part Nos.[2]	
	Military Part No. M55302/	AMP Part No.	Tongue End	Groove End	Military Part No. M55302/	AMP Part No.	Military Part No. M55302/	AMP Part No.
110	113-23	1-530753-8	Female	Female	113-84	3-530752-3	113-80	530755-5
			Male	Female	113-85	3-530752-4	113-81	530755-6
			Female	Male	113-86	3-530752-5	113-82	530755-7
			Male	Male	113-87	3-530752-6	113-83	530755-8
100	113-22	1-530753-6	Female	Female	113-76	2-530752-9	113-72	3-530755-3
			Male	Female	113-77	3-530752-0	113-73	3-530755-4
			Female	Male	113-78	3-530752-1	113-74	3-530755-5
			Male	Male	113-79	3-530752-2	113-75	3-530755-6
90	113-21	1-530753-4	Female	Female	113-68	2-530752-5	113-64	2-530755-9
			Male	Female	113-69	2-530752-6	113-65	3-530755-0
			Female	Male	113-70	2-530752-7	113-66	3-530755-1
			Male	Male	113-71	2-530752-8	113-67	3-530755-2
80	113-20	1-530753-2	Female	Female	113-60	2-530752-1	113-56	2-530755-5
			Male	Female	113-61	2-530752-2	113-57	2-530755-6
			Female	Male	113-62	2-530752-3	113-58	2-530755-7
			Male	Male	113-63	2-530752-4	113-59	2-530755-8
70	113-19	530753-2	Female	Female	113-07	530752-1	113-01	530755-1
			Male	Female	113-08	530752-2	113-02	530755-2
			Female	Male	113-09	530752-3	113-03	530755-3
			Male	Male	113-10	530752-4	113-04	530755-4
60	113-18	1-530753-0	Female	Female	113-52	1-530752-7	113-48	2-530755-1
			Male	Female	113-53	1-530752-8	113-49	2-530755-2
			Female	Male	113-54	1-530752-9	113-50	2-530755-3
			Male	Male	113-55	2-530752-0	113-51	2-530755-4
50	113-17	530753-8	Female	Female	113-44	1-530752-3	113-40	1-530755-7
			Male	Female	113-45	1-530752-4	113-41	1-530755-8
			Female	Male	113-46	1-530752-5	113-42	1-530755-9
			Male	Male	113-47	1-530752-6	113-43	2-530755-0
40	113-16	530753-6	Female	Female	113-36	530752-9	113-32	1-530755-3
			Male	Female	113-37	1-530752-0	113-33	1-530755-4
			Female	Male	113-38	1-530752-1	113-34	1-530755-5
			Male	Male	113-39	1-530752-2	113-35	1-530755-6
30	113-15	530753-4	Female	Female	113-28	530752-5	113-24	530755-9
			Male	Female	113-29	530752-6	113-25	1-530755-0
			Female	Male	113-30	530752-7	113-26	1-530755-1
			Male	Male	113-31	530752-8	113-27	1-530755-2

Housing With Gasket

Note: 70 Pos. Housing Dim. (Typ.)—4.355 [110.62] L x .800 [20.32] W x .400 [10.16] H

No. of Positions	Housing Part Nos.		Turnable Jackscrew Combinations		Housing Assembly Part Nos.[1]		Kit Part Nos.[2]	
	Military Part No. M55302/	AMP Part No.	Tongue End	Groove End	Military Part No. M55302/	AMP Part No.	Military Part No. M55302/	AMP Part No.
110	113-89	530884-2	Female	Female	113-94	530885-5	113-102	530886-5
			Male	Female	113-95	530885-6	113-103	530886-6
			Female	Male	113-96	530885-7	113-104	530886-7
			Male	Male	113-97	530885-8	113-105	530886-8
70	113-88	530884-1	Female	Female	113-90	530885-1	113-98	530886-1
			Male	Female	113-91	530885-2	113-99	530886-2
			Female	Male	113-92	530885-3	113-100	530886-3
			Male	Male	113-93	530885-4	113-101	530886-4

[1]Each Housing Assembly contains: A. 1 Housing. B. 2 Turnable Jackscrews installed (four combinations available, see table).
[2]Each Kit contains: A. 1 Housing Assembly with 2 Turnable Jackscrews installed (four combinations are available, see table). B. 2 Fixed Jackscrews to mate with Turnable Jackscrews (nuts included). These jackscrews are for installation on the mating receptacle housing. C. Loose Piece Contacts. Quantity is number of positions plus 5 extra.

SOURCE: Catalog 82015

Specifications subject to change.

1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

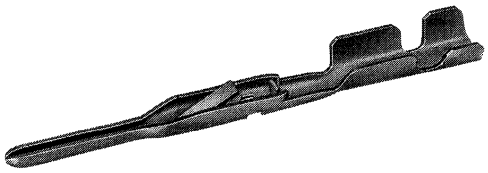
Pin Housings and Assemblies for Crimp Contacts
(Continued)

Crimp Type Pin Contact

Wire Range—26-22 AWG [0.12-0.4 mm²]

Ins. Dia. Range—.036-.054 [0.91-1.37]

Extraction Tool Part No. 91156-1

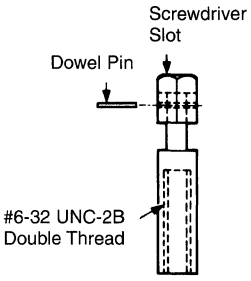


Loose Piece
Military Part No. M55302/113-05
AMP Part No. 530750-5
Hand Tool Part No. 90346-1

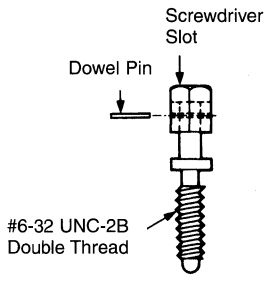
Strip Form
Military Part No. M55302/113-06
AMP Part No. 530750-4

Turnable Jackscrews

Note: To be used as replacement jackscrews for pin housing assemblies shown on page 3380. They are not compatible with any other pin header assemblies.



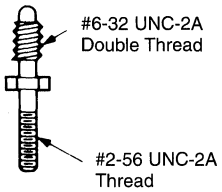
Female
Military Part No. M55302/113-11
AMP Part No. 530754-2



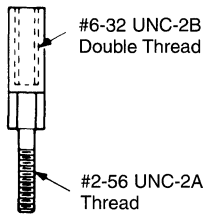
Male
Military Part No. M55302/113-12
AMP Part No. 530754-1

Fixed Jackscrews

Note: To be used with receptacle assemblies shown on pages 3377-3379 for mating with pin assemblies shown on page 3380.

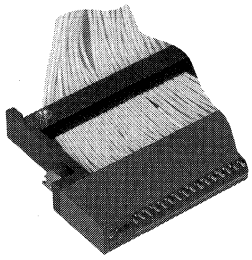


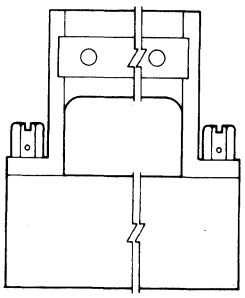
Male
Military Part No. M55302/113-14
AMP Part No. 531141-3
(Nut supplied by customer)



Female
Military Part No. M55302/113-13
AMP Part No. 531141-4
(Nut supplied by customer)

Pin Housing Assembly with Strain Relief





110 Position Housing and Strain Relief Kits

Turnable Jackscrew Combination		Part Numbers
Tongue End	Groove End	
Female	Female	533194-1
Male	Female	533194-2
Female	Male	533194-3
Male	Male	533194-4

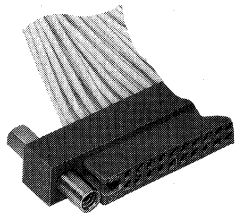
Other sizes can be made available, consult AMP.

SOURCE: Catalog 82015

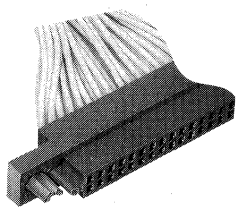
Specifications subject to change.
1-800-522-6752 Product Information Center/ AMP FAX Service
1-800-722-1111 Tooling/Technical Assistance Center

Receptacle Housings and Assemblies for Crimp Contacts

Mates with—Cable Receptacle Housings mate with Pin Housings, pages 3380 and 3381; Rack Mount Receptacle Assemblies mate with Pin Header Assemblies, page 3379



Cable Receptacle with Jackscrew



Rack Mount Receptacle with External Keying

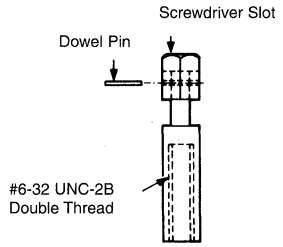
Note: 60 Pos. Housing Dim. (Typ.)—3.855 [97.92] L x .550 [13.97] W x .370 [9.40] H

No. of Positions	Rack Mount Housing Part No.	Cable Housing Part No.	Jackscrew Combinations[1]		Cable Housing with Jackscrews Part No.
			Groove End	Tongue End	
110	1-531802-7	1-531840-7	Male	Male	3-531841-6
			Female	Female	3-531841-3
100	1-531802-5	1-531840-5	Male	Male	3-531841-2
			Male	Female	3-531841-1
			Female	Male	3-531841-0
			Female	Female	2-531841-9
80	1-531802-1	1-531840-1	Male	Male	2-531841-4
			Female	Female	2-531841-1
70	531802-9	531840-9	Male	Male	2-531841-0
			Female	Female	1-531841-7
60	531802-7	531840-7	Male	Male	1-531841-6
			Male	Female	1-531841-5
			Female	Female	1-531841-3
50	531802-5	531840-5	Male	Male	1-531841-2
			Male	Female	1-531841-1
			Female	Male	1-531841-0
			Female	Female	531841-9
40	531802-3	531840-3	Male	Male	531841-8
			Female	Male	531841-6
			Female	Female	531841-5
30	531802-1	531840-1	Male	Male	531841-4
			Male	Female	531841-3
			Female	Male	531841-2

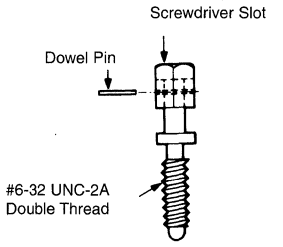
[1]Jackscrews supplied with assemblies Base **Part No. 531841** are **Part No. 530754-4**, female, and **Part No. 530754-3**, male, shown below.

Turnable Jackscrews

Note: To be used with the cable receptacle housings shown above. They are not compatible with other receptacle assemblies.



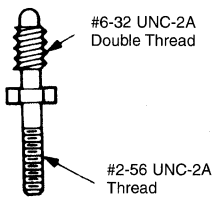
Female
AMP Part No. 530754-4



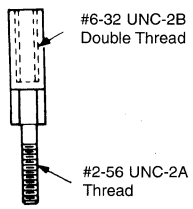
Male
AMP Part No. 530754-3

Fixed Jackscrews

Note: For use with rack mount receptacle housings shown above.



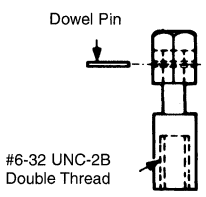
Male
AMP Part No. 532484-1
(Includes nut)



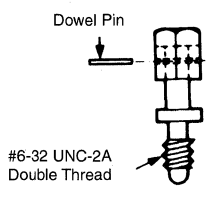
Female
AMP Part No. 532483-2
(Includes nut)

Turnable Jackscrews

Note: For use with rack mount receptacles shown above.



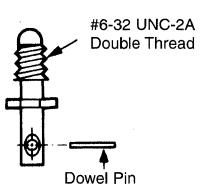
Female
AMP Part No. 531993-2



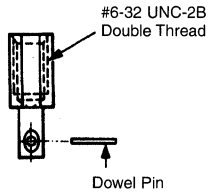
Male
AMP Part No. 531993-1

Fixed Jackscrews

Note: For use with external key type right-angle pin headers when mating with rack mount receptacle housings with turnable jackscrews shown to the left.



Male
AMP Part No. 531985-2



Female
AMP Part No. 531985-1

SOURCE: Catalog 82015

Receptacle Housings and Assemblies for Crimp Contacts
(Continued)

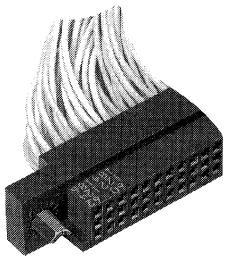
Crimp Type Receptacle Contacts

Wire Range	Ins. Dia. Range	Loose Piece Part No. .000030 [0.00076] Gold	Loose Piece Part No. .000050 [0.00127] Gold	Strip Part No. .000030 [0.00076] Gold	Strip Part No. .000050 [0.00127] Gold	Hand Tool	Applicator for AMP-O-LECTRIC Machine	Applicator for Stripper Crimper Machine
26-22 AWG 0.15-0.3 mm²	**.036-.054** 0.91-1.37	531216-2	531216-4	531216-1	531216-3	90301-2	466819-2[1]	466943-1

[1]Use Applicator **Part No. 466819-1** for the AMPOMATOR Machine Extraction Tool **Part No. 91156-2**

3-Row Receptacle Housings for Crimp Contacts

Mates with—Pin Headers, page 3385



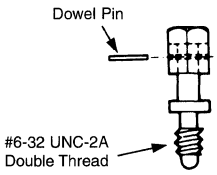
Note: 126 Pos. Housing Dim. (Typ.) 4.950 [125.73] L x .550 [13.97] W x .495 [12.57] H

No. of Positions	AMP Part No.
165	1-531984-4
150	1-531984-3
135	1-531984-1
126	531984-8
120	531984-6
105	531984-4
90	531984-1

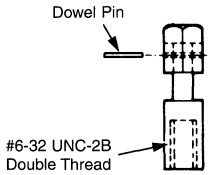
Note: Crimp Type Receptacle Contacts shown above.

Turnable Jackscrews

Note: For use with receptacle housings shown above when mating with right-angle pin headers having fixed jackscrews **(Part No. 531985-1** and **Part No. 531985-2)**



Male
AMP Part No. 532021-1



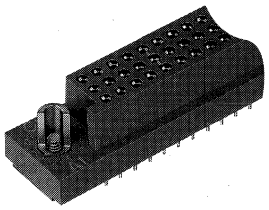
Female
AMP Part No. 532021-2

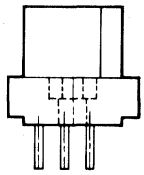
SOURCE: Catalog 82015

Specifications subject to change.
1-800-522-6752 Product Information Center/ AMP FAX Service
1-800-722-1111 Tooling/Technical Assistance Center

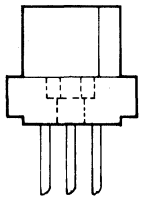
3-Row Receptacle Assemblies

Mates with—Pin Headers, page 3385

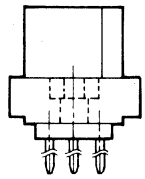




.014 x .019 [0.36 x 0.48] Channel Contact (for flow solder application)



Solder Eyelet Contact (Max. Wire Size 26 AWG [0.15 mm²])



Wrap-Type Posted Contact

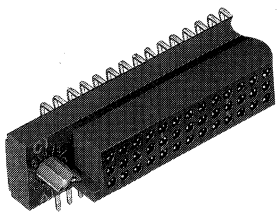
Note: 165 Pos. Housing Dim. (Typ.)—6.250 [158.75] L x .495 [12.57] W x .450 [11.43] H

No. of Positions	.014 x .019 [0.36 x 0.48] Channel Contact			Solder Eyelet			Wrap-Type Posted Contact		
	Commercial Part No.	MIL-Part No. M55302/130	AMP Part No.	Commercial Part No.	MIL-Part No. M55302/130	AMP Part No.	Commercial Part No.	MIL-Part No. M55302/130	AMP Part No.
300[1]	—	—	—	—	—	—	—	—	—
270[1]	1-531138-4	—	—	—	—	—	—	—	—
240	531138-8	-44	531134-8	531140-8	-46	531136-8	531139-8	-45	531135-8
210	531138-7	-41	531134-7	—	-43	531136-7	531139-7	-42	531135-7
195	1-531138-3	-38	1-531134-3	1-531140-3	-40	1-531136-3	1-531139-3	-39	1-531135-3
180	531138-6	-35	531134-6	531140-6	-37	531136-6	531139-6	-36	531135-6
165	531138-5	-32	531134-5	531140-5	-34	531136-5	531139-5	-33	531135-5
150	531138-4	-29	531134-4	531140-4	-31	531136-4	531139-4	-30	531135-4
135	1-531138-2	-26	1-531134-2	—	-28	1-531136-2	1-531139-2	-27	1-531135-2
126	—	—	—	—	—	—	—	—	1-531135-0
120	531138-3	-23	531134-3	531140-3	-25	531136-3	531139-3	-24	531135-3
105	531138-2	-20	531134-2	—	-22	531136-2	531139-2	-21	531135-2
90	531138-1	-17	531134-1	—	-19	531136-1	531139-1	-18	531135-1

[1]Part numbers are available upon request.

3-Row Right-Angle Receptacle Assemblies with Posted Contacts (Wrap-Type)

Mates with—Pin Headers, page 3385



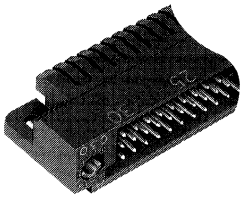
Note: 150 Pos. Housing Dim. (Typ.)—5.750 [146.05] L x .565 [14.35] W x .495 [12.57] H

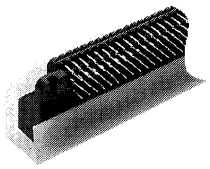
No. of Positions	AMP Part No.
270	534153-1
240	534153-2
210	534153-3
195	534153-4
180	534153-5
165	534153-6
150	534153-7
135	534153-8
126	534153-9
123	1-534153-0
120	1-534153-1
105	1-534153-3
90	1-534153-5

SOURCE: Catalog 82015

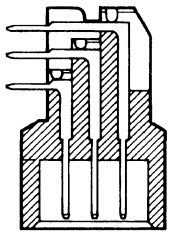
3-Row Right-Angle Pin Header Assemblies

Mates with—Receptacle Assemblies, pages 3383 and 3384

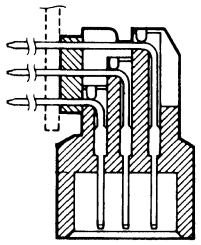




Solder Mask, Part No. 445207-1 (To be used during wave soldering process when mounting to pc board.) Available only in 22 in. [558.8] lengths.



Flow Solder Contacts (for use with .096 [2.44] max. thick pc board)



Wrap-Type Posted Contacts

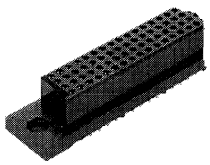
Note: 165 Pos. Housing Dim. (Typ.)—6.250 [158.75] L x .750 [19.05] W x .495 [12.57] H

No. of Positions	Flow Solder Contacts			Wrap-Type Posted Contacts (2 High)
	Commercial Part No.	MIL-Part No. M55302/129	AMP Part No.	AMP Part No.
300[1]	—	—	—	—
270[1]	—	—	—	—
240	531137-8	-18	531133-8	531848-1
210	531137-7	-17	531133-7	—
195	1-531137-3	-16	1-531133-3	1-531848-3
180	531137-6	-15	531133-6	531848-4
165	531137-5	-14	531133-5	531848-3
150	531137-4	-13	531133-4	—
135	1-531137-2	-12	1-531133-2	—
126	—	—	1-531133-0	—
120	531137-3	-11	531133-3	531848-8
105	531137-2	-10	531133-2	531848-7
90	531137-1	-09	531133-1	531848-6

[1]Part numbers are available upon request.

4-Row Receptacle Assemblies

Mates with—Pin Header Assemblies



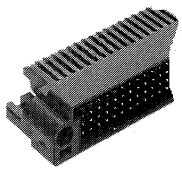
Note: 200 Pos. Housing Dim. (Typ.)—
5.750 [146.05] L x .585 [14.86] W x .400 [10.16] H

No. of Positions	AMP Part No.
300	446081-1
292	446081-2
280	446081-3
268	446081-4
260	446081-5
240	446081-6
232	446081-7
220	446081-8
216	446081-9
200	1-446081-0
192	1-446081-1

No. of Positions	AMP Part No.
180	1-446081-2
168	1-446081-3
160	1-446081-4
152	1-446081-5
140	1-446081-6
128	1-446081-7
120	1-446081-8
100	1-446081-9
68	2-446081-0
40	2-446081-1

4-Row Right-Angle Pin Header Assemblies

Mates with—Receptacle Assemblies



Note: 200 Pos. Housing Dim. (Typ.)—
5.750 [146.05] L x .909 [23.09] W x .580 [14.73] H

No. of Positions	AMP Part No.
300	446080-1
292	446080-2
280	446080-3
268	446080-4
260	446080-5
240	446080-6
232	446080-7
220	446080-8
216	446080-9
200	1-446080-0

No. of Positions	AMP Part No.
192	1-446080-1
180	1-446080-2
168	1-446080-3
160	1-446080-4
152	1-446080-5
140	1-446080-6
128	1-446080-7
120	1-446080-8
100	1-446080-9
68	2-446080-0
40	2-446080-1

SOURCE: Catalog 82015

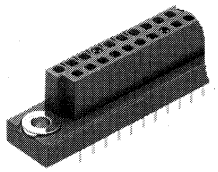
Specifications subject to change.

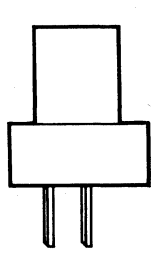
1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

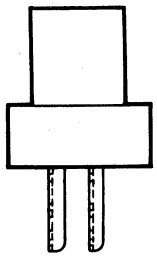
Staggered Receptacle Assemblies

Mates with—Staggered Pin Header Assemblies

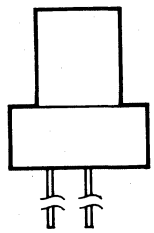




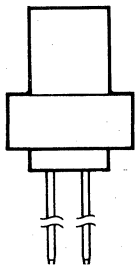
.014 x .019 [0.36 x 0.48] Channel Contact[1]



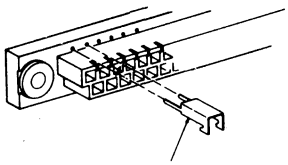
Solder Eyelet Contact (Max. Wire Size 26 AWG [0.15 mm²])



.010 x .020 [0.25 x 0.51] Posted Contact[1]



Wrap-Type Posted Contact[2]



Keying Plug Part No. 202934-1

Note: 71 Pos. Housing Dim. (Typ.)—4.115 [104.52] L x .350 [8.89] W x .400 [10.16] H

No. of Positions	Part Numbers			
	.014 x .019 [0.36 x 0.48] Channel Contact	Solder Eyelet Type Contact	.010 x .020 [0.25 x 0.51] Posted Contact	Wrap-Type Posted Contact (3 High Rack Mount)
71	202932-5	202932-1	1-202932-3	1-202932-5
41	202932-6	202932-2	1-202932-4	1-202932-6

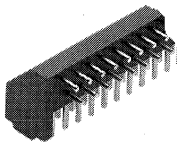
[1]For flow solder application.
[2]Maximum wire size for wrapping a posted box terminal is 30 AWG [0.05 mm²]; maximum insulated wire diameter, .019 [0.48].

Staggered Pin Header Assemblies

Mates with—Staggered Receptacle Assemblies

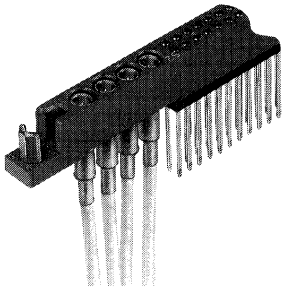
Note: 71 Pos. Housing Dim. (Typ.)—3.776 [95.91] L x .288 [7.32] W x .460 [11.68] H

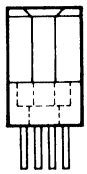
No. of Positions	Part No.
71	202933-1
41	202933-2



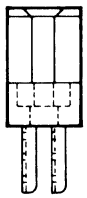
Receptacle Assemblies with Hybrid Cavities

Mates with—Pin Header Assemblies, page 3388

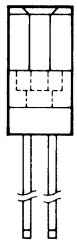




.014 x .019 [0.36 x 0.48] Channel Contact



Solder Eyelet Contact (Max. Wire Size, 26 AWG [0.15 mm²])



Wrap-Type Posted Contact (3 terminations per post)

2 Hybrid Cavity Connectors[1]

Note: 78 Pos. Housing Dim. (Typ.)—5.355 [136.02] L x .248 [6.3] W x .400 [10.16] H

No. of Box Contact Positions	.014 x .019 [0.36 x 0.48] Channel Contact Part No.
128	1-533606-3
122	1-533606-2
118	1-533606-1
108	1-533606-0
98	533606-9
88	533606-8
78	533606-7
68	533606-6
58	533606-5
48	533606-4
38	533606-3
28	533606-2
18	533606-1

[1]These receptacle assemblies accept coaxial contacts—Vertical Cable Socket **Part No. 227605-1**, Right-Angle Cable Socket **Part No. 227606-1** and Vertical Printed Circuit Board Mount Socket **Part No. 227603-1**. See page 3395 for coaxial contact specifications.

4 Hybrid Cavity Connectors[1]

Note: 70 Pos. Housing Dim. (Typ.)—5.355 [136.02] L x .248 [6.30] W x .400 [10.16] H

No. of Box Contact Positions	Part Numbers		
	.014 x .019 [0.36 x 0.48] Channel Contact	Solder Eyelet Contact	Wrap-Type Posted Contact
120	1-533189-0	533180-1	533181-1
110	533189-9	533180-2	533181-2
100	533189-8	533180-3	533181-3
90	533189-7	533180-4	533181-4
80	533189-6	533180-5	533181-5
70	533189-5	533180-6	533181-6
60	533189-1	533180-7	533181-7
50	533189-4	533180-8	533181-8
40	533189-3	533180-9	533181-9
30	533189-2	1-533180-0	1-533181-0

[1]These receptacle assemblies accept coaxial contacts—Vertical Cable Socket **Part No. 227605-1**, Right-Angle Cable Socket **Part No. 227606-1** and Vertical Printed Circuit Board Mount Socket **Part No. 227603-1**. See page 3395 for coaxial contact specifications.

6 Hybrid Cavity Connectors[1]

Note: 62 Pos. Housing Dim. (Typ.)—5.355 [136.02] L x .248 [6.3] W x .400 [10.16] H

No. of Box Contact Positions	.014 x .019 [0.36 x 0.48] Channel Contact Part No.
112	1-533639-0
102	533639-9
92	533639-8
82	533639-7
72	533639-6
62	533639-5
52	533639-4
42	533639-3
32	533639-2
22	533639-1

[1]These receptacle assemblies accept coaxial contacts—Vertical Cable Socket **Part No. 227605-1**, Right-Angle Cable Socket **Part No. 227606-1** and Vertical Printed Circuit Board Mount Socket **Part No. 227603-1**. See page 3395 for coaxial contact specifications.

8 Hybrid Cavity Connectors[1]

Note: 54 Pos. Housing Dim. (Typ.)—5.355 [136.02] L x .248 [6.3] W x .400 [10.16] H

No. of Box Contact Positions	Wrap-Type Posted Contact Part No.
104	533170-1
94	533170-2
84	533170-3
74	533170-4
64	533170-5
54	533170-6
44	533170-7
34	533170-8
24	533170-9
14	1-533170-0

[1]These receptacle assemblies accept coaxial contacts—Vertical Cable Sockets **Part No. 227605-1**, Right-Angle Cable Socket **Part No. 227606-1** and Vertical Pc Board Mount Socket **Part No. 227603-1**. See page 3395 for coaxial contact specifications.

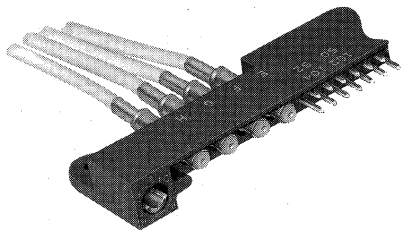
SOURCE: Catalog 82015

Specifications subject to change.

1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

Right-Angle Pin Header Assemblies with Hybrid Contact Cavities



Mates with—Receptacle Assemblies, page 3387

2 Hybrid Cavity Connectors[1]

Note: 78 Pos. Housing Dim. (Typ.)—5.355 [136.02] L x .770 [19.56] W x .330 [8.38] H

No. of Box Contact Positions	AMP Part No.
128	1-533607-3
122	1-533607-2
118	1-533607-1
108	1-533607-0
98	533607-9
88	533607-8
78	533607-2
68	533607-7
58	533607-6
48	533607-5
38	533607-4
28	533607-3
18	533607-1

[1]These pin header assemblies accept coaxial contacts—Vertical Cable Pin **Part No. 227604-1** and Right-Angle Printed Circuit Board Mount Pin **Part No. 227602-1**.

4 Hybrid Cavity Connectors[1]

Note: 70 Pos. Housing Dim. (Typ.)—5.355 [136.02] L x .770 [19.56] W x .330 [8.38] H

No. of Box Contact Positions	AMP Part No.
120	1-533182-0
80	533182-6
70	533182-5
40	533182-3
30	533182-2

[1]These pin header assemblies accept coaxial contacts—Vertical Cable Pin **Part No. 227604-1** and Right-Angle Printed Circuit Board Mount Pin **Part No. 227602-1**.

6 Hybrid Cavity Connectors[1]

Note: 72 Pos. Housing Dim. (Typ.)—5.855 [148.72] L x .770 [19.56] W x .330 [8.38] H

No. of Box Contact Positions	AMP Part No.
112	1-533637-0
102	533637-9
92	533637-8
82	533637-7
72	533637-6
62	533637-5
52	533637-4
42	533637-3
32	533637-2
22	533637-1

[1]These pin header assemblies accept coaxial contacts—Vertical Cable Pin **Part No. 227604-1** and Right-Angle Printed Circuit Board Mount Pin **Part No. 227602-1**.

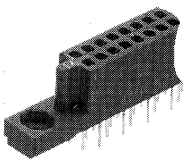
8 Hybrid Cavity Connectors[1]

Note: 64 Pos. Housing Dim. (Typ.)—5.855 [148.72] L x .770 [19.56] W x .330 [8.38] H

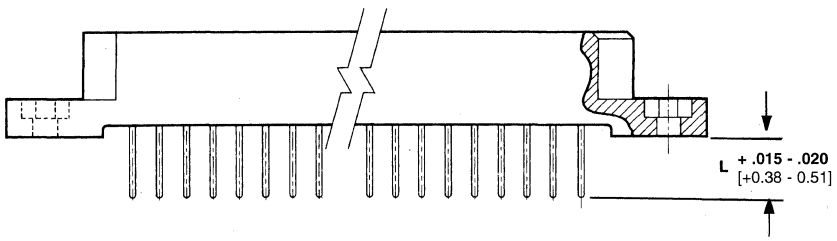
No. of Box Contact Positions	AMP Part No.
104	533171-1
94	533171-2
84	533171-3
74	533171-4
64	533171-5
54	533171-6
44	533171-7
34	533171-8
24	533171-9
14	1-533171-0

[1]These pin header assemblies accept coaxial contacts—Vertical Cable Pin **Part No. 227604-1** and Right-Angle Printed Circuit Board Mount Pin **Part No. 227602-1**.

Sealed Connectors



Mates with—Pin Header Assemblies, pages 3379-3381

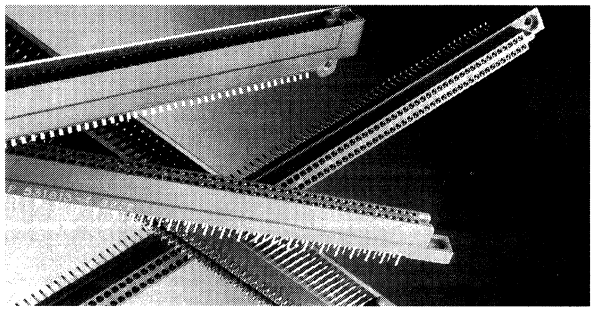


Note: 90 Pos. Housing Dim. (Typ.)—5.355 [136.02] L x .248/.242 [6.3/6.2] W x .400 [10.16] H

No. of Positions	Part Numbers L = .156 [3.96]	Part Numbers L = .235 [5.97]
140	1-534195-3	1-534650-3
134	1-534195-2	1-534650-2
130	1-534195-1	1-534650-1
120	1-534195-0	1-534650-0
110	534195-9	534650-9
100	534195-8	534650-8
90	534195-7	534650-7
80	534195-6	534650-6
70	534195-5	534650-5
60	534195-4	534650-4
50	534195-3	534650-3
40	534195-2	534650-2
30	534195-1	534650-1

SOURCE: Catalog 82015

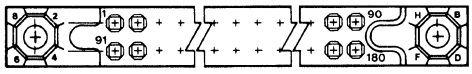
.075 [1.91] Centerline Connectors



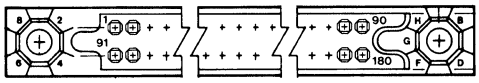
Product Facts

- Contacts are on .075 x .125 [1.91 x 3.18] centers
- Pin headers are provided with pin protectors
- Box receptacles contacts are available in flow solder, solder eyelet and straddle mount styles

Receptacle Assemblies for Flow Soldering

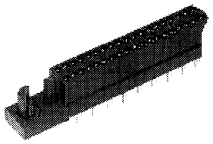


Type Y



Type Z

Contact Styles



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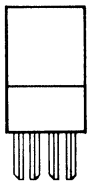
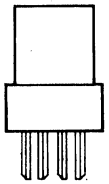
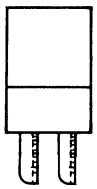


Type Z

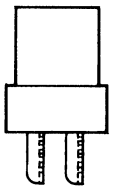


.014 x .019 [0.36 x 0.48] Channel Contact[1]

Type Y



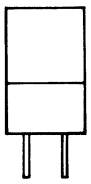
Type Z



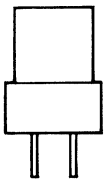
Solder Eyelet Contact (Max. Wire Size, 26 AWG [0.15 mm²])

Mates with—Pin Header Assemblies, page 3390

Type Y

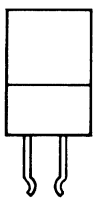


Type Z

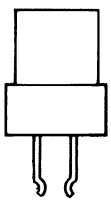


.010 x .020 [0.25 x 0.51] Posted Contacts[1]

Type Y



Type Z



Card Extender Contact (Use with .070/.054 [1.78/1.37] Board)

[1]For flow solder application.

Commercial Receptacle Assemblies

Note: 100 Pos. Housing Dim. (Typ.)—4.630 [117.6] L x .248 [6.3] W x .400 [10.16] H

No. of Positions	Housing Type	.014 x .019 [0.36 x 0.48] Channel Contacts	Solder Eyelet Contacts	.010 x .020 [0.25 x 0.51] Posted Contacts	Card Extender Contacts
		AMP Part No.	AMP Part No.	AMP Part No.	AMP Part No.
180	Z	531813-4	531811-4	531815-4	531817-4
160	Z	531813-3	—	—	531817-3
150	Z	531813-2	—	—	531817-2
120	Z	—	531811-1	531815-1	531817-1
100	Y	—	1-513810-0	—	1-531816-0
80	Y	531812-8	531810-8	—	—
50	Y	531812-5	531810-5	—	531816-5
40	Y	531812-4	531810-4	—	531816-4
30	Y	531812-3	—	—	531816-3
10	Y	—	—	531814-1	—

SOURCE: Catalog 82015

Specifications subject to change.

1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

Receptacle Assembiies for Flow Soldering
(Continued)

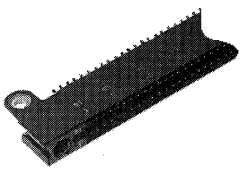
Military Receptacle Assemblies

Note: 90 Pos. Housing Dim. (Typ.)—4.255 [108.08] L x .248 [6.3] W x .400 [10.16] H

No. of Positions	Housing Type	.014 x .019 [0.36 x 0.48] Channel Contacts		Solder Eyelet Contacts		.010 x .020 [0.25 x 0.51] Posted Contacts		Card Extender Contacts	
		MIL-Part No. M55302/	AMP Part No.	MIL-Part No. M55302/	AMP Part No.	MIL-Part No. M55302/	AMP Part No.	MIL-Part No. M55302/	AMP Part No.
180	Z	25-29	531145-4	25-30	531146-4	25-31	531147-4	25-32	531148-4
160	Z	25-25	531145-3	25-26	531146-3	25-27	531147-3	25-28	531148-3
150	Z	25-21	531145-2	25-22	531146-2	25-23	531147-2	25-24	531148-2
120	Z	25-17	531145-1	25-18	531146-1	25-19	531147-1	25-20	531148-1
110	Y	24-85	1-531142-1	24-86	1-531129-1	24-87	1-531143-1	24-88	1-531144-1
100	Y	24-81	1-531142-0	24-82	1-531129-0	24-83	1-531143-0	24-84	1-531144-0
90	Y	24-77	531142-9	24-78	1-531129-2	24-79	531143-9	24-80	531144-9
80	Y	24-73	531142-8	24-74	531129-9	24-75	531143-8	24-76	531144-8
70	Y	24-69	531142-7	24-70	531129-8	24-71	531143-7	24-72	531144-7
60	Y	24-65	531142-6	24-66	531129-7	24-67	531143-6	24-68	531144-6
50	Y	24-61	531142-5	24-62	531129-6	24-63	531143-5	24-64	531144-5
40	Y	24-57	531142-4	24-58	531129-5	24-59	531143-4	24-60	531144-4
30	Y	24-53	531142-3	24-54	531129-4	24-55	531143-3	24-56	531144-3
20	Y	24-49	531142-2	24-50	531129-3	24-51	531143-2	24-52	531144-2
10	Y	24-45	531142-1	24-46	531129-2	24-47	531143-1	24-48	531144-1

Straddle Mount Pin Header Assemblies with Anodized Pin Protectors

Mates with—Receptacle Assemblies, page 3389 and see above.

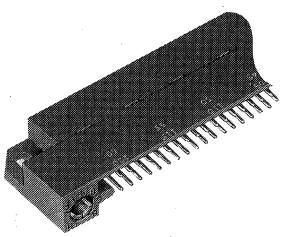


Note: 90 Pos. Housing Dim. (Typ.)—4.255 [108.08] L x .310 [7.87] W x .470 [11.94] H

No. of Positions	Commercial Part No.	Military Pin Header	
		MIL-Part No. M55302/	AMP Part No.
180	1-531809-5	23-30	530785-4
160	1-531809-4	23-29	530785-5
150	—	23-28	530785-2
120	1-531809-2	23-27	530785-6
110	—	23-26	530785-7
100	1-531809-0	23-25	530785-8
90	—	23-24	1-530785-7
80	531809-8	23-23	530785-9
70	—	23-22	1-530785-0
60	—	23-21	1-530785-1
50	531809-5	23-20	1-530785-2
40	531809-4	23-19	1-530785-3
30	531809-3	23-18	1-530785-4
20	—	23-17	1-530785-5
10	—	23-16	1-530785-6

Right-Angle Pin Header Assemblies for Flow Soldering

Mates with—Receptacle Assemblies, page 3389 and see above



Note: 90 Pos. Housing Dim. (Typ.)—4.255 [108.08] L x .770 [19.56] W x .330 [8.38] H

No. of Positions	In-Line, Type I			Staggered, Type II		
	Commercial Part No.	MIL-Part No. M55302/	AMP Part No.	Commercial Part No.	MIL-Part No. M55302/	AMP Part No.
180	1-531127-5	156-15	1-531719-5	1-531124-5	156-30	1-531720-5
160	1-531127-4	156-14	1-531719-4	1-531124-4	156-29	1-531720-4
150	—	156-13	1-531719-3	1-531124-3	156-28	1-531720-3
120	—	156-12	1-531719-2	—	156-27	1-531720-2
110	—	156-11	1-531719-1	—	156-26	1-531720-1
100	—	156-10	1-531719-0	—	156-25	1-531720-0
90	—	156-09	531719-9	531124-9	156-24	531720-9
80	—	156-08	531719-8	531124-8	156-23	531720-8
70	—	156-07	531719-7	—	156-22	531720-7
60	—	156-06	531719-6	531124-6	156-21	531720-6
50	531127-5	156-05	531719-5	531124-5	156-20	531720-5
40	—	156-04	531719-4	531124-4	156-19	531720-4
30	—	156-03	531719-3	531124-3	156-18	531720-3
20	—	156-02	531719-2	—	156-17	531720-2
10	—	156-01	531719-1	—	156-16	531720-1

SOURCE: Catalog 82015

Keying Hardware
.100 [2.54] and .075 [1.91] Centerline

External Keys

Receptacle Key
For use with Receptacles
Kit No. 530341-3
Kit includes 2 each of the following:
Keys, passivated stainless steel
AMP Part No. 530341-1
Military Part No. M55302/31-04
Screws, #2-56 .250 [6.35] long

Pin Header Key
For use with 2-row Pin Headers
Kit No. 530341-4[1]
Kit includes 2 each of the following:
Keys, passivated stainless steel
AMP Part No. 530341-1
Military Part No. M55302/31-04
Rivets, nickel plated brass
AMP Part No. 530347-1
Military Part No. M55302/31-05

Pin Header Key
For use with 2- and 3-row Pin Headers
Kit No. 530341-5[1]
Kit includes 2 each of the following:
Keys, passivated stainless steel
AMP Part No. 530341-1
Military Part No. M55302/31-04
Rivets, nickel plated brass
AMP Part No. 530347-3
Military Part No. M55302/31-10

[1]Rivet Clinching Tools:
2-Row Pin Headers—Tool **Part No. 91117-1**
3-Row Pin Headers—Tool **Part No. 91117-3**

Guide Keys

Guide Keying Pin and Insert
For use with 2-row Receptacles and Pin Headers
Kit No. 531715-1[1]
Kit includes 2 each of the following:
Guide keying pin, passivated stainless steel
Part No. 531713-1
Nut, #2-56
Part No. 23174-1
Guide keying insert, passivated stainless steel
Part No. 531714-1
Rivet, nickel plated brass
Part No. 530347-1

Guide Keying Pin and Insert
For use with 2- and 3-row Receptacles and Pin Headers
Kit No. 531715-2[1]
Kit includes 2 each of the following:
Guide keying pin, passivated stainless steel
Part No. 531713-1
Nut, #2-56
Part No. 23174-1
Guide keying insert, passivated stainless steel
Part No. 531714-1
Rivet, nickel plated brass
Part No. 530347-1

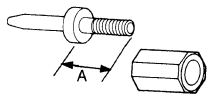
[1]Rivet Clinching Tools:
2-Row Pin Headers—Tool **Part No. 91117-1**
3-Row Pin Headers—Tool **Part No. 91117-4**

Solid Keying Pin

Solid keying pins are for use on connectors when external keying is not used or on external keyed assemblies when more than 64 keying positions are required. Solid keying pins are not to be installed in the three dual positions at each end of the connector.

AMP Part No. 530328-2
Military Part No. M55302/31-03

Guide Pin/Insert



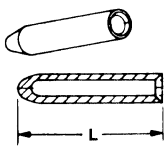
Guide Pin
Passivated stainless steel

A	Part No.
.400 10.16	530345-1
.680 17.27	530345-2
.750 19.05	530345-3

Guide Insert
Passivated stainless steel
Part No. 530346-1
(Consult AMP for mounting recommendations)

Keying Sleeve

Keying sleeves, like solid keying pins, are used as an alternative to external keys or when additional keying is required. When the keying sleeve is used on the pin header, the contact must be removed from the receptacle assembly and the cavity reamed to .062 [1.57] diameter.



L	MIL-Part No. M55302/	AMP Part No.
.305 7.75	31-01	583254-3
.250 6.35	31-02	583254-4

Replacement Contacts
.100 [2.54] and .075 [1.91] Centerline

Pin Contacts

For Straddle Mount Pin Headers

Plating	AMP Part No.
.000030 [0.00076] gold	202947-2
.000050 [0.00127] gold	202947-3

Extraction Tool **Part No. 91156-1**

Receptacle Contacts

.014 x .019 [0.36 x 0.48] Channel Contact

Plating	AMP Part No. 2-Row Connectors	AMP Part No. 3-Row Connectors
.000030 [0.00076] gold	202946-1	202946-2
.000050 [0.00127] gold	202946-7	202946-5

L Length equals .540 [13.72] max. for 2-Row; .619 [15.72] max. for 3-Row; Extraction Tool **Part No. 91035-1**, MIL-Part No. M81969/9-01.

Solder Eyelet Contact (Max. Wire Size, 26 AWG 0.15 mm²)

Plating	MIL-Part No.	AMP Part No.
.000030 [0.00076] gold	—	583218-1
.000050 [0.00127] gold	M55302/ 32-01	583218-3

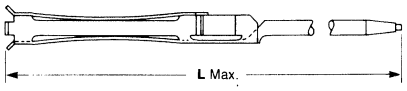
For 2-Row Only

.010 x .020 [0.25 x 0.51] Posted Contact[1]

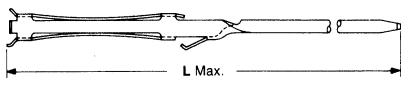
Plating	AMP Part No.
.000030 [0.00076] gold	583452-4
.000050 [0.00127] gold	1-583452-9

[1] .010 x .020 [0.25 x 0.51] posted contacts are used as replacement contacts in card extender asemblies.

Posted Receptacle Contacts .100 [2.54] Centerline



Wrap-Type Contact for Rack Mounting Double Latch .022 x .027 [0.56 x 0.69] Post



Wrap-Type Contact for Pc Mounting Single Latch .022 x .027 [0.56 x 0.69] Post

Plating Code—
A—.000030 [0.00076] gold
B—.000050 [0.00127] gold

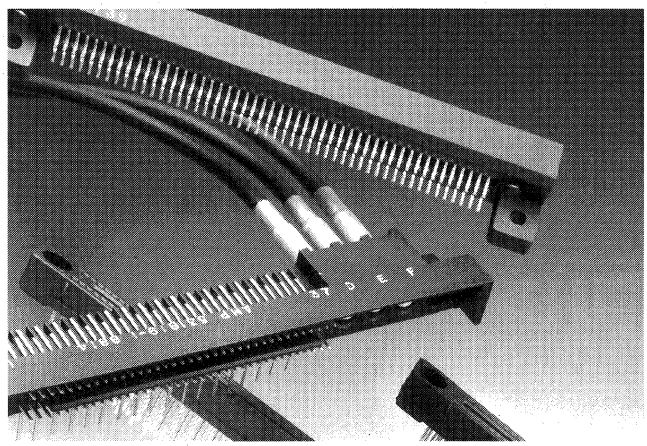
No. Terminations	Dim. L	For Rack Mount (Double Latch)[1] Plating Code A AMP Part No.	Plating Code B MIL-Part No.	Plating Code B AMP Part No.	For Pc Mount (Single Latch) Plating Code A AMP Part No.	Plating Code B MIL-Part No.	Plating Code B AMP Part No.
1 High	**.795** 20.0	532466-3	M55302/32-05	1-532466-2	—	M55302/32-02	2-583812-6
2 High	**.955** 24.26	532466-6	M55302/32-06	1-532466-5	—	M55302/32-03	2-583812-8
3 High	**1.115** 28.32	532466-9	M55302/32-07	1-532466-8	583812-9	M55302/32-04	3-583812-0

[1]Extraction Tool **Part No. 1-265871-7**

SOURCE: Catalog 82015

Specifications subject to change.
1-800-522-6752 Product Information Center/ AMP FAX Service
1-800-722-1111 Tooling/Technical Assistance Center

.050 [1.27] Centerline Connectors



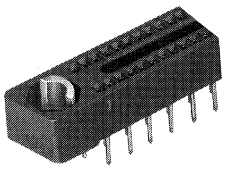
Product Facts

- Contacts are on .050 x .150 [1.27 x 3.81] centers
- Pin headers are available in straddle mount and right-angle versions, both with pin protectors
- Solder tails on receptacles and right-angle pin headers are staggered for easy access
- Connectors with coaxial and box contacts available
- Free 3D and 2D CAD images— See page 56.

EADS CD-ROM

Mini-Box Receptacle Assemblies for Flow Soldering

Mates with—Pin Header Assemblies, page 3393

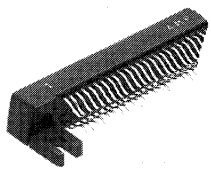


Note: 70 Pos. Housing Dim. (Typ.)—2.280 [57.91] L x .255 [6.48] W x .220 [5.59] H

No. of Positions	Commercial Assemblies Part Nos.		Military Assemblies Part Nos.		
	GPT-30F	Epoxy Sealed* GST-40F	M55302/	GPT-30F	GST-40F
128	530720-9	534175-1	119-11	1-530745-1	2-530745-2
110	530720-8	534175-2	119-10	1-530745-0	2-530745-1
100	530720-7	534175-3	119-9	530745-9	2-530745-0
90	530720-6	534175-4	119-8	530745-8	1-530745-9
80	530720-5	534175-5	119-7	530745-7	1-530745-8
70	530720-4	534175-6	119-6	530745-6	1-530745-7
60	530720-3	534175-7	119-5	530745-5	1-530745-6
50	530720-2	534175-8	119-4	530745-4	1-530745-5
40	530720-1	534175-9	119-3	530745-3	1-530745-4
30	1-530720-0	1-534175-0	119-2	530745-2	1-530745-3
20	1-530720-1	1-534175-1	119-1	530745-1	1-530745-2

Note: Contact Alignment Tool—**Part No. 58107-1**
*Same contact material and finish per military receptacle.

Mini-Box Straddle Mount Receptacle Assemblies



Mates with—Pin Header Assemblies, page 3393

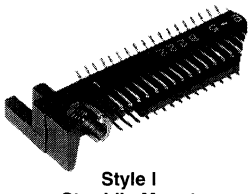
Note: 70 Pos. Housing Dim. (Typ.)—2.280 [57.91] L x .470 [11.94] W x .255 [6.48] H

No. of Positions	Part No.
128	445185-1
110	445185-2
100	445185-3
90	445185-4
80	445185-5
70	445185-6
60	445185-7
50	445185-8
40	445185-9
30	1-445185-0
20	1-445185-1

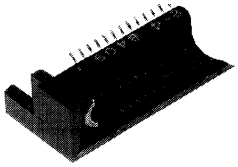
Specifications subject to change.
1-800-522-6752 Product Information Center/ AMP FAX Service
1-800-722-1111 Tooling/Technical Assistance Center

Mini-Box Pin Header Assemblies

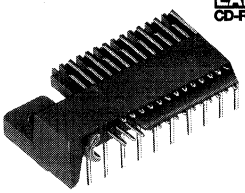
Mates with—Receptacle Assemblies, page 3392



Style I
Straddle Mount
without Pin Protectors



Style II
Straddle Mount
with Pin Protectors



Style III
Right-Angle Mount

Commercial Pin Header Assemblies

Note: 70 Pos. Housing Dim. (Typ.)—Style III, 2.400 [60.96] L x .545 [13.84] W x .310 [7.87] H

No. of Positions	Style I Straddle Mount AMP Part No. GPT-30F	Style II Straddle Mt. w/Pin Protector AMP Part No. GPT-30F	Style III Right-Angle Mount AMP Part No. GPT-30F
128	530719-9	1-531122-1	530733-9
110	—	—	530733-8
100	530719-7	—	530733-7
90	530719-6	—	530733-6
80	530719-5	—	530733-5
70	530719-4	531122-6	530733-4
60	530719-3	531122-5	530733-3
50	530719-2	—	530733-2
40	530719-1	—	530733-1
30	—	—	1-530733-0
20	—	—	1-530733-1

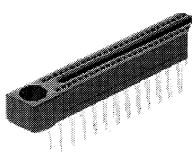
Military Pin Header Assemblies

Note: 70 Pos. Housing Dim. (Typ.)—Style III, 2.400 [60.96] L x .545 [13.84] W x .310 [7.87] H

No. of Positions	Style I Straddle Mount			Style II Straddle Mt. w/Pin Protector			Style III Right-Angle Mount		
	M55302/	GPT-30F	GST-40F	M55302/	GPT-30F	GST-40F	M55302/	GPT-30F	GST-40F
128	118-11	1-530744-1	2-530744-2	118-22	1-531803-1	2-531803-2	117-11	1-530743-1	2-530743-2
110	118-10	1-530744-0	2-530744-1	118-21	1-531803-0	2-531803-1	117-10	1-530743-0	2-530743-1
100	118-9	530744-9	2-530744-0	118-20	531803-9	2-531803-0	117-9	530743-9	2-530743-0
90	118-8	530744-8	1-530744-9	118-19	531803-8	1-531803-9	117-8	530743-8	1-530743-9
80	118-7	530744-7	1-530744-8	118-18	531803-7	1-531803-8	117-7	530743-7	1-530743-8
70	118-6	530744-6	1-530744-7	118-17	531803-6	1-531803-7	117-6	530743-6	1-530743-7
60	118-5	530744-5	1-530744-6	118-16	531803-5	1-531803-6	117-5	530743-5	1-530743-6
50	118-4	530744-4	1-530744-5	118-15	531803-4	1-531803-5	117-4	530743-4	1-530743-5
40	118-3	530744-3	1-530744-4	118-14	531803-3	1-531803-4	117-3	530743-3	1-530743-4
30	118-2	530744-2	1-530744-3	118-13	531803-2	1-531803-3	117-2	530743-2	1-530743-3
20	118-1	530744-1	1-530744-2	118-12	531803-1	1-531803-2	117-1	530743-1	1-530743-2

Extended Mini-Box Receptacle Assemblies

Mates with—Straddle Mount Pin Header Assemblies, page 3394



Note: 160 Pos. Housing Dim. (Typ.)—
4.950 [125.73] L x .260 [6.60] W x .220 [5.58] H

No. of Positions	Part No.
200	534179-8
192	534179-7
180	534179-6
172	534179-5

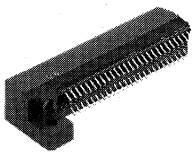
No. of Positions	Part No.
160	534179-4
152	534179-3
140	534179-2
132	534179-1

SOURCE: Catalog 82015

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

Extended Mini-Box Straddle Mount Pin Header Assemblies

Mates with—Receptacle Assemblies, page 3393

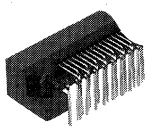


Note: 160 Pos. Housing Dim. (Typ.)—5.050 [128.27] L x .470 [11.94] W x .340 [8.64] H

No. of Positions	Part No.	No. of Positions	Part No.
200	534180-8	160	534180-4
192	534180-7	152	534180-3
180	534180-6	140	534180-2
172	534180-5	132	534180-1

Extended Mini-Box Right-Angle Pin Header Assemblies

Mates with—Receptacle Assemblies, page 3393

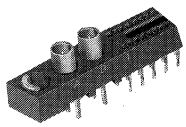


Note: 160 Pos. Housing Dim (Typ.)—5.050 [128.27] L x .395 [10.03] W x .340 [8.64] H

No. of Positions	Part No.	No. of Positions	Part No.
200	534688-8	160	534688-4
192	534688-7	152	534688-3
180	534688-6	140	534688-2
172	534688-5	132	534688-1

Mini-Box Receptacle Assemblies with 4 or 6 Hybrid Cavities

Mates with—Pin Header Assemblies



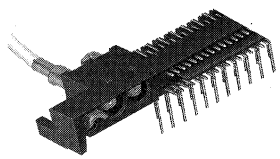
Note: 36 Pos. Housing Dim. (Typ.)—2.780 [70.61] L x .255 [6.48] W x .220 [5.59] H

No. of Box Contact Positions	No. of Coaxial Cavities	AMP Part No.
90	4	532797-1
74	6	531820-1
36	6	531820-3
26	6	531820-2

Note: These receptacle assemblies accept coaxial contact — Vertical Pc Board Mount Socket **Part No. 227603-1.**

Mini-Box Right-Angle Pin Header Assemblies with 4 or 6 Hybrid Cavities

Mates with—Receptacle Assemblies



Note: 36 Pos. Housing Dim.(Typ.)—2.900 [73.66] L x .395 [10.03] W x .310 [7.87] H

No. of Box Contact Positions	No. of Coaxial Cavities	AMP Part No.
90	4	532796-1
74	6	531819-1
36	6	531819-3
26	6	531819-2

Note: These pin header assemblies accept coaxial contacts — Vertical Cable Pin **Part No. 227604-1** and Right-Angle Pc Board Mount Pin **Part No. 227602-1.**

SOURCE: Catalog 82015

Mini-Box and Extended Mini-Box Connector Keying Hardware

External Keys

These external keys are used with the receptacle assemblies shown on pages 3392-3394 and with the pin header assemblies shown on pages 3393 and 3394. They are press fitted into position using tool **Part No. 91117-2**. Keys used in one end of each mated pair will yield 8 keying combinations, and when used in both ends of the mated pairs will yield 64 keying combinations. The No. 2-56 screws are used to mount keyed receptacles to a printed circuit board. Rivets can be used to retain keys in pin header assemblies.

For use with Pin Headers

External Key Kit No. 530721-4

Kit includes 2 each of the following:
Keys - AMP Part No. 530721-1
Military Part No. M55302/31-06
Rivets - AMP Part No. 534164-2

For use with Receptacles

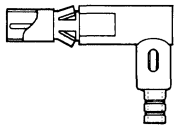
External Key Kit No. 530721-3

Kit includes 2 each of the following:
Keys - AMP Part No. 530721-1
Military Part No. M55302/31-06
#2-56 Screws, .250 [6.35] Long

Microminiature COAXICON Contacts

Cable Pin

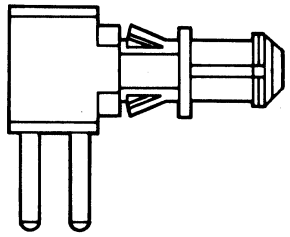
Cable Socket



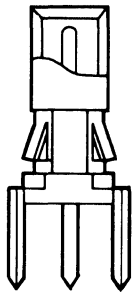
Right-Angle Cable Socket

Cable Size	Contact Style	Part No.	Application Tool Part No.
RG178/U Double Braid RG 196/U Tensolite 30850/81T-1 Malco 250-390-8	Cable Pin	227604-1	220215-1
	Cable Socket	227605-1	
	Right-Angle Cable Socket	227606-1	

Extraction Tool **Part No. 220216-1**



Right-Angle Pin for Pc Board Application Part No. 227602-1

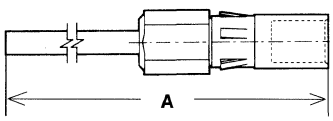


Vertical Socket for Pc Board Application Part No. 227603-1

Note: For .125 [3.18] max. thick pc board.

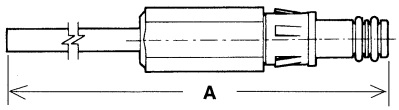
High Voltage Contacts

Pin Contact



Dimension A	Part No.
6.00 152.4	446451-1
12.00 304.8	446451-2
18.00 457.2	446451-3

Socket Contact

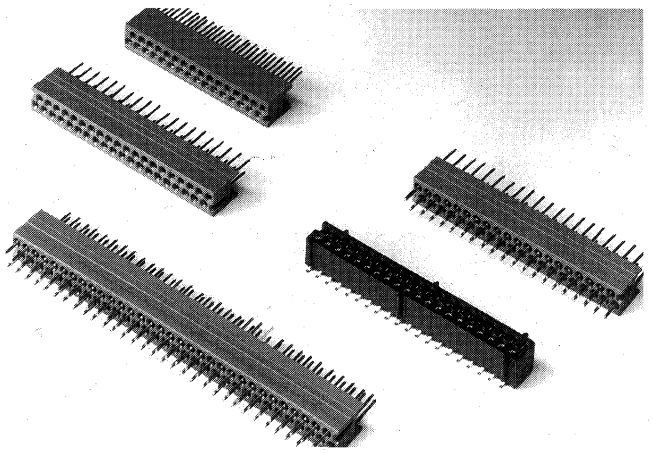


Dimension A	Part No.
6.00 152.4	446452-1
12.00 304.8	446452-2
18.00 457.2	446452-3

SOURCE: Catalog 82015

Specifications subject to change.
1-800-522-6752 Product Information Center/ AMP FAX Service
1-800-722-1111 Tooling/Technical Assistance Center

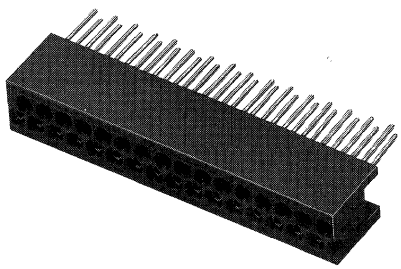
Chevron-Shaped Contact Connectors



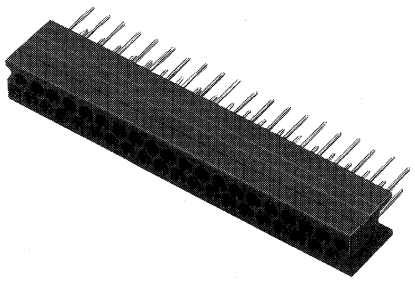
Product Facts

- High-density packaging system: contacts on .050 [1.27] true or staggered centerlines
- .025 [0.64] centerline pc board interface
- Low profile
- Receptacle contacts incorporate two spiral springs for redundant contact to pins
- Pc edge straddle-mount and surface-mount versions
- Suitable for matched impedance applications with 75-ohm cable
- Pin counts from 4 to 96 positions

Straddle-Mount Pin and Receptacle Connectors



Connector with .025 [0.64] Center Spacing



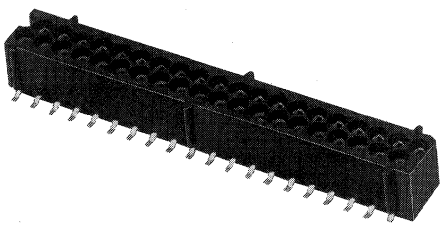
Connector with .050 [1.27] Center Spacing

Note: 64 Pos. Housing Dim. (Typ.)—1.631 [41.43] L x .125 [3.18] W x .170 [4.32] H

Tab Spacing	Number of Positions	Part Numbers	
		Pin Assembly	Receptacle Assembly
.025 [0.64]	32	—	203990-2
	40	—	203990-7
	64	203988-3	—
	68	203988-6	—
	76	203988-8	—
.050 [1.27]	16	—	203991-1
	24	1-203989-1	1-203991-0
	32	203989-2	203991-2
	40	1-203989-4	1-203991-3
	64	203989-3	203991-3
	72	203989-7	203991-6
	80	—	1-203991-4

Note: Other sizes to 96 positions available upon request, consult AMP.

Planar Surface-Mount Socket Connector



Note: 48 Pos. Housing Dim. (Typ.)—
1.225 [31.12] L x .164 [4.17] W x .125 [3.18] H

Number of Positions	Part Number
4	213143-1
6	213143-2
24	213143-7
26	213143-3
30	213143-8
40	213143-4
48	213143-5
50	213143-6

Note: Connectors include polarizing key to prevent 180° mismatch of like sizes; keys are not intended to prevent mating of different sizes.

SOURCE: Catalog 82014

Specifications subject to change.

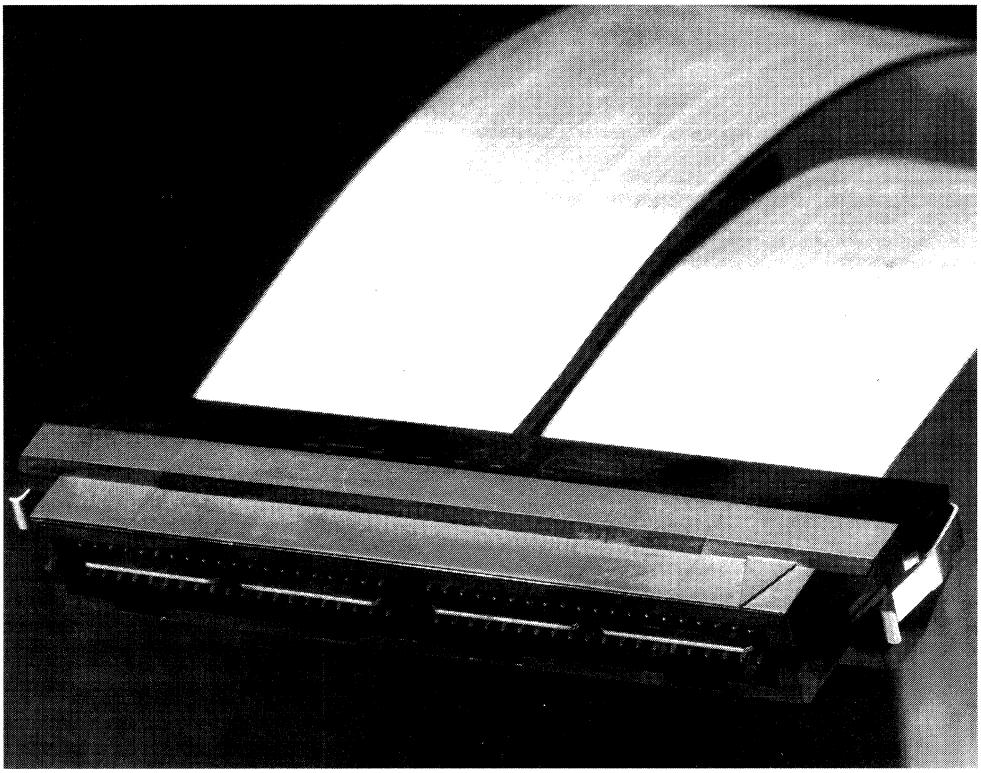
1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

AMP

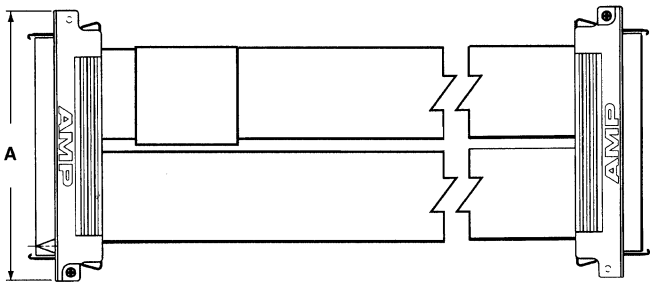
METRIC

AMP Micro-Strip Cable Assemblies



Product Facts

- High megahertz clock rates
- Sub-nanosecond risetimes
- Controlled impedance— 50 ± 5 ohms
- Propagation delay of 1.45 ns/foot
- FEP dielectric
- 40 signal contacts in a 0.1 x 1.0 [2.54 x 25.4] area
- 36, 52, 72, 88, and 108 signal contacts per cable assembly
- 24 standards lengths from 3 to 120 inches [76.2 to 3048] (custom lengths are available upon request)
- Mechanical latching and polarization
- Mates to AMP Micro-Strip vertical and right-angle board-to-board receptacles
- Board mount connectors are compatible with standard through-hole flow solder and vapor phase reflow solder processes
- Board mount connectors are Recognized under the Component Program of Underwriters Laboratories Inc., File No. E28476
- Board mount connectors are Certified by the Canadian Standards Association, File No. LR 7189A



Cable Assembly Part Number	Number of Signal Pins: Cable Assembly	Number of Signal Pins: Board Connector	Dimension A	Mating Vertical Board Connectors, Solder Tail Length: 2.41 [.095]	Mating Vertical Board Connectors, Solder Tail Length: 3.18 [.125]	Mating Vertical Board Connectors, Solder Tail Length: 4.57 [.180]	Mating Right-Angle Board Connectors, Solder Tail Length: 2.41 [.095]	Mating Right-Angle Board Connectors, Solder Tail Length: 3.18 [.125]	Unavailable Board Connector Signal Pins
621189	36	40	**42.06** 1.656	536279-1	536254-1	536255-1	536295-1	536297-1	1, 2, 39, 40
621190	52	60	**54.76** 2.156	536279-2	536254-2	536255-2	536295-2	536297-2	1, 2, 19, 20, 21, 22, 59, 60
621191	72	80	**67.46** 2.656	536279-3	536254-3	536255-3	536295-3	536297-3	1, 2, 39, 40, 41, 42, 79, 80
621192	88	100	**80.16** 3.156	536279-4	536254-4	536255-4	536295-4	536297-4	1, 2, 19, 20, 21, 22, 59, 60, 61, 62, 99, 100
621193	108	120	**92.86** 3.656	536279-5	536254-5	536255-5	536295-5	536297-5	1, 2, 39, 40, 42, 79, 80, 81, 82, 119, 120

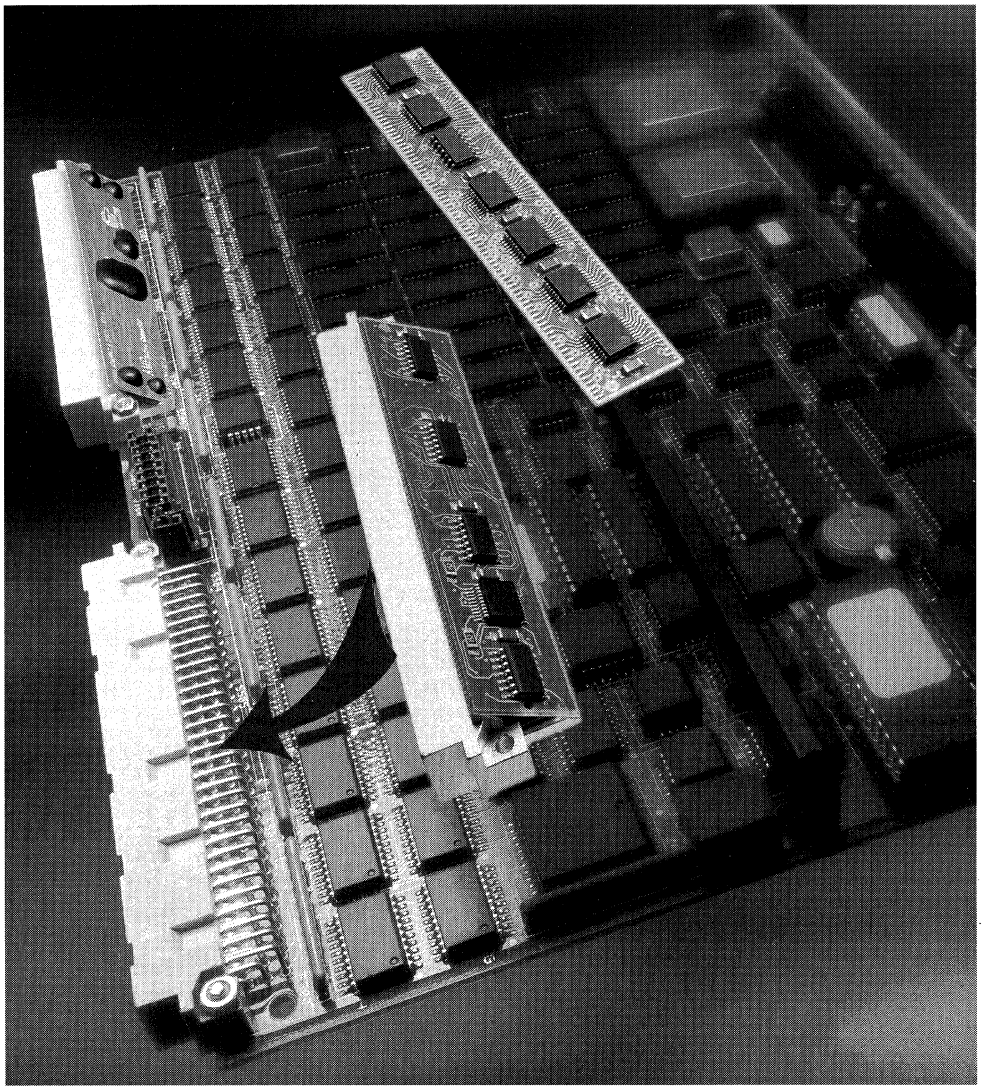
SOURCE: Catalog 65069

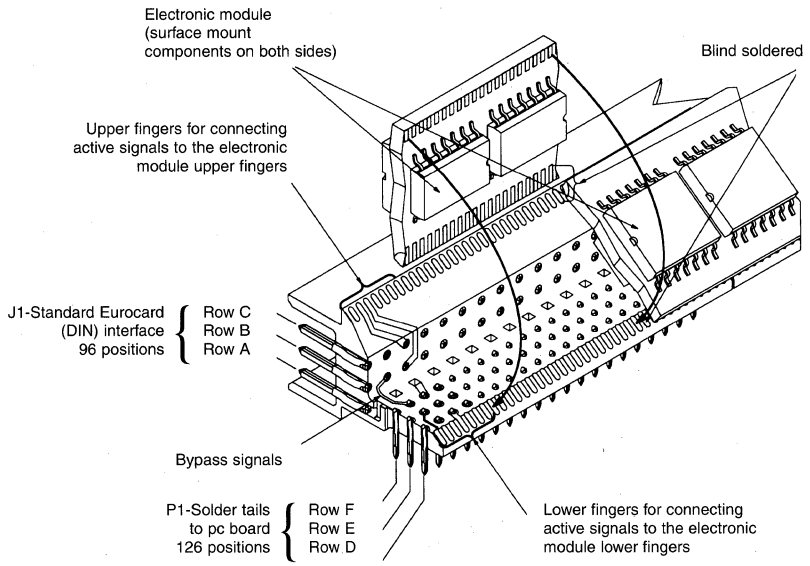
Specifications subject to change.
1-800-522-6752 Product Information Center/ AMP FAX Service
1-800-722-1111 Tooling/Technical Assistance Center

ACTIVE + DIN Connector

Product Facts

- Compatible with all Eurocard Type C (DIN) backplane receptacles used worldwide for VMEbus, Multibus II, and many other proprietary applications
- Bus-related circuitry can be included in virtually the same area as a passive connector, freeing space on the module card for other functions
- Options to meet specific shielding/grounding needs include connector-shroud shielding to reduce emissions and crosstalk
- Layout optimization by AMP, combined with chip-on-board placement and surface mount manufacturing, facilitates rapid completion of custom applications
- Active connectors are shipped fully assembled and functionally tested
- 96 male interface contacts to backplane, gold plated on a .100 [2.54] grid
- Daughtercard interface is 126-pin, through-hole technology, on a .075 x .075 [1.91 x 1.91] grid
- Compatible with all existing through-hole reflow technology





Note: Contact AMP for custom-designed, application-specific circuits to improve system performance.

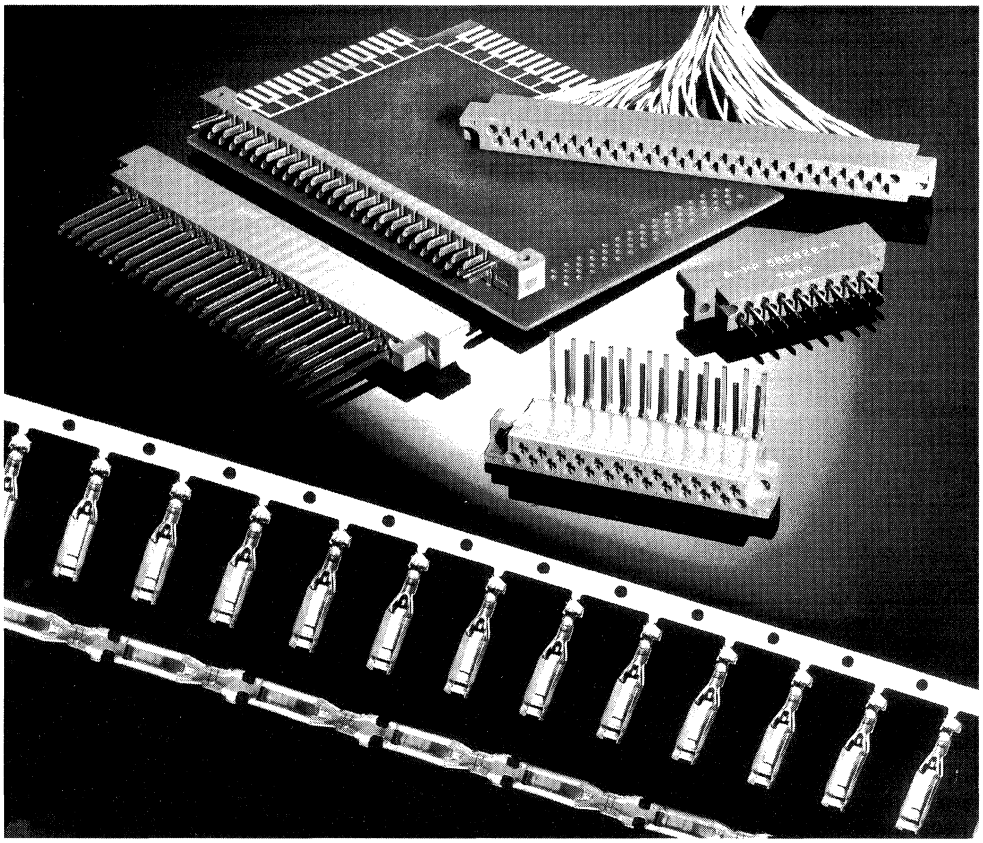
SOURCE: Catalog 124135

Specifications subject to change.

1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

AMP-BLADE Two-Piece Printed Circuit Edge Connectors (Wire-to-Board)



Product Facts

AMP-BLADE II Connectors

- Selective gold plating for economy with high performance
- Glass-filled polyester housing

AMP-BLADE and Military Connectors

- Full gold plating
- Diallyl phthalate housing rated from -65°C to 125°C
- 5 amps per contact
- Recognized under the Component Program of Underwriters Laboratories Inc., File No. E28476

For applications requiring the highest level of conductivity and reliability, AMP-BLADE Two-Piece Printed Circuit Edge Connectors meet all applicable performance requirements of MIL-C-21097 and design requirements of MIL-E-5400 for two-piece connectors.

The blade and receptacle design provides multiple areas of contact for maximum conductivity. Gold-over-nickel plating in critical mating areas of the contacts prevents metal migration and oxide build-up for additional reliability. Controlled insertion and extraction forces permit easy mating and unmating of connector assemblies.

A guide system prevents contact damage and provides positive alignment for reliable mating of connector halves.

The receptacle half of this two-piece connector accepts a variety of contact designs, but requires only that number of contacts which fulfills circuitry needs. Crimp snap-in contacts are available in loose-piece or, to further reduce installed costs, in strip form for application by high-speed, automatic compression-crimping equipment.

Post-type contacts are specifically designed for wiring AMP TERMI-POINT clips and tools. The connectors with post-type contacts also adapt to wrap-type terminations.

The split eyelet contact simplifies bus wiring by permitting wire to be easily snapped into the contact notch for soldering. Each contact accepts up to two 18 AWG [0.8 to 0.9 mm^2] stranded or solid wires. Standard solder-eyelet contacts accept up to two 18 AWG [0.8 to 0.9 mm^2] stranded or 16 AWG [1.25 to 1.4 mm^2] solid wires.

High reliability, versatility and speed of assembly are features which make the AMP-BLADE Two-Piece Printed Circuit Edge Connectors ideal for dense wiring in applications where rugged serviceability is a prime consideration.

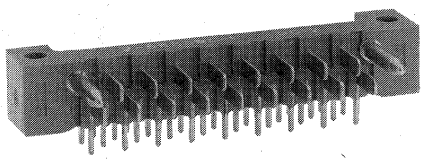
SOURCE: Catalog 82037

Specifications subject to change.

1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

Board-Half Housing Preloaded with Blade Type Contacts



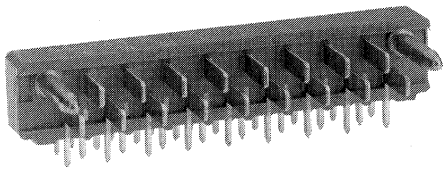
Housing with Mounting Holes

Mate with—Receptacle Housings, pages 3403 and 3404

Note: 17 Pos. Housing Dim. (Typ.)—2.390 [60.70] L x .415 [10.54] W x .400 [10.16] H

No. of Positions	Printed Circuit Board Thickness	Part Numbers			
		Commercial Type		Military Type CS	
		Diallyl Phthalate Housing Gold Plating Thickness		Diallyl Phthalate Housing	
		.000015 [0.00038]	.000030 [0.00076]	Military	AMP
17	1/16 [1.59]	1-582390-1	3-582152-1	21097/14-01	582843-2
	3/32 [2.38]	2-582390-1	6-582152-1	21097/14-02	1-582843-4
	1/8 [3.18]	3-582390-1	—	21097/14-03	2-582843-5
23	1/16 [1.59]	1-582390-2	3-582152-2	21097/14-04	582843-3
	3/32 [2.38]	2-582390-2	6-582152-2	21097/14-05	582843-1
	1/8 [3.18]	—	9-582152-2	21097/14-06	2-582843-6
29	1/16 [1.59]	1-582390-3	3-582152-3	21097/14-07	582843-4
	3/32 [2.38]	2-582390-3	6-582152-3	21097/14-08	1-582843-5
	1/8 [3.18]	—	9-582152-3	21097/14-09	2-582843-7
35	1/16 [1.59]	1-582390-4	3-582152-4	21097/14-10	582843-5
	3/32 [2.38]	2-582390-4	6-582152-4	21097/14-11	1-582843-6
	1/8 [3.18]	3-582390-4	—	21097/14-12	2-582843-8
41	1/16 [1.59]	1-582390-5	3-582152-5	21097/14-13	582843-6
	3/32 [2.38]	2-582390-5	6-582152-5	21098/14-14	1-582843-7
	1/8 [3.18]	3-582390-5	9-582152-5	21097/14-15	2-582843-9
47	1/16 [1.59]	1-582390-6	3-582308-1	21097/14-16	582843-7
	3/32 [2.38]	2-582390-6	6-582308-1	21097/14-17	1-582843-8
	1/8 [3.18]	3-582390-6	—	21097/14-18	3-582843-0

Notes: 1. Blade contacts (gold plated) are molded into housing in predetermined positions to mate with receptacle housing.
2. Connectors can be furnished with the two middle rows of tines removed to fit existing board hole patterns.



Housing without Mounting Holes

Mate with—Receptacle Housings, pages 3403 and 3404

Note: 17 Pos. Housing Dim. (Typ.)—2.070 [52.58] L x .415 [10.54] W x .400 [10.16] H

No. of Positions	Printed Circuit Board Thickness	Part Numbers			
		Commercial Type		Military Type CS	
		Diallyl Phthalate Housing Gold Plating Thickness		Diallyl Phthalate Housing	
		.000015 [0.00038]	.000030 [0.00076]	Military	AMP
17	1/16 [1.59]	4-582390-1	3-582152-6	21097/15-01	582843-8
	3/32 [2.38]	—	—	21097/15-02	1-582843-9
	1/8 [3.18]	—	—	21097/15-03	3-582843-1
23	1/16 [1.59]	4-582390-2	3-582152-7	21097/15-04	582843-9
	3/32 [2.38]	—	6-582152-7	21097/15-05	2-582843-0
	1/8 [3.18]	—	—	21097/15-06	3-582843-2
29	1/16 [1.59]	—	3-582152-8	21097/15-07	1-582843-0
	3/32 [2.38]	—	—	21097/15-08	2-582843-1
	1/8 [3.18]	—	—	21097/15-09	3-582843-3
35	1/16 [1.59]	4-582390-4	3-582152-9	21097/15-10	1-582843-1
	3/32 [2.38]	—	—	21097/15-11	2-582843-2
	1/8 [3.18]	—	9-582152-9	21097/15-12	3-582843-4
41	1/16 [1.59]	4-582390-5	3-582152-0	21097/15-13	1-582843-2
	3/32 [2.38]	—	6-582152-0	21097/15-14	2-582843-3
	1/8 [3.18]	—	—	21097/15-15	3-582843-5
47	1/16 [1.59]	—	3-582308-2	21097/15-16	1-582843-3
	3/32 [2.38]	—	6-582308-2	21097/15-17	2-582843-4
	1/8 [1.59]	—	—	21097/15-18	3-582843-6

Notes: 1. Blade contacts (gold plated) are molded into housing in predetermined positions to mate with receptacle housing.
2. Connectors can be furnished with the two middle rows of tines removed to fit existing board hole patterns.

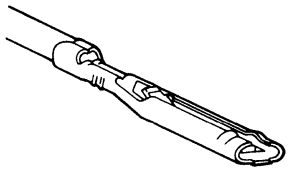
SOURCE: Catalog 82037

Specifications subject to change.

1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

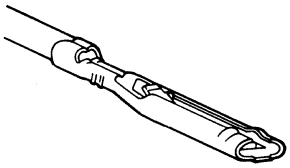
AMP-BLADE II Connector Snap-In Receptacle Contacts



Crimp, Snap-In Receptacle Contacts

Wire Range AWG	Wire Range mm²	Insulation Dia. Range	Gold Plating Thickness	Part Numbers Side Feed Strip	Part Numbers Loose Piece
24-20	0.2-0.5	**.040-.080** 1.02-2.03	**.000030** 0.00076	531586-3	531586-6
			.000050 0.00127	531586-4	—
28-24	0.09-0.2	**.030-.060** 0.76-1.52	**.000030** 0.00076	531587-3	531587-6
28-24	0.09-0.2	**.078** Special 1.98	**.000015** 0.00038	531588-2	531588-5
			.000030 0.00076	531588-3	531588-6
			.000050 0.00127	531588-4	531588-7
(1) 18 or (2) 20 or 22	0.8-0.9 or 0.3-0.6	**.067-.090** 1.70-2.28	**.000015** 0.00038	531589-2	—
			.000030 0.00076	531589-3	531589-6

Snap-In Receptacle Contacts



Wire Range AWG	Wire Range mm²	Insulation Dia. Range	Part Numbers Commercial Type End Feed Strip	Part Numbers Commercial Type Loose Piece	Part Numbers Military Type Military	Part Numbers Military Type End Feed Strip	Part Numbers Military Type Loose Piece
24-20	0.2-0.6	**.040-.080** 1.02-2.03	66005-2	66010-2	21097/16-03	66005-3	66010-3
28-24	0.08-0.2	**.030-.060** 0.76-1.52	66009-2	66011-2	21097/16-01	66009-3	66011-3
(2) 20 or (2) 22	0.183 or 0.643	**(2) .045** (2) 1.14 to **(2) .072** (2) 1.83	66021-2	66026-2	21097/16-04	66021-3	66026-3
18	0.8	**.067-.090** 1.70-2.29	66021-2	66026-2	21097/16-04	66021-3	66026-3
28-24	0.08-0.2	**.078** Spec. 1.98	66027-2	66029-2	21097/16-02	66027-3	66029-3

SOURCE: Catalog 82037

Specifications subject to change.

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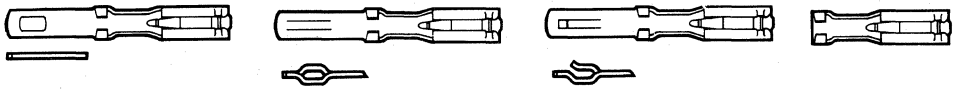
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

AMP-BLADE II Connector Snap-In Receptacle Contacts

(Continued)

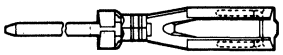


Type A | Type B | Type C | Type D

Solder-Tab Receptacle Contacts

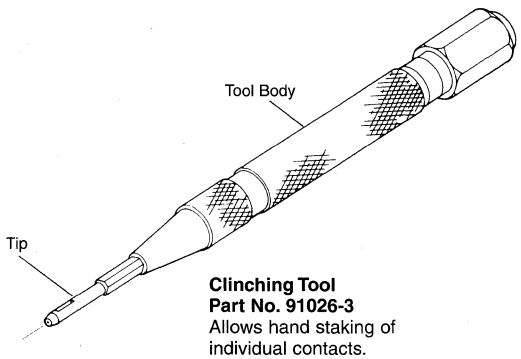
Type	Maximum Extension Beyond Back Face of Block	Part Numbers—Loose Piece		
		Commercial Type	Military Type	
		Gold Plating Thickness .000030 [0.00076] over .000030 [0.00076] Nickel	Gold Plating Thickness .000050 [0.00127] over .000030 [0.00076] Nickel	
			Military	AMP
A	**.390** 9.91	66086-2	—	—
B	**.375** 9.52	66086-3	—	—
C	**.375** 9.52	66086-4	—	—
D	None	—	21097/17-01	583211-1

Post-Type Receptacle Contacts

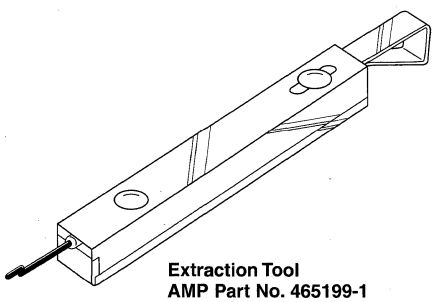


Post Length Extention From Rear of Housing	Gold Plating Thickness	Part Numbers	
		.031 x .062 [0.79 x 1.57] Posts	.045 x .045 [1.14 x 1.14] Posts
.370 9.40	**.000015** 0.00038	582652-1	—
	.000030 0.00076	1-582261-1	1-582364-1
.600 15.24	**.000015** 0.00038	582261-2	—
	.000030 0.00076	1-582261-2	1-582364-2
.770 19.56	**.000015** 0.00038	582652-3	—
	.000030 0.00076	1-582261-3	1-582364-3
1.000 25.40	**.000015** 0.00038	582652-4	—
	.000030 0.00076	1-582261-4	1-582364-4

Receptacle Contact Insertion/Extraction Tools



Clinching Tool
Part No. 91026-3
Allows hand staking of individual contacts.



Extraction Tool
AMP Part No. 465199-1
Military Part No. M21097/18-01

SOURCE: Catalog 82037

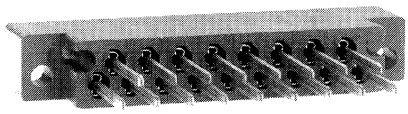
Specifications subject to change.

1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

Wire-Half Housing Assemblies and Housings

Preloaded Receptacle Housing Assemblies (for Crimp Contacts, TERMI-POINT Clip or Wrap-Type Post Contacts, Solder/Weld Contacts)



Material

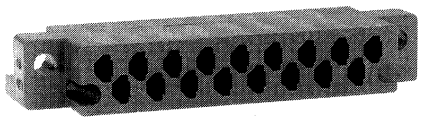
Housing—Diallyl Phthalate glass-filled polyester, green

Mate with—Board-Half Housings, page 3400

Note: 17 Pos. Housing Dim. (Typ.)—2.390 [60.71] L x .745 [18.92] W x .400 [10.16] H

No. of Pos.	Post Length		No. of Clip or Wrap-Type Terminations Per Post	Preloaded Receptacle Housing Part Numbers			
				.031 x .062 [0.79 x 1.57] Post Gold Plating Thickness		.045[2] [1.14 x 1.14] Post Gold Plating Thickness	
	in.	mm		.000015 [0.00038]	.000030 [0.00076]	.000015 [0.00038]	.000030 [0.00076]
17	.600	15.24	2	531592-3	—	—	—
	.370	9.40	1	531592-4	—	531916-4	—
23	.600	15.24	2	531592-7	3-531592-1	—	—
	.370	9.40	1	531592-8	—	—	—
29	.370	9.40	1	—	—	1-531916-2	—
35	.770	19.65	3	1-531592-4	—	1-531916-4	—
	.370	9.40	1	1-531592-6	—	—	—
41	1.000	25.40	4	1-531592-7	—	—	—
	.600	15.24	2	—	4-531592-3	—	—
	.370	9.40	1	2-531592-0	—	—	—
47	.770	19.65	3	—	—	—	2-531917-2
	.600	15.24	2	2-531592-3	—	—	—
	.370	9.40	1	—	4-531592-8	2-531916-4	2-531917-4

Preloaded Receptacle Housing Assemblies (for TERMI-POINT Clip or Wrap-Type Post Contacts) and Receptacle Housings (for Crimp or Solder Eyelet Type Contacts)



Material

Housing—Diallyl Phthalate

Mate with—Board-Half Housings, page 3400

Note: 17 Pos. Housing Dim. (Typ.)—2.390 [60.71] L x .745 [18.92] W x .400 [10.16] H

No. of Pos.	Post Length		No. of Clip or Wrap-Type Terminations Per Post	Part Numbers			
				Preloaded Receptacle Housing	Receptacle Housings for Crimp or Solder Eyelet Type Contacts*		
				.031 x .062 [0.79 x 1.57] Post Gold Plating Thickness	Commercial Type	Military Type CR-Receptacle	
	in.	mm		.000030 [0.00076]		Military	AMP
17	.370	9.40	1	582828-4	3-582151-1	21097/13-01	5-582151-1
23	.770	19.65	3	582829-2	3-582151-2	21097/13-02	5-582151-2
29	1.000	25.40	4	582830-1	3-582151-3	21097/13-03	5-582151-3
	.770	19.65	3	582830-2			
	.370	9.40	1	582830-4			
35	1.000	25.40	4	582831-1	3-582151-4	21097/13-04	5-582151-4
	.770	19.65	3	582831-2			
	.600	15.24	2	582831-3			
	.370	9.40	1	582831-4			
41	.770	19.65	3	582832-2	3-582151-5	21097/13-05	5-582151-5
	.600	15.24	2	582832-3			
	.370	9.40	1	582832-4			
47	1.000	25.4	4	582819-1	3-582307-1	21097/13-06	5-582307-1
	.770	19.65	3	582819-2			
	.600	15.24	2	582819-3			
	.370	9.40	1	582819-4			

*Order contacts separately. See pages 3401 and 3402.

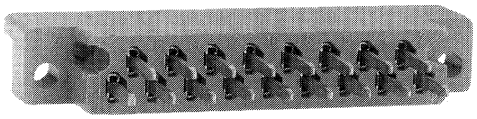
SOURCE: Catalog 82037

Specifications subject to change.

1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

Receptacle Housings for Crimp, Snap-In Contacts



Material

Housing—Glass-filled polyester, green

Mate with—Board-Half Housings, See page 3400

No. of Pos.	Part Numbers*
17	531590-1
23	531590-2
29	531590-3
35	531590-4
41	531590-5
47	531590-6

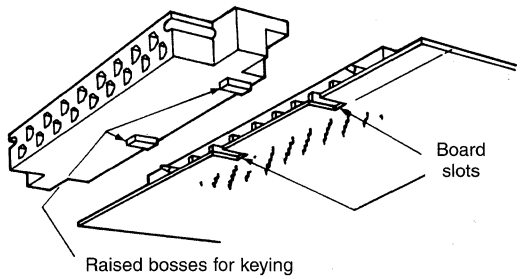
*Order contacts separately. See page 3401.

Connector Keying

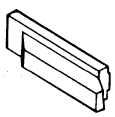
External Bosses

Polarization of connector halves is provided by permanent guide pins in blade contact housing.

Keying can be provided by means of external bosses. Order bosses for external keying by ordering standard part number receptacle and specify which odd-numbered positions should be provided with bosses.



Keying Plugs

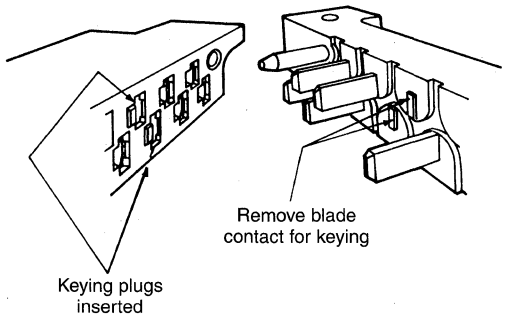


Material—Nylon

AMP Part Number 1-582156-9

Military Part Number 21097/11-07

Keying of the connector can be achieved by plugging receptacle cavities. Insert keying plug into mating side of receptacle housing cavity. Remove corresponding blade contact from blade housing using tool **Part Number 811145-1**.

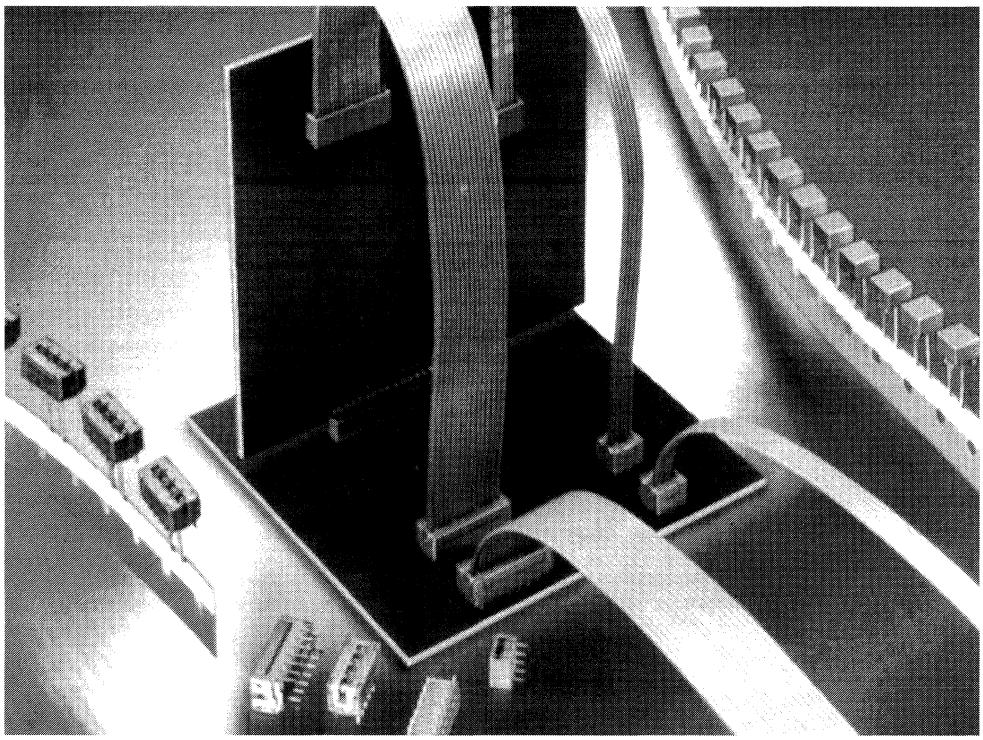


SOURCE: Catalog 82037

METRIC

AMP Super Trap Connectors 1.25 mm [.049] Centerline

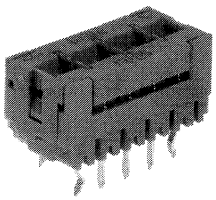
Cable-to-Board Connectors

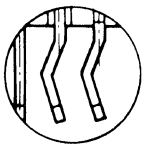


Product Facts

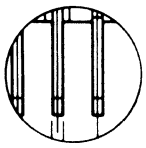
- Connector for terminating 1.25 mm [.049] 26 AWG ribbon cable to the printed circuit board
- Available in two styles—vertical and horizontal mounting
- Radial tape-mounted for high-speed automatic packaging
- Loose-piece connector features post with kink which secures connector on Pc board until it is soldered
- Low profile
- Available in 4 through 15 positions

Vertical Mounting Type





With Kink Post

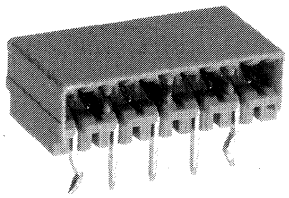


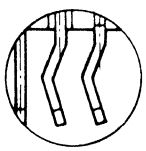
Without Kink Post

Note: 10 Pos. Housing Dim. (Typ.)— 14.85 [.585] L x 7.3 [.287] W x 7.0 [.276] H

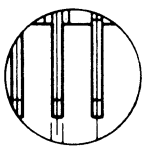
No. of Positions	Part Numbers	
	With Kink Post	Without Kink Post
	Loose Piece	Radial Tape Mounted (Qty.)
4	5-176746-4	5-176433-4 (1,000)
5	5-176746-5	5-176433-5 (1,000)
6	5-176746-6	5-176433-6 (1,000)
7	5-176746-7	5-176433-7 (500)
8	5-176746-8	5-176433-8 (500)
9	5-176746-9	5-176433-9 (500)
10	6-176746-0	6-176433-0 (500)
11	6-176746-1	6-176433-1 (500)
12	6-176746-2	6-176433-2 (500)
13	6-176746-3	6-176433-3 (500)
14	6-176746-4	6-176433-4 (500)
15	6-176746-5	6-176433-5 (500)

Horizontal Mounting Type





With Kink Post



Without Kink Post

Note: 10 Pos. Housing DIm. (Typ.)— 13.85 [.545] L x 7.3 [.287] W x 4.5 [.177] H

No. of Positions	Part Numbers	
	With Kink Post	Without Kink Post
	Loose Piece	Radial Tape Mounted (Qty.)
4	5-176927-4	5-176929-4 (1,000)
5	5-176927-5	5-176929-5 (1,000)
6	5-176927-6	5-176929-6 (1,000)
7	5-176927-7	5-176929-7 (500)
8	5-176927-8	5-176929-8 (500)
9	5-176927-9	5-176929-9 (500)
10	6-176927-0	6-176929-0 (500)
11	6-176927-1	6-176929-1 (500)
12	6-176927-2	6-176929-2 (500)
13	6-176927-3	6-176929-3 (500)
14	6-176927-4	6-176929-4 (500)
15	6-176927-5	6-176929-5 (500)

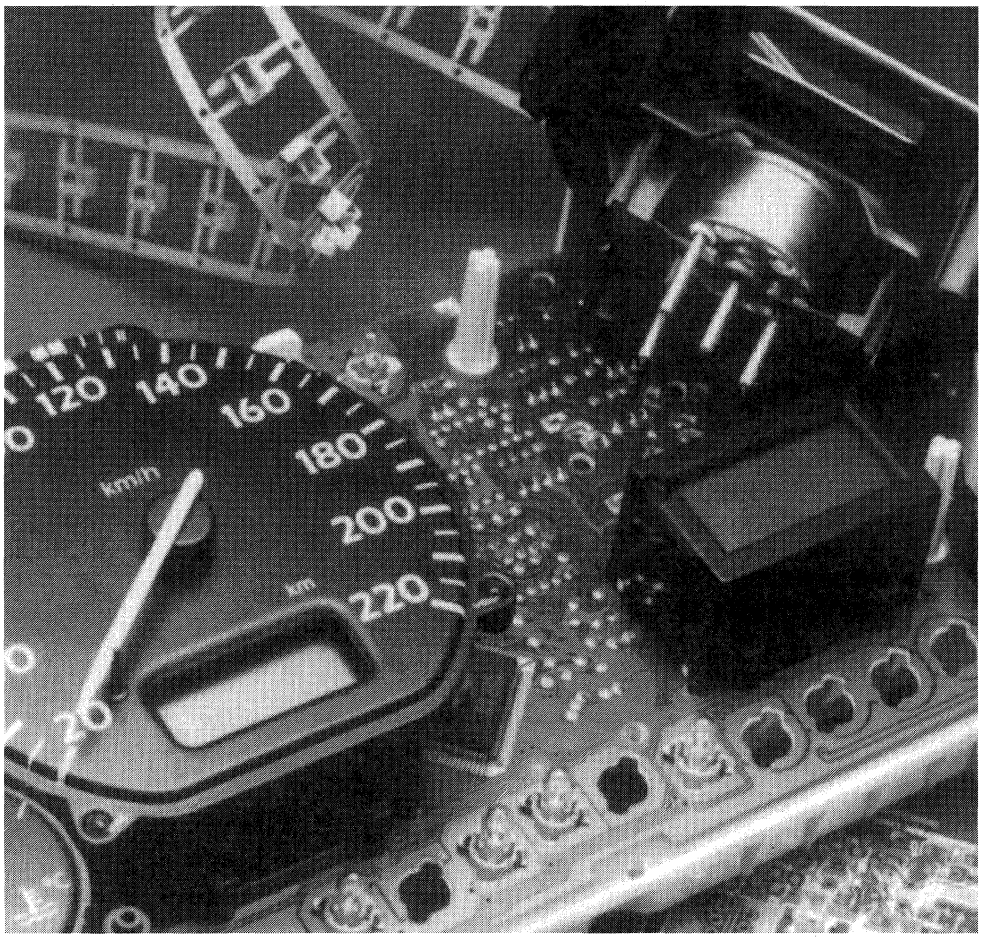
SOURCE: Catalog 124962

Specifications subject to change.

1-800-522-6752
Product Information Center/ AMP FAX Service

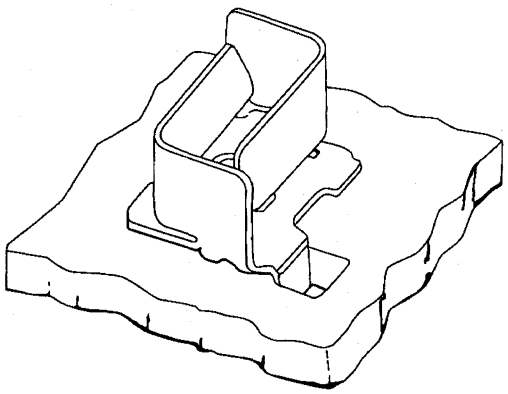
1-800-722-1111
Tooling/Technical Assistance Center

Printed Circuit Board (PCB) Pin Receptacles



Product Facts

- Components with pin contact can be easily inserted into the printed circuit board after the pin receptacles are flow soldered
- The receptacles hold the pins from the components without the necessity of soldering
- Components can be easily removed from the printed circuit board for replacement or repair
- Components with pin contacts may be mated and unmated ten times
- The receptacle contacts are securely clinched to the printed circuit board prior to soldering
- The receptacles are machine applied by semiautomatic and automatic insertion equipment
- Components may be inserted from either side of the printed circuit board

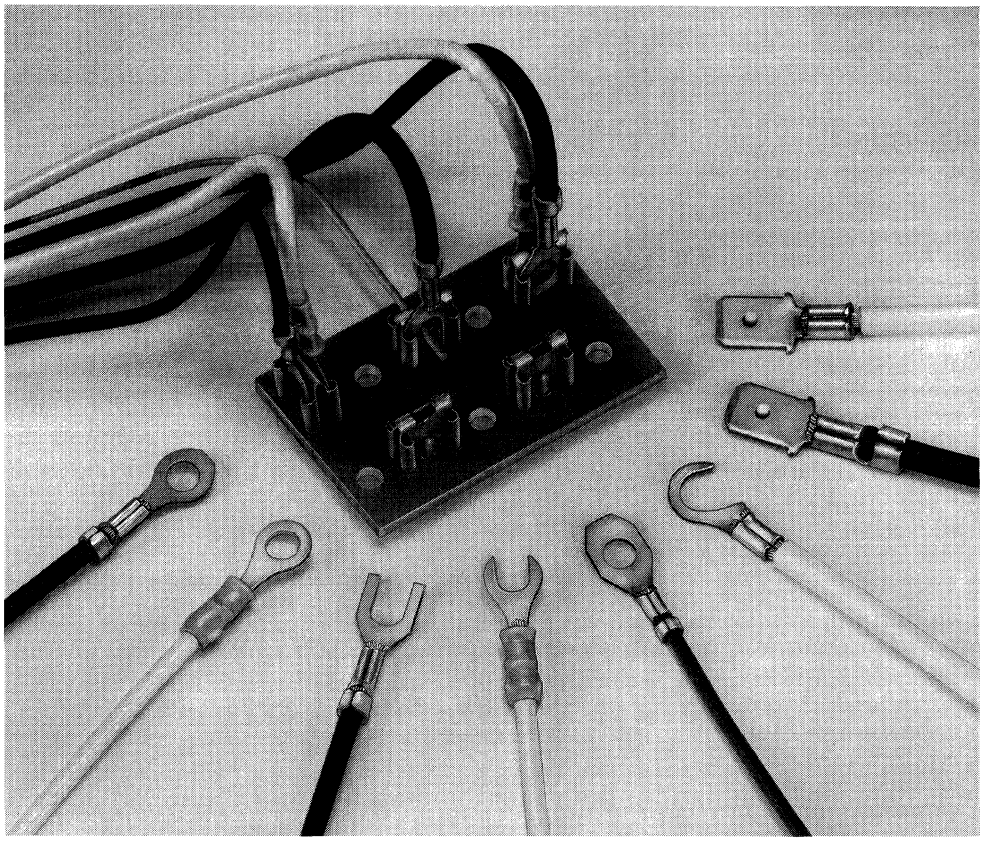


Mating Pin Dia.	Pcb Thickness	Material and Finish	Part Numbers	
			Receptacle	Insertion Head[1]
.088-.093 [2.24-2.36]	**.063-.079** [1.60-2.01]	Phos. Brz., Pre-Tin	63566-1	853439-2
.098 [2.49]	**.063-.079** [1.60-2.01]	Phos. Brz., Pre-Tin	63572-1	853439-3

[1] For use with either AMP FHIS Bench Machine **Part No. 464300-1** or AMP Comp-U-Sertor II Machine **Part No. 122300-1**.

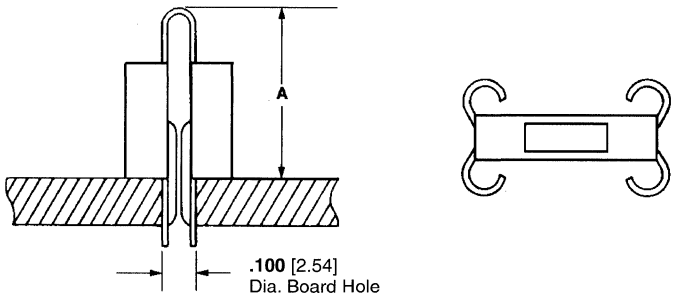
SOURCE: Catalog 82159

Printed Circuit Board (PCB) Receptacles



Product Facts

- Receptacles accept all .250 [6.35] x .016 [0.41] thick terminal configurations
- Receptacles available for .250 [6.35] x .032 [0.81] thick FASTON tab terminals
- Receptacles available for termination of 24-22 AWG [0.2-0.4 mm²] solid wire
- Available in tin-plated brass
- No tooling needed to insert or remove terminals
- Continuous strip contacts allow high speed application with single or multiple-head insertion machines
- An economical means of retrofitting and field replacing wire-to-board connections



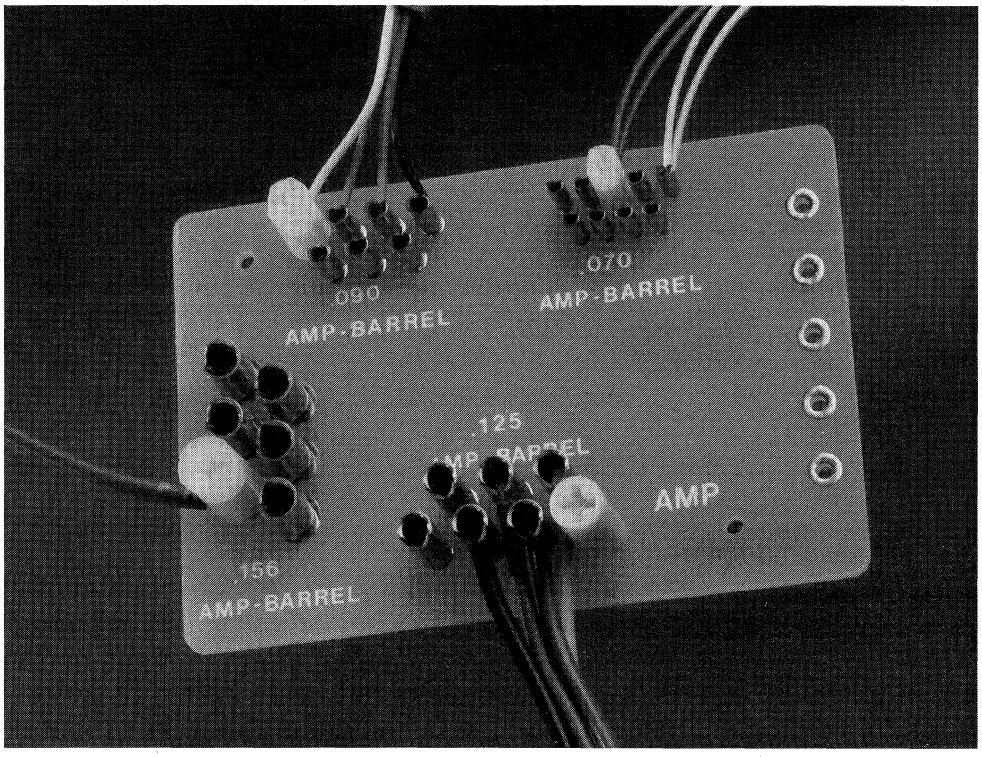
Accepts	Dimension A	Part Numbers				
		Strip Form			Loose Form	
		Receptacle	Insertion Head[2]	Inserter Applicator[3]	Receptacle	Insertion Tool
.250 x .016 [6.35 x 0.41] Terminals	**.290** 7.37	62745-1	813961-1	—	62806-1	274251-1
		62111-2	—	467322-1		
		62751-1[4]	—	467322-2		
.250 x .016 [6.35 x 0.41] Terminals and 24-22 AWG [0.2-0.4 mm²] Solid Wire	**.290** 7.37	62199-2	—	467322-1	—	—
.250 x .032 [6.35 x 0.81] FASTON Tab Terminals	**.390** 9.91	62172-2[1]	—	466109-1	—	—

[1] For .123 ± .002 [3.12 ± 0.05] board hole only.
[2] For use with either AMP FHIS Bench Machine **Part No. 464300-1** or AMP Comp-U-Sertor II Machine **Part No. 122300-1**.
[3] For use with AMP "U" Frame Machine **Part No. 691679-1**.
[4] With clinchable pcb tabs.

SOURCE: Catalog 82159

Specifications subject to change.
1-800-522-6752 Product Information Center/ AMP FAX Service
1-800-722-1111 Tooling/Technical Assistance Center

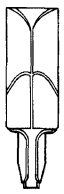
AMP-BARREL Terminals



Product Facts

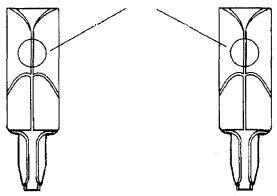
- Unique insulation displacement technology
- Eliminates wire preparation—no stripping or soldering
- Capable of being wave-soldered to pc board with other components, enabling wires to be terminated at a more conducive time and location
- Anti-solder wicking design
- Accepts a wide range of wire sizes, solid or stranded
- Available in single and two-wire version
- Reusable terminal
- Available in loose-piece or strip version
- Semiautomatic insertion machine for strip version
- Simple, rugged low cost wire insertion tool
- Recognized under the Component Program of Underwriters Laboratories Inc., File E28476

.070 [1.78] and .090 [2.29] Terminals



.125 [3.18] Terminals

See Detail A

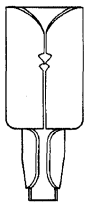


Standard with Wire Cutoff Feature

Detail A

with Insulation Cutting Feature in Wire Slot

.156 [3.96] Terminals



Terminal Size	Conductor (solid or stranded)				Pc Board		Material and Finish	Part Numbers	
	Wire Size Range		Max. Ins. O.D.	Wire per Terminal	Thickness Range	Mounting Hole Dia.		Loose Piece	Strip
	AWG	mm²							
.070 [1.78]	28-26	0.08-0.15	**.036** [0.91]	1 or 2	**.047-.062** [1.19-1.57]	**.035-.040** [0.89-1.02]	Phos. Brz., Pre-Tin	553015-1	553015-2
.090 [2.29]	28-22	0.08-0.4	**.053** [1.35]	1 or 2	**.047-.094** [1.19-2.39]	**.050-.054** [1.27-1.37]		552967-1	552967-2
.125 [3.18] Standard	28-18	0.08-0.8	**.086** [2.18]	1 or 2	**.062-.094** [1.57-2.39]	**.061-.065** [1.55-1.65]	Phos. Brz., Pre-Tin	552699-1*	—
					.062-.125 [1.57-3.18]	**.061-.065** [1.55-1.65]		—	552699-2*
					.062-.094 [1.57-2.39]	**.061-.065** [1.55-1.65]		552699-4	—
					.062-.125 [1.57-3.18]	**.061-.065** [1.55-1.65]		—	552699-5
.125 [3.18] With wire cutoff features	28-18	0.08-0.8	**.086** [2.18]	1 or 2	**.062-.094** [1.57-2.39]	**.061-.065** [1.55-1.65]	Phos. Brz., Pre-Tin	554935-1*	—
					.062-.094 [1.57-2.39]	**.061-.065** [1.55-1.65]		—	554935-2*
					.062-.094 [1.57-2.39]	**.061-.065** [1.55-1.65]		554935-3	—
					.062-.094 [1.57-2.39]	**.061-.065** [1.55-1.65]		—	554935-4
.156 [3.96]	24-18	0.2-0.8	**.115** [2.92]	1	**.062-.094** [1.57-2.39]	**.078-.082** [1.98-2.08]	Brass, Tin	552770-1	552770-2

*Has tough insulation cutting feature in wire slot (see Detail A in illustration). These barrels are not recommended for smaller standard wires.

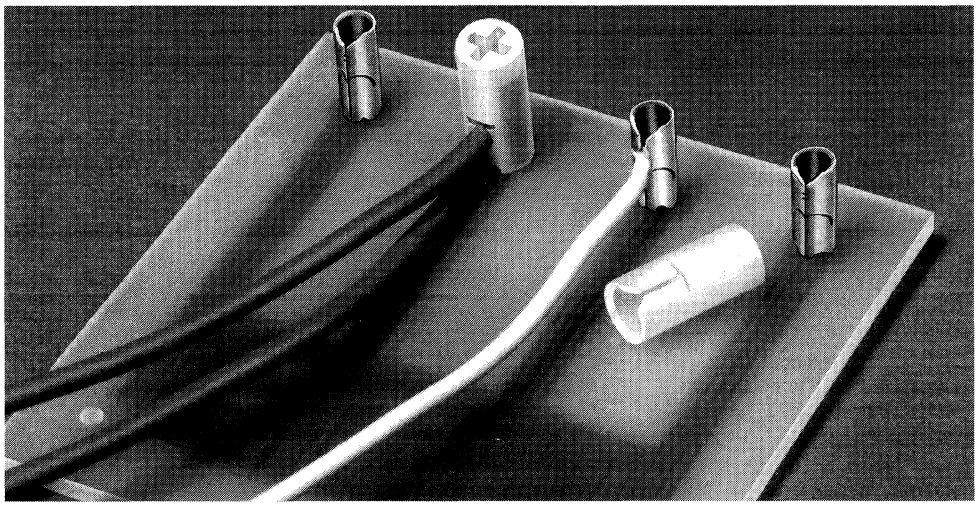
Notes: 1. .070 [1.78] and .090 [2.29] terminals accept two wires of the same gage and type.
2. The .125 [3.18] terminal accepts two wires of the same type that may vary in size by one wire gage.
3. .070 [1.78] and .090 [2.29] terminals have a solder resist material on the inside of barrel which prevents solder wicking.

SOURCE: Catalog 82159

AMP-BARREL Terminals
(Continued)

Wire Stuffer Cap

Product Facts
- Insulates
- Provides strain relief
- Acts as field service repair tool

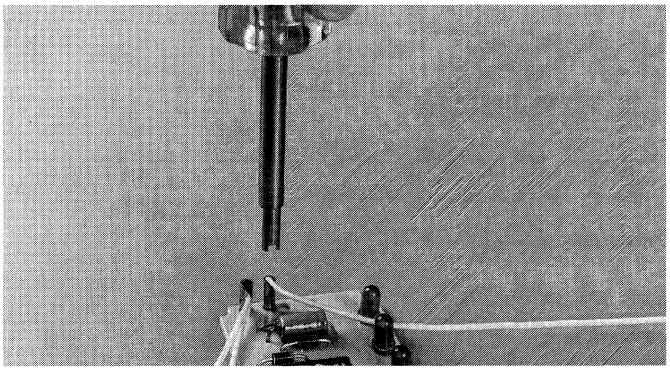


Wire Size Range AWG	Wire Size Range mm²	Color	For Use With Terminal No.	Wire Stuffer Cap Part No.
28-26	0.08-0.15	Natural	553015	553593-1
28-22	0.08-0.4	Natural	552967	553594-1
22-18	0.4-0.8	Yellow	552699	230707-1
28-24	0.08-0.2	Natural	552699	230707-3
24-18	0.2-0.8	Natural	552770	553595-1

Wire Insertion Tool

Precut, unstripped wires are easily terminated in the AMP-BARREL Terminal with a simple screwdriver type tool. It properly positions the wire to the correct depth in the terminal. For two wire applications, the second wire pushes the first wire into the lower section of the terminal.

Auxiliary Handle
Part No. 231279-1



Wire Size Range AWG	Wire Size Range mm²	Color Code on Tool Shaft	For use with Terminal No.	Wire Insertion Tool Nos.
22-18	0.4-0.8	Yellow	552699-1, 552699-2 552699-4, 552699-5	552714-1
24-18	0.2-0.8	Red	552770-1 and 552770-2	552714-2
28-24	0.08-0.2	White	552699-1, 552699-2 552699-4, 552699-5	552714-3
28-22	0.08-0.4	Blue	552967-1 and 552967-2	552714-4
28-26	0.08-0.15	Green	553015-1 and 553015-2	552714-5
22-26	0.4-0.15	None	554935-2 and 554935-4	231890-1

Manual Pin Insertion Kit

Kit Part No. 230549-3
for .070 [1.78] AMP-BARREL Terminal Part No. 553015-1

Kit Part No. 230549-4
for .090 [2.29] AMP-BARREL Terminal Part No. 552967-1

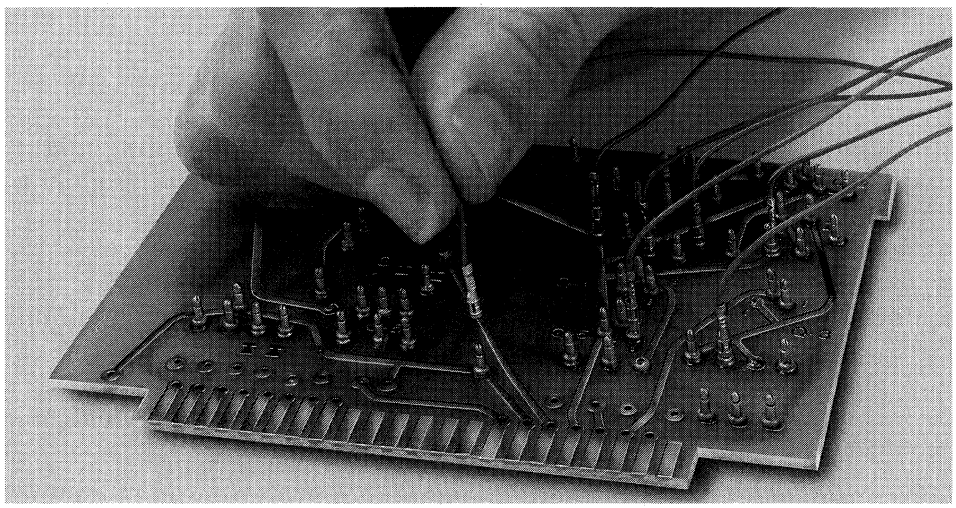
Kit Part No. 230549-1
for .125 [3.18] AMP-BARREL Terminal Part Nos. 552699-1 and 552699-4

Kit Part No. 230549-2
for .156 [3.96] AMP-BARREL Terminal Part No. 552770-1

SOURCE: Catalog 82159

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

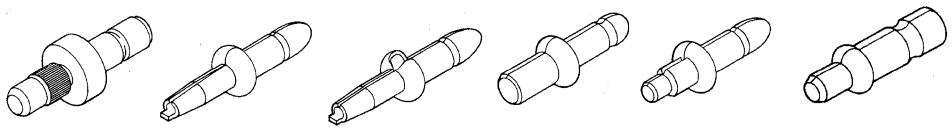
Printed Circuit Board Disconnects



Product Facts

- Quick connect or disconnect
- Automatic or semiautomatic application of strip form receptacles to wire
- Receptacles for wire size range 28 AWG thru 17 AWG [0.09 mm² thru 1.04 mm²] and tinsel wire
- Automatic or semiautomatic insertion of strip form pins to printed circuit boards
- Solid or formed pins, single or double-sided printed circuit board capability
- Choice of materials and platings

Solid and Formed Pins



Type A Type B Type C Type D Type E Type F

.058 [1.47] Diameter Solid Pins

Type	Hole Dia.	Pc Board Thickness	Material and Finish	Part Numbers Loose Piece	Insertion Tool Part No.
A	.062-.059 [1.57-1.50]	.063 [1.6]	Brass, Tin	60599-1	689141-1
			Brass, Sel. Gold	60599-3	
		.125 [3.18]	Brass, Tin	60753-2	
			Brass, .000030 Gold	60753-3	
		.0312 [.792]	Brass, Tin	60839-1	

.058 [1.47] Diameter Formed Pins

Type	Hole Dia.	Pc Board Thickness	Material and Finish	Part Numbers Strip	Part Numbers Loose Piece	Part Numbers Pin Insertion Machine	Insertion Tool Part No.
B	.050-.046 [1.27-1.17]	.0625 or .0937 [1.59 or 2.38]	Phos. Brz., Pre-Tin	60802-2	60803-2	453973-2	689141-1
			Phos. Brz., Gold[1]	60802-1	60803-1	453973-2	
			Phos. Brz., Pre-Tin	350030-1	—	453973-5	
	.062-.058 [1.57-1.47]	.0625 or .0937 [1.59 or 2.38]	Phos. Brz., Pre-Tin	60809-1	60874-1	453973-2	
			Brass, Pre-Tin	171236-1	171255-1	—	
			Phos. Brz., Gold[1]	60809-2	60874-2	453973-2	
			Phos. Brz., Tin	60809-4	—	453973-2	
	.070-.066 [1.78-1.68]	.0625 or .0937 [1.59 or 2.38]	Phos. Brz., Pre-Tin	60813-1	61018-1	453973-2	
C	.050-.046 [1.27-1.17]	.0625 or .0937 [1.59 or 2.38]	Phos. Brz., Gold[2]	61038-1	61067-1	453973-8	689141-1
D	.073-.067 [1.85-1.70]	.0625 [1.59]	Phos. Brz., Pre-Tin	60824-1	61097-1	453973-6	689141-1
			Phos. Brz., Gold[1]	60824-2	61097-2	453973-6	
	.050-.046 [1.27-1.17]	.0625 [1.59]	Phos. Brz., Gold[2]	640967-2	—	1-453973-7	
E	.061-.055 [1.55-1.40]	.047 [1.19]	Phos. Brz., Pre-Tin	641944-1	—	—	689141-1
		.0625 [1.59]	Phos. Brz., Pre-Tin	60973-1	640394-1	453973-1	
			Phos. Brz., Gold[1]	60973-2	—	453973-1	

Note: All formed pins are made from .010 [0.25] thick material.
[1].000030 [0.00076] gold plated
[2].000030 [0.00076] gold plated in disconnect area

.093 [2.36] Diameter Formed Pins

Type	Hole Dia.	Pc Board Thickness	Material and Finish	Part Numbers Strip	Part Numbers Loose Piece	Pin Insertion Machine Part No.
F	.073-.067 [1.85-1.70]	.0625 [1.59]	Phos. Brz., Pre-Tin	61137-1*	350491-1	453973-3

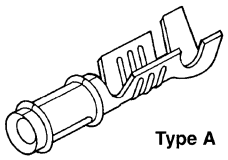
*Can also use AMP Comp-U-Sertor II Machine **Part No. 122300-1**, Insertion Head **Part No. 804908-3.**

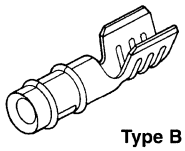
SOURCE: Catalog 82159

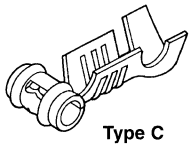
Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

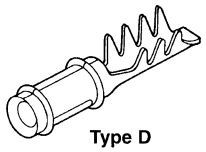
Printed Circuit Board Disconnects
(Continued)

Receptacles


Type A


Type B


Type C


Type D

.058 [1.47] Diameter

Type	Wire Size Range AWG	Wire Size Range mm²	Insulation Diameter	Material and Finish	Part Numbers Strip Form[3]	Part Numbers Loose Form	Hand Tool Part No.	Insertion Tool Part No.
A	28-26	0.08-0.15	**.035-.045** [0.89-1.14]	Phos. Brz., Pre-Tin	60354-7	—	—	
A	26-22	0.15-0.4	**.035-.065** [0.89-1.65]	Phos. Brz., Gold[1]	60888-2	60983-1	90131-4	452383-1
				Phos. Brz., Pre-Tin	60888-1	60983-2		
				Be Cu, Tin	60888-3	60983-4		
				Be Cu, Gold[1]	60888-4	60983-3		
A	26-22	0.15-0.4	**.035-.065** [0.89-1.65]	Be Cu, Gold[1]	61160-4[4]	—	—	
A	26-20	0.15-0.6	**.040-.110** [1.02-2.79]	Be Cu, Tin	350196-1[5]	—	—	452383-2
A	24-20	0.2-0.6	**.045-.070** [1.14-1.78]	Phos. Brz., Pre-Tin	60598-3	60789-1	90204-4	452383-1
				Be Cu, Tin	60598-4	60789-2		
A	24-20	0.2-0.6	**.045-.070** [1.14-1.78]	Phos. Brz., Gold	60598-7	60789-3		
				Be Cu, Gold[2]	60598-9	60789-8		
				Phos. Brz., Gold[2]	1-60598-0	—		
A	24-20	0.2-0.6	**.047-.070** [1.2-1.78]	Phos. Brz., Pre-Tin	170136-2	170137-1		
A	24-20	0.2-0.6	**.060-.090** [1.52-2.29]	Phos. Brz. Pre-Tin	60940-1	60986-1	90221-2	452383-2
				Phos. Brz., Gold[1]	60940-3	—		
				Be Cu, Tin	60940-2			
				Be Cu, Gold[1]	60940-4	—		
B	22-17	0.4-1.0	—	Be Cu, Tin	640259-1	640024-1	90314-1	—
C	26-22	0.15-0.4	**.035-.065** [0.89-1.65]	Be Cu, Gold[2]	61513-1	350189-2	90131-4	
				Phos. Brz., Pre-Tin	61513-2	350189-1		
C	24-20	0.2-0.6	**.045-.070** [1.14-1.78]	Be Cu, Gold[2]	61119-1	61276-1	90204-4	453850-1
				Phos. Brz., Pre-Tin	61119-2	61276-2		
				Be Cu, Tin	61119-3	61276-3		
C	24-20	0.2-0.6	**.040-.100** [1.02-2.54]	Phos. Brz., Pre-Tin	61323-1[5]	—	90224-1	
				Be Cu, Tin	61323-2[5]	—		
D	Tinsel Wire		**.030-.040** [0.76-1.02]	Phos. Brz., Pre-Tin	350393-1	—	—	453850-1

.065 [1.65] Diameter

Type	Wire Size Range AWG	Wire Size Range mm²	Insulation Diameter	Material and Finish	Part Numbers Strip Form	Part Numbers Loose Form	Hand Tool Part No.	Insertion Tool Part No.
C	24-20	0.2-0.6	**.045-.070** [1.14-1.78]	Phos. Brz., Pre-Tin	61451-2	—	—	—

.093 [2.36] Diameter

Type	Wire Size Range AWG	Wire Size Range mm²	Insulation Diameter	Material and Finish	Part Numbers Strip Form	Part Numbers Loose Form	Hand Tool Part No.	Insertion Tool Part No.
A	28-26	0.08-0.15	**.032-.057** [0.81-1.45]	Phos. Brz., Tin	350221-1	—	—	452383-1
A	22-18	0.4-0.8	**.060-.110** [1.52-2.79]	Phos. Brz., Tin	61291-1	61260-1	90135-2	452383-3
				Be Cu, Tin	61291-2	—		

Note: Part Numbers 61160-4, 350221-1, 61291-1, 61291-2 and 61260-1 are made from .012 [.30] thick material. All other receptacles are made from .010 [.25] thick material.
[1].000030 [0.00076] gold plated
[2].000015 [0.00038] gold plated
[3]Machine applied; applicator required. For machine and applicator part numbers, call AMP.
[4]These receptacles have plain receptacle barrels—no embossments, slots or detents.
[5]These receptacles have an overlap insulation crimp.

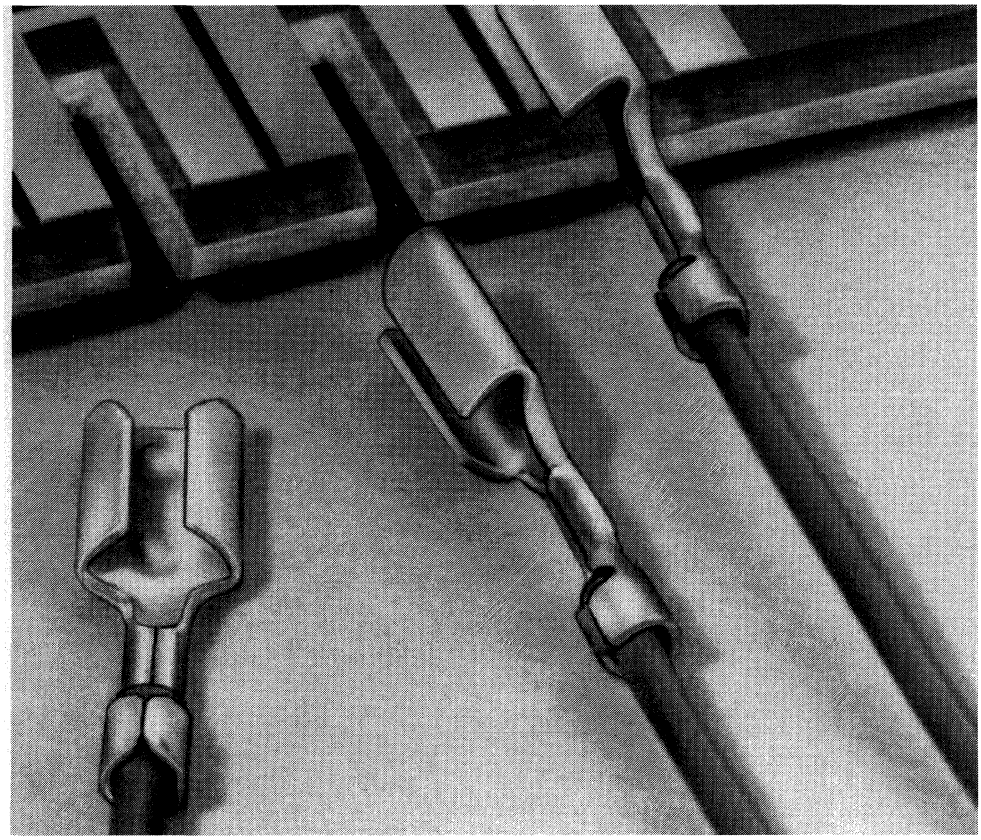
SOURCE: Catalog 82159

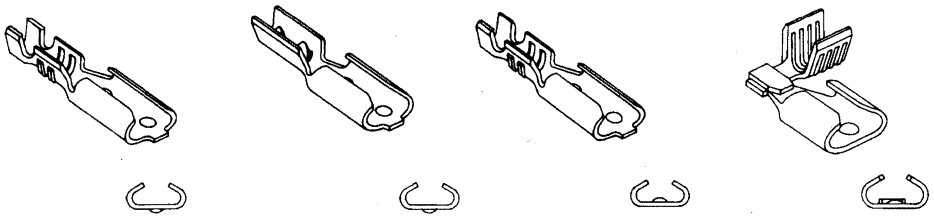
Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

AMP EDGE Single Lead Printed Circuit Terminals

Product Facts

- Friction fitting, quick connect/disconnects—no insertion or extraction tools required
- Excellent vibration and shock resistance
- Accepts wire size range 32-16 AWG
- Wide choice of materials and finishes
- Terminal sizes accommodate .040 [1.02], .047 [1.2], .062 [1.57] and .093 [2.36] thick boards
- Precision hand tool crimped or high-speed machine terminated for volume production at lowest installed cost





Type A Type B Type D Type E

Type	Wire Size Range AWG	Wire Size Range mm²	Material	Finish	Stock Thk.	Wire Ins. Dia.	Board Thk.	Strip Form Part Numbers[8]
A	32-24	0.03-0.2	Phos. Brz.	Tin	**.010** [0.25]	**.020-.050** [0.51-1.27]	**.062** [1.57]	61389-2[1]
A	30-22	0.05-0.4	Phos. Brz.	Tin	**.010** [0.25]	**.075** [1.91]	**.062** [1.57]	61455-2[1]
A	22-20	0.4-0.6	Phos. Brz.	Tin	**.010** [0.25]	**.075** [1.91]	**.062** [1.57]	42263-7[1]
B	—	—	Brass	Tin	**.010** [0.25]	**.045-.060** [1.14-1.52]	**.062** [1.57]	60606-1[1]
D	22-20	0.4-0.6	Brass	None	**.010** [0.25]	**.080-.100** [2.03-2.54]	**.062** [1.57]	60002-1[3]
D	22-18	0.4-0.8	Phos. Brz.	Tin	**.010** [0.25]	**.080-.100** [2.03-2.54]	**.062** [1.57]	61561-2[3]
D	22-18	0.4-0.8	Brass	Tin	**.016** [0.41]	**.080-.100** [2.03-2.54]	**.062** [1.57]	60156-2[4]
D	22-18	0.4-0.8	Brass	Tin	**.016** [0.41]	**.080-.100** [2.03-2.54]	**.062** [1.57]	60704-1[5]
E	22-16	0.4-1.4	Brass	Tin	**.012** [0.30]	—	**.062** [1.57]	61782-1[6]
E	22-16	0.4-1.4	Brass	Tin	**.012** [0.30]	—	**.062** [1.57]	61782-2[7]

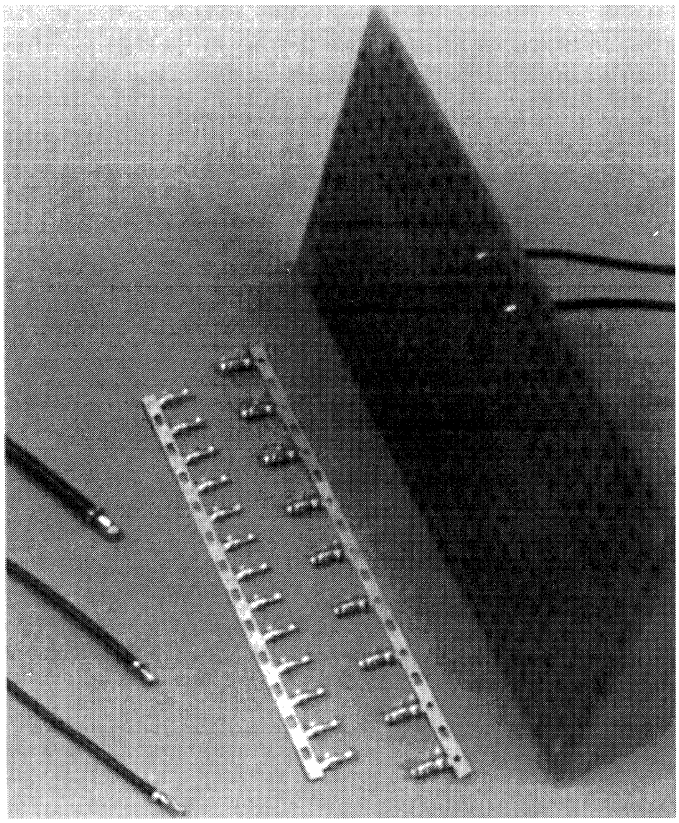
[1](2) dimples outside (.010 [0.25] high)
[3](2) dimples inside (.020 [0.51] high)
[4](2) dimples inside (.014 [0.36] high)
[5](2) dimples inside (.005 [0.13] high)
[6](2) dimples inside (.023 [0.58] high)
[7](2) dimples inside (.023 [0.58] high), reverse reeled
[8]Machine applied; applicator required. For machine and applicator part numbers, call AMP.

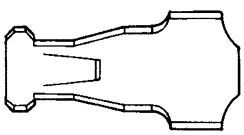
SOURCE: Catalog 82159

Miniature AMP-IN Terminals

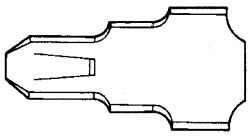
Product Facts

- Eliminates manual preparation of wires prior to soldering into pc boards
- Low applied cost
- Total height above pc board is less than most other components
- Available for 26-22 AWG, 22-18 AWG and 18-14 AWG wire ranges
- Terminal locking lance holds wire in pc board for flow soldering
- Design allows both wire and terminal to be soldered and assures proper solder flow
- Insulation support provides strain relief for wire and protection of solder joint
- Type D terminal offers minimum below pc board length

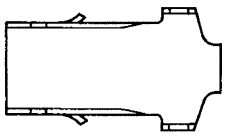




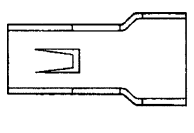
Type A



Type B



Type C



Type D

Type	Wire Size Range AWG	Wire Size Range mm²	Wire Insulation Diameter	Board Hole Diameter	Extension Below Board (Ref.)	Strip Form Terminal Part Nos.	Quick-Change Applicator*
A	22-18	0.4-0.8	**.060-.110** [1.52-2.79]	**.073 ± .004** [1.85 ± 0.10]	**.145** [3.68]	640311-1	—
	26-22	0.15-0.4	**.040-.100** [1.02-2.54]	**.055 ± .004** [1.4 ± 0.10]	**.145** [3.68]	640401-1	—
B	22-18	0.4-0.8	**.060-.110** [1.52-2.79]	**.073 ± .004** [1.85 ± 0.10]	**.135** [3.43]	350566-1	687911-8
	26-22	0.15-0.4	**.060-.100** [1.52-2.54]	**.055 ± .004** [1.4 ± 0.10]	**.135** [3.43]	640108-1	—
	26-22	0.15-0.4	**.040-.070** [1.02-1.78]	**.055 ± .004** [1.4 ± 0.10]	**.135** [3.43]	640663-1	466739-4
C	18-14	0.8-2	**.150** [3.81] Max.	**.125 ± .003** [3.18 ± 0.08]	**.125** [3.18]	770060-1	—
D	18-22	0.8-0.4	**.060-.110** [1.52-2.79]	**.072 ± .003** [1.83 ± 0.08]	**.090** [2.29]	770565-2	—

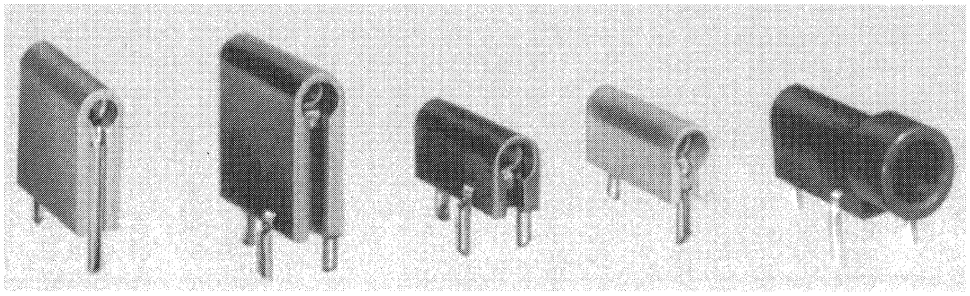
*Contact AMP Tooling/Technical Assistance Center.

Notes: 1. Higher tensile available with nose crimp types A and C.
2. Not available in loose piece.
3. No hand tools available.
4 .062 [1.57] pc board thickness.

SOURCE: Catalog 82159

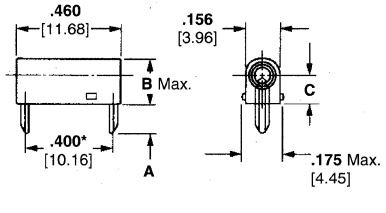
Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

Test Probe Receptacles

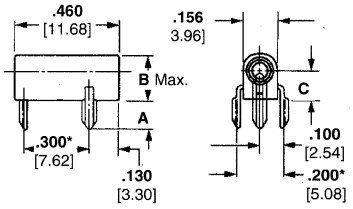


Product Facts

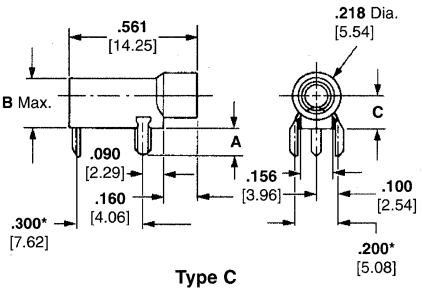
- Leg mounts are "V" shaped to promote solder wicking and consistent fillets
- Receptacle is recessed in housing to prevent shorting or flashover
- Probe may be inserted in either end of test probe receptacle except Type C
- Housing color is molded, not dyed
- Accepts .080 ± .001 [2.03 ± 0.03] probes



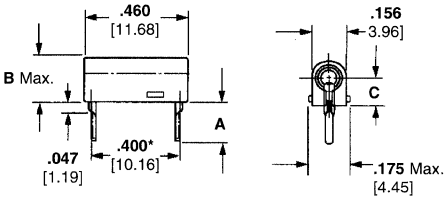
Type A



Type B



Type C



Type D

Color Suffix Table

Suffix Dash Number	Housing Color
-0	Black
-1	Brown
-2	Red
-3	Orange
-4	Yellow
-5	Green
-6	Blue
-7	Violet
-8	Gray
-9	White

Note: Color table contains AMP designations.

Type	Contact Finish	Dimensions A	Dimensions B	Dimensions C	Housing Colors	Part Nos.**
A	Bright Tin-Lead	**.130** [3.30]	**.230** [5.84]	**.138** [3.51]	See Table	1-582118-x
	Silver	**.130** [3.30]	**.230** [5.84]	**.138** [3.51]	See Table	2-582118-x
	Gold	**.130** [3.30]	**.230** [5.84]	**.138** [3.51]	See Table	3-582118-x
	Silver	**.130** [3.30]	**.230** [5.84]	**.138** [3.51]	Natural	5-582118-9
	Gold	**.130** [3.30]	**.230** [5.84]	**.138** [3.51]	Natural	6-582118-9
	Bright Tin-Lead	**.130** [3.30]	**.467** [11.86]	**.375** [9.53]	See Table	1-582340-x
	Silver	**.130** [3.30]	**.467** [11.86]	**.375** [9.53]	Black	2-582340-0
	Silver	**.130** [3.30]	**.467** [11.86]	**.375** [9.53]	Red	2-582340-2
	Gold	**.130** [3.30]	**.467** [11.86]	**.375** [9.53]	See Table	3-582340-x
	Gold	**.130** [3.30]	**.467** [11.86]	**.375** [9.53]	Natural	6-582340-9
B	Gold	**.130** [3.30]	**.230** [5.84]	**.138** [3.51]	See Table	3-582119-x
	Gold	**.130** [3.30]	**.230** [5.84]	**.138** [3.51]	Natural	6-582119-9
	Gold	**.130** [3.30]	**.467** [11.86]	**.375** [9.53]	See Table	3-582120-x
	Gold	**.130** [3.30]	**.467** [11.86]	**.375** [9.53]	Natural	6-582120-9
C	Gold	**.130** [3.30]	**.230** [5.84]	**.138** [3.51]	See Table	350180-x
D	Gold	**.180** [4.57]	**.230** [5.84]	**.138** [3.51]	See Table	1-380736-x
	Gold	**.180** [4.57]	**.230** [5.84]	**.138** [3.51]	Natural	2-380736-0
	Bright Tin-Lead	**.180** [4.57]	**.230** [5.84]	**.138** [3.51]	Green	3-380736-5

*Mounting hole location for .050-.054 [1.27-1.37]
**Part numbers with a numerical suffix are only for the specific color listed in the chart.

SOURCE: Catalog 82159

Power Tap

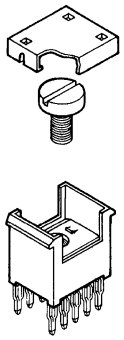
Product Facts

- **ACTION PIN contacts eliminate soldering**
- **Provides high current, separable connection to pc board traces**
- **Wire-to-board connection using common terminals**
- **All metal-to-metal assembly for long-term integrity**
- **Standard DIP outlines (.300 x .100 [7.62 x 2.54]), 10 positions, and .250 x .125 [6.35 x 3.18], 6 and 10 positions**
- **Low resistance interface**
- **Internally threaded tap to secure screw to terminal**
- **Anti-rotational embossments hold wire and terminal in place**
- **Standard Power Taps rated at 2.5 amps per pin—6 position 15 amps, 10 position 25 amps current carrying capability**
- **Recognized under the Component Program of Underwriters Laboratories Inc., File No. E146448**
- **Certified by Canadian Standards Association, File No. LR 7189**

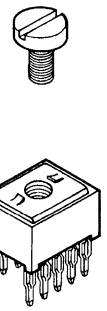
AMP Power Taps are designed for the growing need for power to printed circuit board applications required in today's electronic industry. The taps provide a high current, separable connection to a pc board.

This is a partial listing of Power Taps. For a complete list of part numbers, see Catalog 82159.

.300 X .100 [7.62 x 2.54]
High-Profile Tap 10 Position



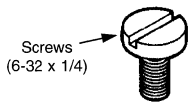
.300 X .100 [7.62 x 2.54]
Low-Profile Tap 10 Position

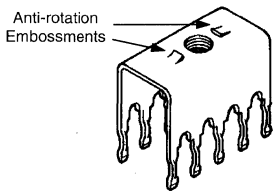


Standard Insulated Power Tap

Tap Version	Description	Screw Size	Part Nos.
High-Profile	Housing and contact assembled without screw[1]	6-32	55557-3
	Housing and contact assembled with screw[1,2]	6-32	55557-4
Low-Profile	Housing and contact assembled without screw	6-32	55556-3
	Housing and contact assembled with screw[2]	6-32	55556-4
	Housing and contact assembled without screw	M4	55556-9
	Housing and contact assembled with screw[2,3]	6-32	55673-2

[1]Cover not assembled
[2]Screw not assembled
[3]No anti-rotation embossments





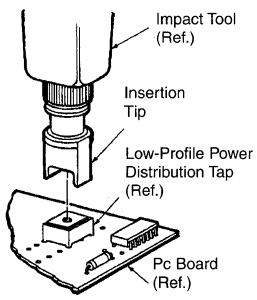
Standard Uninsulated Power Tap

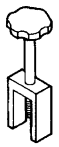
Size	Description	Screw Size	Part Numbers
.300 x .100 [7.62 x 2.54] 10 Position	Without Screw	6-32	55558-3
	With Screw		55558-4
	Without Screw	6-32	55558-7[1]
.250 x .125 [6.35 x 3.18] 6 Position	Without Screw	6-32	55323-5
	With Screw	6-32	55323-9
.250 x .125 [6.35 x 3.18] 10 Position	Without Screw	6-32	55323-6
	With Screw	6-32	1-55323-0

[1]No anti-rotation embossments

Installation and Extraction Tooling for Standard Threaded Taps Only

Impact Insertion Tool
Part No. 313102-1
(Insertion Tip
Part No. 58133-1 required)



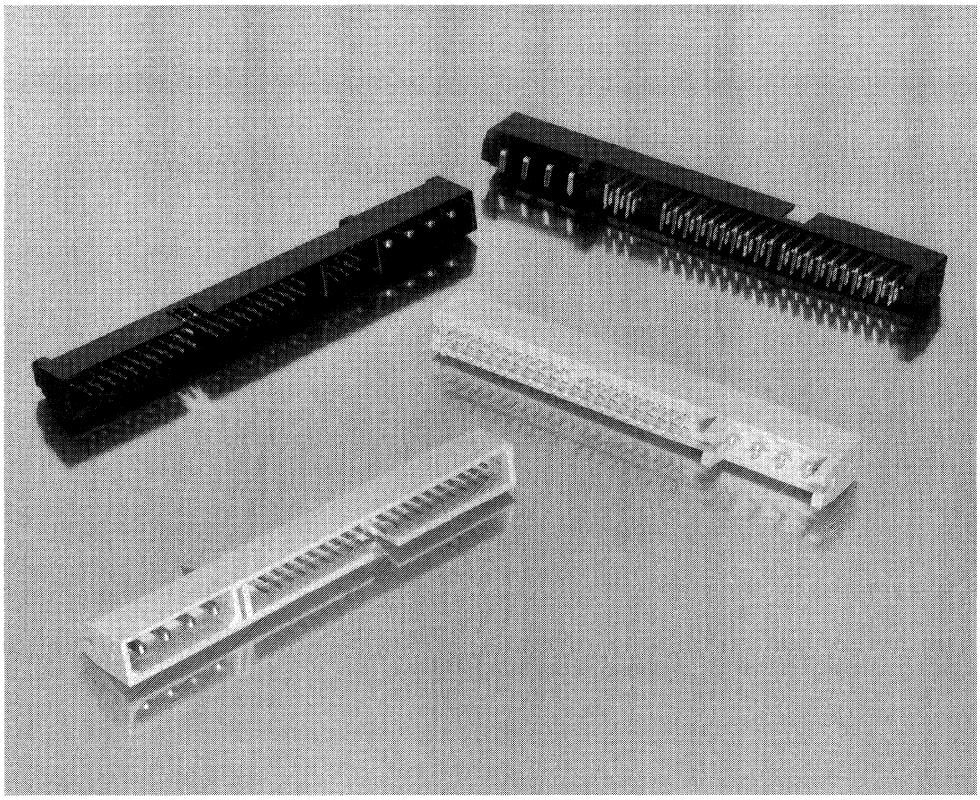


Extraction Tool
Part No. 68380-1

SOURCE: Catalog 82159

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

2-in-1 Combination Disk Drive Connectors



Product Facts

- 40- to 50-position AMPMODU Post Header combined with a 4-position Commercial MATE-N-LOK header
- Through hole, right-angle/straddle mount
- UL 94V-0 rated, high temperature housing material compatible to surface mount IR reflow processes
- Solder leg area with 60/40 tin-lead plating options available
- Gold flash over palladium nickel option available
- Solder tail options for retention to pc board available

AMPMODU Post Header (SCSI)

- 50-position, .025 [0.64] sq. post on .100 [2.54] centerline
- Duplex plated — center-bar polarization on side shroud wall

MATE-N-LOK Header

- 4-position, .200 [5.08] centerline
- Tin-lead finish
- Polarization and detent latching on shroud walls

Application

- I/O connector for 3.5 inch hard disk drive products

AMP has designed a new combination connector consisting of two connector configurations in one. Designed specifically for the disk drive industry, this right-angle, through-hole, combination connector consists of a 40- to 50-position AMPMODU .100 [2.54] centerline header (SCSI), and a 4-position MATE-N-LOK power connector.

Other applications include storage devices, such as tape drives and CD drives.

Various plating options are available including a low cost alternative gold over palladium nickel, which performs like a 30-microinch gold at reduced prices.The connector housing is made of 94V-0 rated, high temperature thermoplastic for surface-mount application. It will withstand the rigors of IR reflow and vapor phase soldering processes. There are three solderable hold-downs built into the connector for connector/board alignment and stability.

Other configurations, including SMT compatible vertical right-angle disk drive, board-mount connectors, 2/3 connector configuration and a 6-position shunting test connector can be made available.

Type	Position Size	Part Number	Packaging
Through-Hole (with Hold-downs)	4+50	84160-1	Slotted Tray
Through-Hole (with Hold-downs)	4+50	84160-2	Tubed Tray
Through-Hole (with Hold-downs)	4+50	84223-1	Slotted Tray
Through-Hole	4+40	84288-1	Slotted Tray
Through-Hole	4+50	84288-2	Slotted Tray
Through-Hole (with Hold-downs)	4+6+40	84273-1	Slotted Tray
Straddle-Mount	4+40	84266-1	Slotted Tray
Straddle-Mount	4+50	84266-2	Slotted Tray
Surface Mount	4+40	84275-1	Slotted Tray
Surface Mount	4+50	84294-1	Slotted Tray

SOURCE: Catalog 91119

Specifications subject to change.

1-800-522-6752
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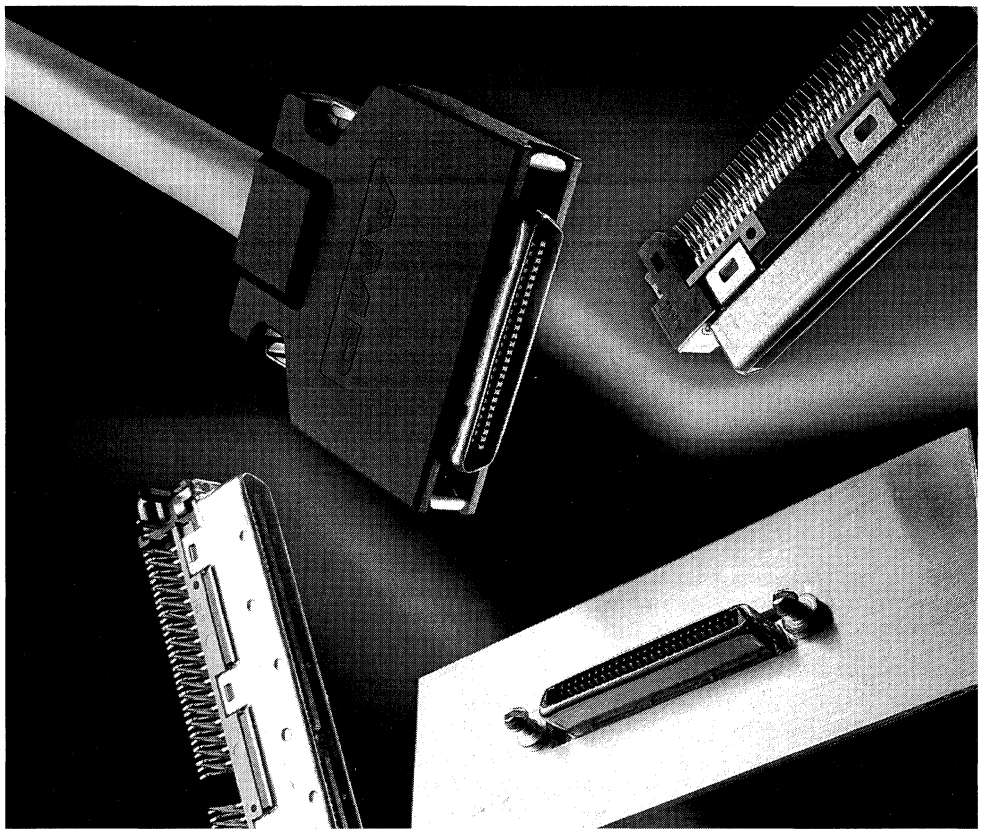
1-800-722-1111
Tooling/Technical Assistance Center

METRIC

CHAMP 0.8 mm High Density Interconnection System



Product Facts

- EMI shielded high density and low-profile I/O system
- Precision insert molded contacts on 0.8 mm [.032] centerlines—offer 30% linear pc board space savings
- Low-profile right-angle pc connector, 5.0 mm [.197] high— a 50% reduction in height
- Available in thru-hole or hybrid pc board lead configuration—combination of surface mount and thru-hole leads
- Tested up to 2,000 durability cycles
- Contact tips recessed for electrostatic discharge (ESD) and damage protection
- M2 threaded hardware for panel mounting
- Right-angle, pc board connectors available in 50, 68, and 90 position receptacle assemblies, and 50 and 90 position plug assemblies
- Cable plug connectors accept 0.05 mm² [30 AWG] solid or stranded wire and are available in 50 and 68 position assemblies
- Contacts are insulation displacement type (IDC) and can be quickly terminated by the CHAMPOMATOR 2.5 Semi-Automatic Termination Machine
- Metal-shell backshell kits feature integral cable braid termination and a choice of squeeze-to-release latches or jackscrew mating hardware
- Enclosure cover for backshell kit made of UL 94V-0 rated ABS

Typical Applications

- Notebook and sub-notebook computers
- Pen based computers
- Personal data assistance devices
- Cellular phone digital input/output

0.8 mm Right-Angle Printed Circuit Board Connectors

90-Position, Low-Profile, Receptacle Assembly, Shielded, Hybrid Leads (with boardlocks)
Part No. 787175-1

68-Position, High-Profile, Receptacle Assembly, Shielded, Thru-Hole Leads (with boardlocks)
Part No. 787254-1

50-Position, Low-Profile, Receptacle Assembly, Shielded, Hybrid Leads (with boardlocks)
Part No. 787096-1

50-Position, Low-Profile, Plug Assembly, Shielded, Hybrid Leads (with boardlocks)
Part No. 787095-1

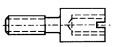
Note: 68 Pos. Housing Dim. (Typ.)—42.70 [1.681] L x 14.65 [0.577] W x 6.00 [0.236] H

Hardware*

Screwlocks, Boardmount

Part No. 787004-3
Bulk (quantity 200)

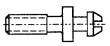
Part No. 787004-2
Individual (2)



Latching Posts, Boardmount

Part No. 787003-3
Bulk (quantity 200)

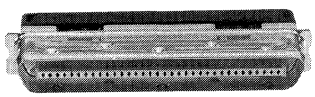
Part No. 787003-2
Individual (2)



*For 1.12 [0.044] panel thickness.

0.8 mm Cable Connectors

50-Position Plug
Part No. 787131-1



68-Postion Plug (shown)
Part No. 787131-3

Note: Wire insulation diameter range—0.56-0.64 [.022-.025]

0.8 mm Backshell Kits

No. of Pos.	Kit Part Numbers			
	with Squeeze-to-Release Latches		with Jackscrew Fasteners	
	Bulk (100)	Individual	Bulk (100)	Individual
50	787133-1	787133-2	787233-1	787233-2
68	787229-1	787229-2	787191-1	787191-2

SOURCE: Catalog 65972

Specifications subject to change.

1-800-522-6752
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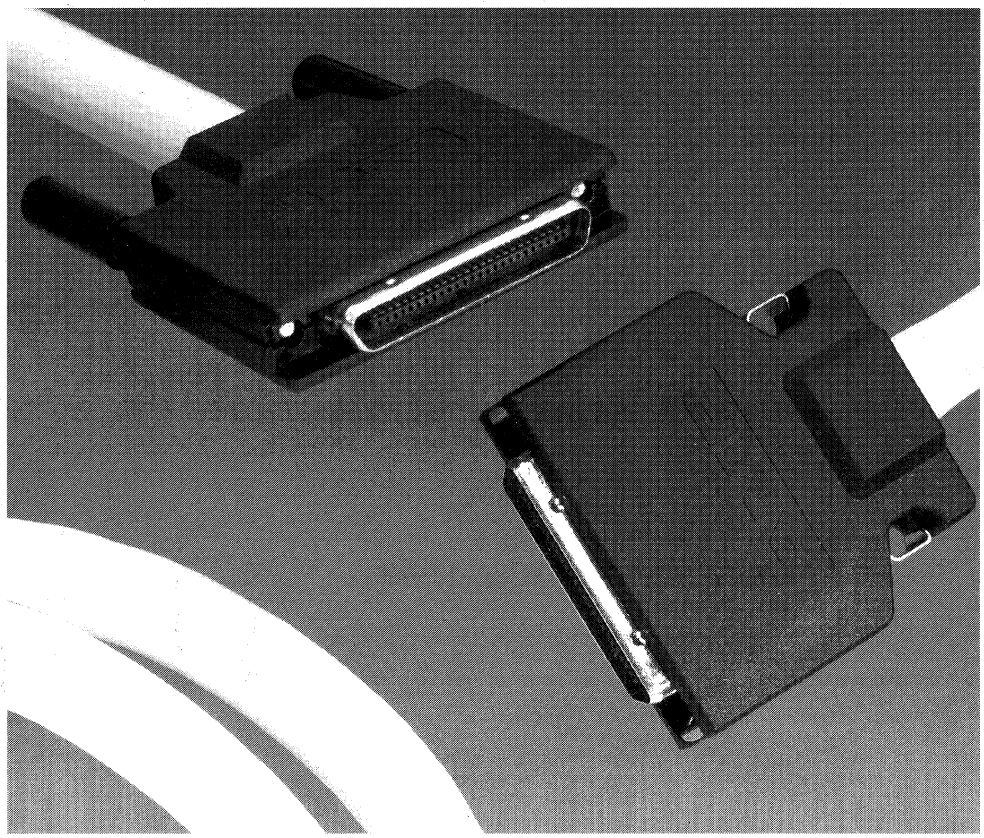
1-800-722-1111
Tooling/Technical Assistance Center

CHAMP 0.8 mm [.031] Cable Assemblies

METRIC



Product Facts

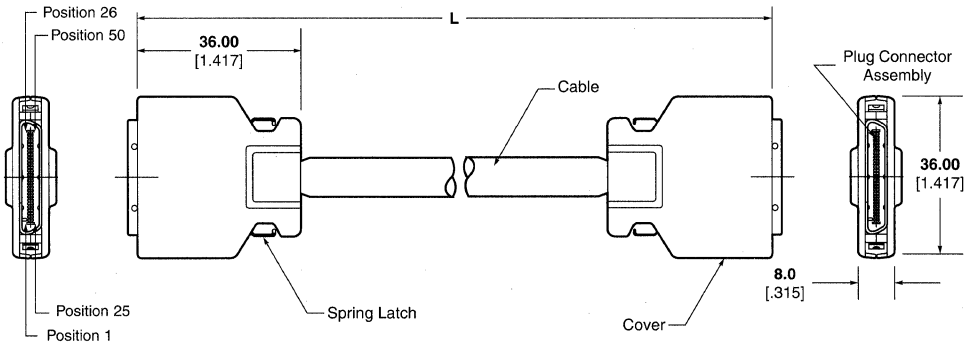
- High-density interconnect on 0.8 mm [.031] centerlines
- IDC terminated for reliable, repeatable terminations
- Terminates 30 AWG solid or stranded twisted pair and discrete wire
- Shielded backshells with 180° cable exit
- Indents on plug metal shell for shielding interconnect
- "D" shell mates first, breaks last
- Integral cable braid termination and strain relief
- Available with squeeze-to-release latches or jackscrews with insulated thumb caps
- Available in 50 and 68 positions (additional sizes and configurations soon to be released)
- Produced under a Quality Management System certified to ISO 9001

A copy of the certificate is available upon request

ISO 9001 Certified

50-Position Plug to 50-Position Plug Twisted-Pair Cable Assembly

Mates with— Part No. 787096-1
Hybrid, right-angle, board mount receptacle connector



Differential Impedance	Length (L)	Part Number
105 Ohms	1000 [39.40]	621039-1

Note: Length Tolerances–
Less than 1000 [39.4].....±12.7 [.5]
1000 [39.4]–3000 [118.1].....±25.4 [1.0]
3000 [118.1] and up.....±50.8 [2.0]

Note: Configurations Available: 50 Pos. Plug with squeeze-to-release latches or jackscrews; 68 Pos. Plug with jackscrews.

AMP offers a wide variety of cable assembly products to meet your interconnection requirements:

- IPI
- HIPPI
- VESA
- SCSI
- QuickRing
- Scalable Coherent Interface (SCI)
- IEEE P1394
- IEEE P1284
- Serial Storage Architecture (SSA)
- ATM
- Fibre Channel

SOURCE: Catalog 124110

RF Connectors

Product Facts

- **Listed by Underwriters Laboratories Inc., File No. E81956 (Cabled Connectors)**
- **Recognized under the Component Program of Underwriters Laboratories Inc., File No. E81956 (Soldered Connectors)**
- **Certified by the Canadian Standards Association, File No. LR 7189**

Note: The following products are not approved by either UL or CSA: Decoupled Connectors, BNC Self-Terminating Connectors, SSMB Connectors, Micro-Miniature Connectors, TERMASHIELD Ferrules, Braid-Pic Contacts and Terminals, and COAXICON Latching Connectors.

- **Produced under a Quality Management System certified to ISO 9001**

A copy of the certificate is available upon request

AMP RF connectors are furnished in a wide variety of styles and configurations to suit almost any design requirement. For cable connectors, AMP offers a choice of tooling to meet your exact production needs. This combination of AMP connectors and matching tooling provides trouble-free terminations at the lowest applied cost.

The AMP engineering and marketing team is always ready to assist you with any particular design requirement. Please feel free to contact your nearest AMP Sales Representative or call the Product Information Center 800-522-6752.

The AMP Design Approach

Superior RF connector performance is realized when full consideration is given to all design factors. At AMP, experience has proven the accuracy of proprietary computer programs which provide precise electrical designs that are optimized by test simulation. This valuable experience has shown that the junction between the connector and the transmission line is a very important element in the design evaluation. With coaxial cable connectors, AMP specializes in compression crimping to provide predictable, repeatable performance at the lowest applied cost. Special crimp geometries are designed into appropriate tooling to maximize performance.
And when the application allows some compromise in performance, an AMP RF connector designed for the Mil-standard hex crimp can be used.

AMP RF connectors are designed in accordance with Military Specification MIL-C-39012. The more popular of these connectors are then qualified to this specification. In several lines, commercial versions are also available. These commercial products offer equivalent quality performance at a substantial cost savings. This is accomplished through the use of less expensive materials and platings, as well as through the elimination of costly, military marking and QPL testing.

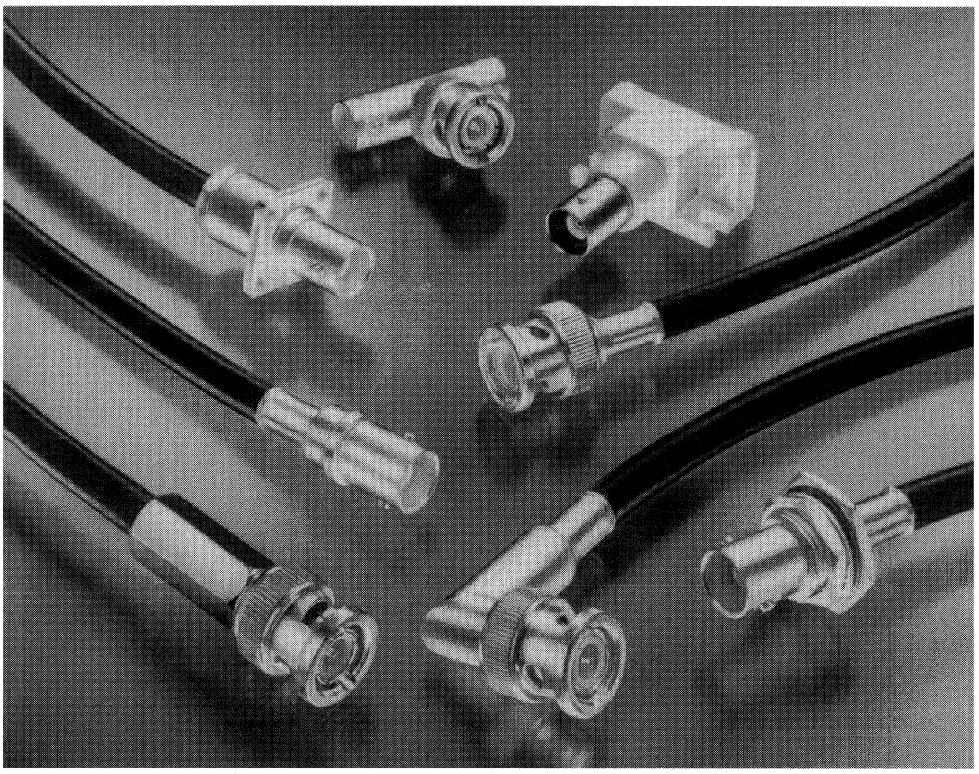
SOURCE: Catalog 82074

Specifications subject to change.

1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

BNC Connectors



Product Facts

- **Various connectors available in 50 and 75 ohm versions**
- **Fully intermateable with comparable BNC UG/U connectors**
- **Low VSWR**
- **Bayonet lock coupling for quick connect/disconnect**
- **Tarnish resistant nickel finish available**
- **Choice of different dielectrics**
- **Full range of Hex Crimp and O Crimp products for common coaxial cables**
- **Single crimp connectors offer one crimping operation for fast application**
- **Twist-on connectors require no special tooling for application to the cable**
- **Field serviceable (Category A) connectors qualified to MIL-C-39012**
- **Field replaceable (Category C) plugs with captivated center contact**
- **Field replaceable plugs can be terminated with industry standard tooling**

The AMP BNC RF connector family with bayonet locking coupling provides highly reliable, quick connect/ disconnect coaxial connections. AMP single and dual crimp terminations offer positive insulation grip and require absolutely no soldering, providing terminations at the lowest overall applied cost.

Available in both 50 and 75 ohm versions, these connectors feature numerous styles including cable plugs and jacks, adapters and printed circuit board connectors. In addition to a variety of crimp type terminations, connectors are furnished in field replaceable and twist-on styles. These connectors accept a wide range of coaxial cables and are intermateable with industry standard connectors designed to MIL-C-39012 specifications.

Single crimp connectors provide reduced application time and lower applied costs. This is accomplished by using AMP one-crimp tooling which simultaneously terminates the inner conductor, outer braid and cable support with one controlled stroke.

When applications require military approved connectors, note that many of the dual crimp connectors meet and/or exceed all the requirements in specification MIL-C-39012, Class II, Category B, and carry the appropriate military designation number.

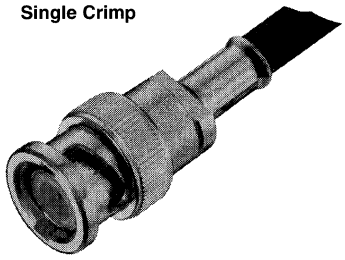
AMP can also supply low cost alternatives with an extensive commercial type product line. These connectors are designed around the mil-specifications, but utilize low-cost materials, offering comparable mechanical and electrical performance.

SOURCE: Catalog 82074

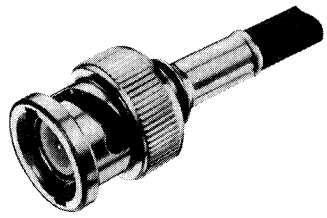
BNC Connectors, 50 Ohm

Plugs, Crimp

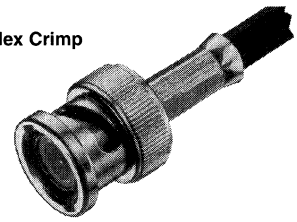
Single Crimp



Dual Crimp



Hex Crimp



Connector Cable Range Selection Code†	RG/U Cable	Termination Type	Center Contact Plating	Body Plating	Dielectric	Style	M39012/ Military No. and/or Comments	Part No.	CERTI-CRIMP Hand Tool with Integral Die	Interchangeable Dies for PRO-CRIMPER II Hand Tool	Interchangeable Dies for Hand Tool 69710-1 & Pneu. Tools 69365 & 69365-3
A	178, 178A 178B 196, 196A	Single Crimp	Gold	Silver	TEFLON	Mil Type	—	330876	69245-4	—	69471
B	174 188, 188A 316	Hex Crimp	Gold	Nickel	Polyethylene	Commercial	—	2-221128-1	—	58436-3	—
		Dual Crimp	Gold	Nickel	TEFLON	Mil Type	—	225395-7	220009-1	—	220026-1
		Dual Crimp	Gold	Nickel	Polyethylene	Commercial	—	1-227079-6	220009-5	220210-1	220217-3
		Dual Crimp	Tin Lead	Nickel	Polyethylene	Commercial	—	1-227079-4	220009-5	220210-1	220217-3
		Dual Crimp	Gold	Silver	TEFLON	Mil Type	—	2-331350-4	220009-1	—	220026-1
		Single Crimp	Gold	Nickel	Polypropylene	Mil Type	—	225527-9	69245-2	—	—
		Single Crimp	Gold	Silver	Polypropylene	Mil Type	—	2-330058-1	69245-2	—	69422
		Single Crimp	Gold	Silver	TEFLON	Mil Type	—	2-330061-1	69245-2	—	69422
B1	179, 179A 179B, 161 187, 187A Belden 9221	Hex Crimp	Gold	Nickel	Polyethylene	Commercial	—	2-221128-3	—	58436-3	—
		Dual Crimp	Gold	Nickel	TEFLON	Mil Type	—	225395-8	220009-5	—	220026-1
		Dual Crimp	Tin Lead	Nickel	Polyethylene	Commercial	—	2-227079-0	220009-5	220210-1	220217-3
		Dual Crimp	Gold	Nickel	Polyethylene	Commercial	—	2-227079-2	220009-5	220210-1	220217-3
		Dual Crimp	Gold	Silver	TEFLON	Mil Type	—	2-331350-5	220009-1	—	220026-1
		Single Crimp	Gold	Silver	Polypropylene	Mil Type	—	2-329084-1	69245-1	—	69408
		Single Crimp	Gold	Silver	TEFLON	Mil Type	—	2-329446-1	69245-1	—	69408
B2	IBM 5353914, Brand Rex T-209A	Dual Crimp	Gold	Silver	TEFLON	Mil Type	—	5-331350-5	69477-2	—	69669-2
B3	RD 316, 188 Double Braid	Dual Crimp	Gold	Nickel	Polyethylene	Commercial	—	8-227079-2	69477-4	58330-1	—
C	Belden 9252 122	Dual Crimp	Gold	Nickel	TEFLON	Mil Type	—	5-225395-7	69477-2	—	69669-2

†Refer to Appendix Pages for code specifications.

SOURCE: Catalog 82074

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

BNC Connectors, 50 Ohm
(Continued)

Plugs, Crimp
(Continued)

Connector Cable Range Selection Code†	RG/U Cable	Termination Type	Center Contact Plating	Body Plating	Dielectric	Style	M39012/ Military No. and/or Comments	Part No.	CERTI-CRIMP Hand Tool with Integral Die	Interchangeable Dies for PRO-CRIMPER II Hand Tool	Interchangeable Dies for Hand Tool 69710-1 & Pneu. Tools 69365 & 69365-3
C1	180, 180A 180B 195, 195A	Hex Crimp	Gold	Nickel	Polyethylene	Commercial	—	2-221128-5	—	58436-3	—
		Dual Crimp	Gold	Nickel	TEFLON	Mil Type	—	225395-9	69477-2	—	69669-2
		Dual Crimp	Tin Lead	Nickel	Polyethylene	Commercial	—	3-227079-7	69477-4	58330-1	—
		Dual Crimp	Gold	Silver	TEFLON	Mil Type	—	2-331350-6	69477-2	—	69669-2
		Single Crimp	Gold	Silver	TEFLON	Mil Type	—	2-329447-1	69246-1	—	69423
C2	Belden 9907,8219 89907 Comm/ Scope 2104	Hex Crimp	Gold	Nickel	Polyethylene	Commercial	—	2-221128-7	—	58436-1[2]	—
		Dual Crimp	Gold	Nickel	Polyethylene	Commercial	—	6-227079-7[3]	220187-1	58435-1[1]	220217-1
		Dual Crimp	Gold	Nickel	Polyethylene	Commercial	—	6-227079-8[4]	220187-1	58304-2	220217-1
C3	Belden 8218	Dual Crimp	Gold	Nickel	TEFLON	Mil Type	—	1-225395-0	69477-2	—	69669-2
		Dual Crimp	Gold	Nickel	Polyethylene	Commercial	—	1-227079-9	69477-4	58330-1	58376-1
		Dual Crimp	Tin Lead	Nickel	Polyethylene	Commercial	—	1-227079-7	69477-4	58330-1	58376-1
		Dual Crimp	Gold	Silver	TEFLON	Mil Type	—	2-331350-2	69477-2	—	69669-2
D	58, 58A 58B, 58C	Hex Crimp	Gold	Nickel	Polyethylene	Commercial	Bulk Packaged	221128-1	—	58436-1[2]	—
		Hex Crimp	Gold	Nickel	Polyethylene	Commercial	—	1-221128-0	—	58436-1[2]	—
		Dual Crimp	Gold	Nickel	TEFLON	Mil Type	—	225395-1	69478-1	220189-3	69727
		Dual Crimp	Tin Lead	Nickel	Polyethylene	Commercial	—	227079-1	220187-1	220189-1	220217-1
		Dual Crimp	Gold	Nickel	Polyethylene	Commercial	—	227079-5	220187-1	58435-1[1]	220217-1
		Dual Crimp	Silver	Nickel	Polyethylene	Commercial	—	227079-9	220187-1	58435-1[1]	220217-1
		Dual Crimp	Gold	Silver	TEFLON	Mil Type	16B0004	2-331350-1	69478-1	220189-3	69727
		Single Crimp	Gold	Silver	Polypropylene	Mil Type	—	2-329082-1	69140-1	—	69223-1
		Single Crimp	Gold	Silver	TEFLON	Mil Type	—	2-329444-1	69140-1	—	69223-1
		Single Crimp	Gold	Silver	TEFLON	Mil Type	Weatherproof	330884	69376-3	—	69815
D1	141, 141A 303	Dual Crimp	Gold	Nickel	TEFLON	Mil Type	—	225395-5	69478-1	220189-3	69727
		Single Crimp	Gold	Silver	TEFLON	Mil Type	—	2-330358-1	69140-1	—	—
D2	Belden 88240, Berk-Tek BTDC-58, Comm/ Scope 2135	Hex Crimp	Gold	Nickel	Polyethylene	Commercial	—	1-221128-0	—	58436-1[2]	—
		Dual Crimp	Gold	Nickel	Polyethylene	Commercial	—	4-227079-3	220187-1	58435-1[1]	220217-1
		Dual Crimp	Gold	Nickel	TEFLON	Mil Type	—	4-225395-2	69478-1	220189-3	69727
E	223 55, 55A, 55B	Dual Crimp	Gold	Nickel	TEFLON	Mil Type	—	225395-3	69478-1	220189-3	69727
		Dual Crimp	Gold	Nickel	Polyethylene	Commercial	—	227079-6	220187-1	58435-1[1]	220217-1
		Single Crimp	Gold	Silver	TEFLON	Mil Type	—	2-329444-2	69140-2	—	69424

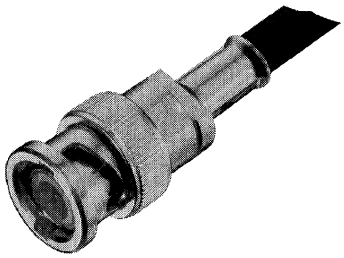
†Refer to Appendix Pages for code specifications.
[1]Order PRO-CRIMPER II Coaxial "O" Crimp Hand Tool Assembly **Part No. 58433-1**, which includes dies **Part No. 58435-1**.
[2]Order PRO-CRIMPER II Coaxial Hex Crimp Hand Tool Assembly **Part No. 58433-2**, which includes dies **Part No. 58436-1**.
[3]For use with Belden 9907, Comm/Scope 3104 only.
[4]For use with Belden 89907, Comm/Scope 2104 only.

SOURCE: Catalog 82074

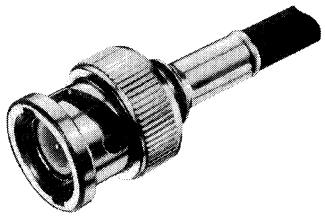
BNC Connectors, 50 Ohm
(Continued)

Plugs, Crimp
(Continued)

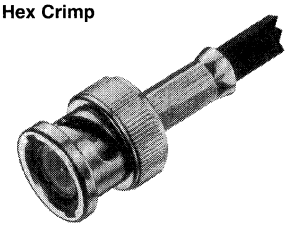
Single Crimp



Dual Crimp



Hex Crimp



Connector Cable Range Selection Code†	RG/U Cable	Termination Type	Center Contact Plating	Body Plating	Dielectric	Style	M39012/ Military No. and/or Comments	Part No.	CERTI-CRIMP Hand Tool with Integral Die	Interchangeable Dies for PRO-CRIMPER II Hand Tool	Interchangeable Dies for Hand Tool 69710-1 & Pneu. Tools 69365 & 69365-3
E1	142, 142A 142B, 400	Dual Crimp	Gold	Nickel	TEFLON	Mil Type	—	225395-6	69478-1	220189-3	69727
		Dual Crimp	Gold	Nickel	Polyethylene	Commercial	—	6-227079-1	220187-1	58435-1[1]	220217-1
		Dual Crimp	Gold	Silver	TEFLON	Mil Type	16B0007	2-331350-9	69478-1	220189-3	69727
		Single Crimp	Gold	Silver	TEFLON	Mil Type	—	2-330358-2	69331-1	—	69429-1
G, G1	140, 210, 62, 62A, 62B, 59, 59A, 59B, 302, Belden 9291, 9209, 9269, 89269, 88241 Hi-Temp 62A, Times PL-62, Berk-Tek BTDC-59, BTDC-62	Hex Crimp	Gold	Nickel	Polyethylene	Commercial	—	1-221128-1	—	58436-1[2]	—
G	124, 140, 210, 62, 62A, 62B, 59, 59A, 59B, Belden 9291, 9209, 9269	Hex Crimp	Silver	Nickel	Polyethylene	Commercial	—	1-221128-4	—	58436-1[2]	—
		Hex Crimp	Gold	Nickel	Polyethylene	Commercial	—	1-221128-1	—	58436-1[2]	—
		Dual Crimp	Gold	Nickel	TEFLON	Mil Type	—	225395-2	69477-1	220189-4	—
		Dual Crimp	Tin Lead	Nickel	Polyethylene	Commercial	—	227079-3	220187-2	220189-2	220217-2
		Dual Crimp	Gold	Nickel	Polyethylene	Commercial	—	227079-7	220187-2	58435-1[1]	220217-2
		Dual Crimp	Silver	Nickel	Polyethylene	Commercial	—	1-227079-1	220187-2	58435-1[1]	220217-2
		Dual Crimp	Gold	Silver	TEFLON	Mil Type	16B0008	331350	69477-1	—	69669-1
		Single Crimp	Gold	Silver	Polypropylene	Mil Type	—	2-329083-1	69141-1	—	—
		Single Crimp	Gold	Silver	TEFLON	Mil Type	—	2-329445-1	69141-1	—	—

†Refer to Appendix Pages for code specifications.
[1]Order PRO-CRIMPER II Coaxial "O" Crimp Hand Tool Assembly **Part No. 58433-1,** which includes dies **Part No. 58435-1**.
[2]Order PRO-CRIMPER II Coaxial Hex Crimp Hand Tool Assembly **Part No. 58433-2**, which includes dies **Part No. 58436-1**.

SOURCE: Catalog 82074

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

BNC Connectors, 50 Ohm
(Continued)

Plugs, Crimp
(Continued)

Connector Cable Range Selection Code†	RG/U Cable	Termination Type	Center Contact Plating	Body Plating	Dielectric	Style	M39012/ Military No. and/or Comments	Part No.	CERTI-CRIMP Hand Tool with Integral Die	Interchangeable Dies for PRO-CRIMPER II Hand Tool	Interchangeable Dies for Hand Tool 69710-1 & Pneu. Tools 69365 & 69365-3
G1	302, Belden 88241, 89269 Hi-Temp 62A Times PL62, Berk-Tek, BTDC-59, BTDC-62	Dual Crimp	Gold	Nickel	TEFLON	Mil Type	—	4-225395-1	69477-1	58537-1	69669-1
		Dual Crimp	Gold	Nickel	Polyethylene	Commercial	—	4-227079-9	220187-2	58435-1[1]	220217-2
G2	Hi-Temp 59 Times PL59, PLF59 (20 AWG C.C.)	Dual Crimp	Gold	Nickel	Polyethylene	Commercial	—	5-227079-3	—	58537-1	—
		Dual Crimp	Gold	Nickel	TEFLON	Mil Type	—	4-225395-4	69477-1	58537-1	69669-1
G4	Belden 9104, 9240 9112, 9167, 9259, 9266 Times FM-59	Hex Crimp	Gold	Nickel	Polyethylene	Commercial	—	1-221128-7	—	58436-1[2]	—
		Dual Crimp	Gold	Nickel	TEFLON	Mil Type	—	2-225395-0	69477-1	58537-1	69669-1
		Dual Crimp	Gold	Silver	TEFLON	Mil Type	—	5-331350-3	69477-1	58537-1	69669-1
		Dual Crimp	Gold	Nickel	Polyethylene	Commercial	—	1-227079-3	220187-2	58537-1	—
		Dual Crimp	Gold	Nickel	Polyethylene	Commercial	—	8-227079-7	—	58537-1	—
H	71, 71A, 71B	Single Crimp	Gold	Silver	TEFLON	Mil Type	—	2-329445-2	69141-2	—	69425
J1	Belden 9248, 9114	Dual Crimp	Gold	Nickel	Polyethylene	Commercial	—	3-227079-0	220247-1	58539-1	—
K2	Belden 8281, 9141, 9231 Western Electric 724, 728, 3049	Hex Crimp	Gold	Nickel	Polyethylene	Commercial	—	1-221128-2	—	58436-2	—
		Dual Crimp	Gold	Nickel	Polyethylene	Commercial	—	5-227079-8	220043-1	58538-1	220088-1
		Dual Crimp	Gold	Silver	TEFLON	Mil Type	—	4-331350-0	220043-1	58538-1	220088-1
		Single Crimp	Gold	Silver	Polypro-pylene	Mil Type	—	330878	69652	—	220000
M	8, 8A, 213	Dual Crimp	Gold	Nickel	TEFLON	Mil Type	—	2-225395-1	220015-1	—	—
		Dual Crimp	Gold	Silver	TEFLON	Mil Type	—	225886-1	220015-1	—	—
M1	11, 11A	Dual Crimp	Gold	Silver	TEFLON	Mil Type	—	225886-4	220015-1	—	—
M2	Belden 9914 Times FM-8	Dual Crimp	Gold	Silver	TEFLON	Mil Type	—	225886-7	220015-1	—	—
M3	Alpha 9847 Belden 8213, 9292	Dual Crimp	Gold	Silver	TEFLON	Mil Type	—	225886-5	220015-1	—	—
		Dual Crimp	Gold	Silver	TEFLON	Mil Type	—	5-331350-8	220015-1	—	—
N	9, 9A, 9B, 214	Dual Crimp	Gold	Silver	TEFLON	Mil Type	—	225886-1	220015-1	—	—

†Refer to Appendix Pages for code specifications.
[1]Order PRO-CRIMPER II Coaxial "O" Crimp Hand Tool Assembly **Part No. 58433-1,** which includes dies **Part No. 58435-1.**
[2]Order PRO-CRIMPER II Coaxial Hex Crimp Hand Tool Assembly **Part No. 58433-2**, which includes dies **Part No. 58436-1**.
Note: PRO-CRIMPER II Hand Tool Frame **Part No. 354940-1** without Dies.

SOURCE: Catalog 82074

Specifications subject to change.

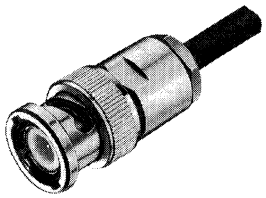
1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

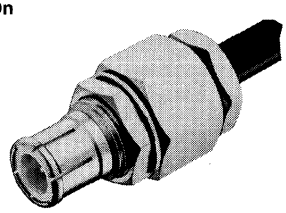
BNC Connectors, 50 Ohm
(Continued)

Plugs, Field Serviceable

Standard



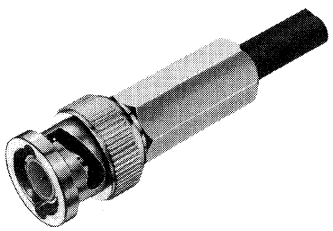
Push-On



Connector Cable Range Selection Code†	RG/U Cable	Termination Type	Center Contact Plating	Body Plating	Dielectric	Style	M39012/ Military No. and/or Comments	Part No.
D	58, 58A, 58B, 58C	Solder Clamp	Gold	Nickel	TEFLON	Push-On	—	222728-1
D, D1 E, E1	58, 58A, 58B, 58C, 141, 141A, 303, 223, 55, 55A, 55B, 142, 142A, 142B, 400	Solder Clamp	Gold	Silver	TEFLON	Mil Type	16-0101 Category A UG-88/U	221265-1
		Solder Clamp	Gold	Nickel	TEFLON	Commercial	Category A	1-221265-0
G, G1 H	124, 140, 210, 62, 62A, 62B, 59, 59A, 59B, Belden 9291, 9209, 9269, 89269, 88241, Hi-Temp 62A, Times PL-62, Berk-Tek BTDC-59, BTDC-62, 302, 71, 71A, 71B	Solder Clamp	Gold	Silver	TEFLON	Mil Type	16-0102 Category A UG-260/U	221265-2
		Solder Clamp	Gold	Nickel	TEFLON	Commercial	Category A	1-221265-1

†Refer to Appendix Pages for code specifications.

Plugs, Twist-On



Mates with—Twist-On Jacks, see page 4010

Connector Cable Range Selection Code†	RG/U Cable	Termination Type	Center Contact Plating	Body Plating	Dielectric	Style	M39012/ Military No. and/or Comments	Part No.
D	58 58B	Twist-On	Gold	Nickel	Polymethyl-pentene	Commercial	—	414265-1
D2	Belden 88240	Twist-On	Gold	Nickel	Polymethyl-pentene	Commercial	—	414265-2
G	59, 59A 59B	Twist-On	Gold	Nickel	Polymethyl-pentene	Commercial	—	414265-3
G1	Belden 88241	Twist-On	Gold	Nickel	Polymethyl-pentene	Commercial	—	414265-4
K2	Belden 8281, 9141, 9231 Western Electric 724, 728, 3049	Twist-On	Gold	Nickel	Polymethyl-pentene	Commercial	—	414265-5

†Refer to Appendix Pages for code specifications.
Note: Twist-On plugs must be used with cable that has a solid conductor.
These plugs are not recommended for applications where the cable frequently moves or flexes.

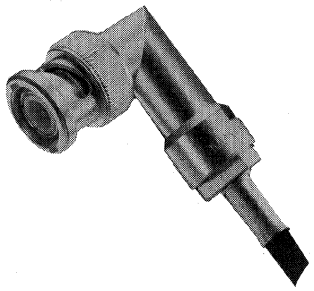
SOURCE: Catalog 82074

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

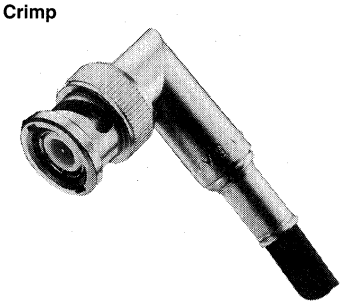
BNC Connectors, 50 Ohm
(Continued)

Right-Angle Plugs, Crimp

Single Crimp



Dual Crimp



Connector Cable Range Selection Code†	RG/U Cable	Termination Type	Center Contact Plating	Body Plating	Dielectric	Style	M39012/ Military No. and/or Comments	Part No.	CERTI-CRIMP Hand Tool with Integral Die	Interchangeable Dies for PRO-CRIMPER II Hand Tool	Interchangeable Dies for Hand Tool 69710-1 & Pneu. Tools 69365 & 69365-3
B	174, 188, 188A, 316	Hex Crimp	Gold	Nickel	Polymethyl-pentene	Commercial	—	413959-3	—	58436-3	—
		Single Crimp	Gold	Silver	TEFLON	Mil Type	—	331178	69245-1	—	69422
B1	179, 179A 179B, 161 187, 187A Belden 9221	Hex Crimp	Gold	Nickel	Polymethyl-pentene	Commercial	—	413959-4	—	58436-3	—
		Single Crimp	Gold	Silver	TEFLON	Mil Type	—	331179	69245-1	—	69408
B3	RD 316, 188	Dual Crimp	Gold	Nickel	TEFLON	Mil Type	—	1-225974-1	220009-1	—	220026-1
C1	180, 180A, 180B 195, 195A	Hex Crimp	Gold	Nickel	Polymethyl-pentene	Commercial	—	413959-5	—	58436-3	—
C2	Belden 9907, 89907, 8219 Comm/Scope 2104, 3104	Hex Crimp	Gold	Nickel	Polymethyl-pentene	Commercial	—	413959-6	—	58436-1	—
D	58, 58A, 58B, 58C	Hex Crimp	Gold	Nickel	Polymethyl-pentene	Commercial	—	413959-1	—	58436-1	—
		Dual Crimp	Gold	Silver	TEFLON	Mil Type	—	225973-1	69478-1	—	69727
		Dual Crimp	Gold	Nickel	TEFLON	Mil Type	—	225974-1	69478-1	220189-3	69727
		Single Crimp	Gold	Silver	TEFLON	Mil Type	—	331175	69140-1	—	69223-1
E	55, 55A 55B, 223	Dual Crimp	Gold	Nickel	TEFLON	Mil Type	—	225974-2	69478-1	220189-3	69727
		Single Crimp	Gold	Silver	TEFLON	Mil Type	—	331182	69140-2	—	69429-1
E1	142, 142A 142B, 400	Single Crimp	Gold	Silver	TEFLON	Mil Type	—	331182	69331-1	—	69429-1
		Dual Crimp	Gold	Silver	TEFLON	Mil Type	—	225973-4	69478-1	220189-3	69727
G	124, 140 210 62, 62A, 62B 59, 59A, 59B Belden 9291, 9209, 9269	Hex Crimp	Gold	Nickel	Polymethyl-pentene	Commercial	—	413959-2	—	58436-1	—
		Dual Crimp	Gold	Silver	TEFLON	Mil Type	—	225973-5	69477-1	58537-1	69669-1
		Dual Crimp	Gold	Nickel	TEFLON	Mil Type	—	225974-5	69477-1	58537-1	69669-1
		Single Crimp	Gold	Silver	TEFLON	Mil Type	—	331176	69141-1	—	69224-1
K2	Belden 8281, 9141, 9231 Western Electric 724, 728, 3049	Single Crimp	Gold	Silver	TEFLON	Mil Type	—	50635	69652	—	220000

†Refer to Appendix Pages for code specifications.

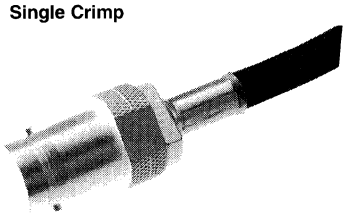
SOURCE: Catalog 82074

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

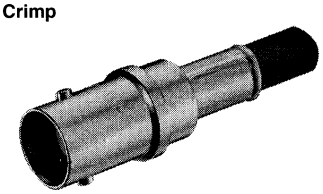
BNC Connectors, 50 Ohm
(Continued)

Jacks, Crimp

Single Crimp



Dual Crimp



Connector Cable Range Selection Code†	RG/U Cable	Termination Type	Center Contact Plating	Body Plating	Dielectric	Style	M39012/ Military No. and/or Comments	Part No.	CERTI-CRIMP Hand Tool with Integral Die	Interchangeable Dies for PRO-CRIMPER II Hand Tool	Interchangeable Dies for Hand Tool 69710-1 & Pneu. Tools 69365 & 69365-3
B	174, 188, 188A 316	Hex Crimp	Gold	Nickel	Polymethyl-pentene	Commercial	—	413779-3	—	58436-3	—
		Dual Crimp	Gold	Nickel	TEFLON	Mil Type	—	225396-7	220009-1	—	220026-1
		Dual Crimp	Gold	Nickel	Polypro-pylene	Commercial	—	228979-7	220009-5	—	220217-3
		Dual Crimp	Gold	Silver	TEFLON	Mil Type	—	2-331351-4	220009-1	—	220026-1
		Single Crimp	Gold	Nickel	TEFLON	Mil Type	—	2-330062-1	69245-1	—	69422
B1	179, 179A, 179B, 161, 187, 187A, Belden 9221	Hex Crimp	Gold	Nickel	Polymethyl-pentene	Commercial	—	413779-4	—	58436-3	—
		Dual Crimp	Gold	Nickel	TEFLON	Mil Type	—	225396-8	220009-1	—	220026-1
C1	180, 180A, 180B, 195' 195A	Hex Crimp	Gold	Nickel	Polymethyl-pentene	Commercial	—	413779-5	—	58436-3	—
		Dual Crimp	Gold	Nickel	TEFLON	Mil Type	—	225396-9	69477-2	—	69669-2
C2	Belden 89907, 9907, 8219, Comm/Scope 3104, 2104	Hex Crimp	Gold	Nickel	Polymethyl-pentene	Commercial	—	413779-6	—	58436-1	—
		Dual Crimp	Gold	Nickel	Polypro-pylene	Commercial	—	1-228979-3	220187-1	58435-1	220217-1
D	58, 58A, 58B, 58C	Dual Crimp	Gold	Nickel	TEFLON	Mil Type	—	225396-1	69478-1	220189-3	69727
		Dual Crimp	Gold	Nickel	Polypro-pylene	Commercial	—	228979-5	220187-1	58435-1[1]	220217-1
		Dual Crimp	Gold	Silver	TEFLON	Mil Type	17B0004	2-331351-1	69478-1	220189-3	69727
		Single Crimp	Gold	Nickel	TEFLON	Mil Type	—	2-329545-1	69140-1	—	69223-1
D, D2	58, 58A, 58B, 58C, Belden 88240, Berk-Tek BTDC-58 Comm/Scope 2135	Hex Crimp	Gold	Nickel	Polymethyl-pentene	Commercial	—	413779-1	—	58436-1	—
D1, D2	141, 141A, 303 Belden 88240 Berk-Tek BTDC-58	Dual Crimp	Gold	Nickel	TEFLON	Mil Type	—	2-225396-1	69478-1	220189-3	69727
E	223, 55, 55A, 55B	Single Crimp	Gold	Silver	TEFLON	Mil Type	—	2-329452-2	69140-2	—	69424
G	124, 140, 210, 62, 62A, 62B, 59, 59A, 59B, Belden 9291, 9209, 9269	Hex Crimp	Gold	Nickel	Polymethyl-pentene	Commercial	—	413779-2	—	58436-1	—
		Dual Crimp	Gold	Nickel	Polypro-pylene	Commercial	—	228979-6	220187-2	58435-1[1]	220217-2
		Dual Crimp	Gold	Nickel	TEFLON	Mil Type	—	225396-2	69477-1	58537-1	69669-1
		Dual Crimp	Gold	Silver	TEFLON	Mil Type	17B0008	331351	69477-1	—	69669-1
		Single Crimp	Gold	Silver	Polypro-pylene	Mil Type	—	2-329063-1	69141-1	—	69224-1
		Single Crimp	Gold	Silver	TEFLON	Mil Type	—	2-329549-1	69141-1	—	69224-1

†Refer to Appendix Pages for code specifications.
[1]Order PRO-CRIMPER II Coaxial "O" Crimp Hand Tool Assembly **Part No. 58433-1**, which includes dies **Part No. 58435-1**.

SOURCE: Catalog 82074

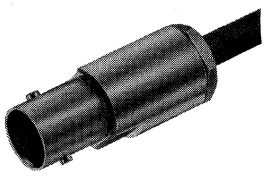
Specifications subject to change.

1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

BNC Connectors, 50 Ohm
(Continued)

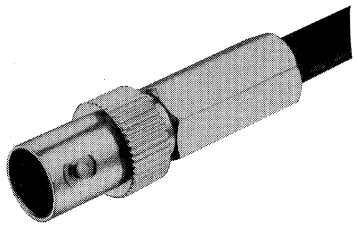
Jacks, Field Serviceable



Connector Cable Range Selection Code†	RG/U Cable	Termination Type	Center Contact Plating	Body Plating	Dielectric	Style	M39012/ Military No. and/or Comments	Part No.
D, D1 E, E1	58, 58A, 58B, 58C, 141, 141A 223, 55, 55A, 55B, 142, 142A, 142B, 400	Solder Clamp	Gold	Silver	TEFLON	Mil Type	17-0101 Category A UG-88/U	221295-1
G, G1 H	124, 140, 210, 62, 62A, 62B, 59, 59A, 59B, Belden 9291, 9209, 9269, 89269, 88241, Hi-Temp 62A, Times PL-62, Berk-Tek BTDC-59, BTDC-62, 302, 71, 71A, 71B	Solder Clamp	Gold	Silver	TEFLON	Mil Type	17-0102 Category A UG-260/U	221295-2

†Refer to Appendix Pages for code specifications.

Jacks, Twist-On

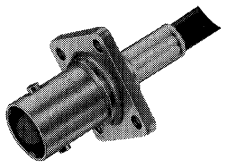


Mates with—Twist-On Plugs, see page 4007

Connector Cable Range Selection Code†	RG/U Cable	Termination Type	Center Contact Plating	Body Plating	Dielectric	Style	M39012/ Military No. and/or Comments	Part No.
D	58,58B	Twist-On	Gold	Nickel	Acetal	Commercial	—	222428-7
D2	Belden 88240	Twist-On	Gold	Nickel	Acetal	Commercial	—	1-222428-1
G	59, 59A, 59B	Twist-On	Gold	Nickel	Acetal	Commercial	—	222428-1
G1	Belden 88241	Twist-On	Gold	Nickel	Acetal	Commercial	—	1-222428-3

†Refer to Appendix Pages for code specifications.
Note: Twist-On jacks must be used with cable that has a solid conductor. These jacks are not recommended for applications where the cable frequently moves or flexes.

Panel Jacks, Crimp



Connector Cable Range Selection Code†	RG/U Cable	Termination Type	Center Contact Plating	Body Plating	Dielectric	Style	M39012/ Military No. and/or Comments	Part No.	CERTI-CRIMP Hand Tool with Integral Die	Interchangeable Dies for PRO-CRIMPER II Hand Tool	Interchangeable Dies for Hand Tool 69710-1 & Pneu. Tools 69365 & 69365-3
B	174, 188, 188A, 316	Dual Crimp	Gold	Nickel	TEFLON	Mil Type	—	225397-7	220009-1	—	220026-1
B3	RD 316, 188	Dual Crimp	Gold	Nickel	TEFLON	Mil Type	—	1-225397-4	220009-1	—	220026-1
D	58, 58A, 58B, 58C	Dual Crimp	Gold	Nickel	—	Mil Type	—	225397-1	69478-1	220189-3	69727
G	124, 140, 210, 62, 62A, 62B, 59, 59A, 59B, Belden 9291, 9209 9269, 89269	Dual Crimp	Gold	Nickel	TEFLON	Mil Type	—	225397-2	69477-1	220189-4	69669-1

†Refer to Appendix Pages for code specifications.

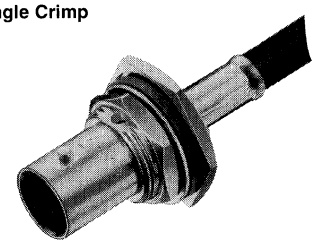
SOURCE: Catalog 82074

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

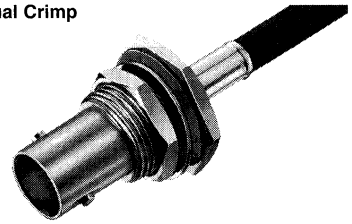
BNC Connectors, 50 Ohm
(Continued)

Bulkhead Jacks, Crimp

Single Crimp



Dual Crimp



Connector Cable Range Selection Code†	RG/U Cable	Termination Type	Center Contact Plating	Body Plating	Dielectric	Style	M39012/ Military No. and/or Comments	Part No.	CERTI-CRIMP Hand Tool with Integral Die	Interchangeable Dies for PRO-CRIMPER II Hand Tool	Interchangeable Dies for Hand Tool 69710-1 & Pneu. Tools 69365 & 69365-3
A	178, 178A, 178B, 196, 196A	Single Crimp	Gold	Silver	TEFLON	Mil Type	—	331974	69245-4	—	69471
B	174, 188, 188A, 316	Hex Crimp	Gold	Nickel	Polymethyl-pentene	Commercial	—	413771-3	—	58436-3	—
		Dual Crimp	Gold	Nickel	TEFLON	Mil Type	—	225398-7	220009-1	—	220026-1
		Dual Crimp	Gold	Nickel	Polypro-pylene	Commercial	—	228980-7	220009-5	—	220217-3
		Dual Crimp	Gold	Silver	TEFLON	Mil Type	—	1-331693-2	220009-1	—	220026-1
		Single Crimp	Gold	Silver	Polypro-pylene	Mil Type	—	2-330060-1	69245-2	—	69422
		Single Crimp	Gold	Nickel	Polypro-pylene	Mil Type	—	2-330060-2	69245-2	—	69422
		Single Crimp	Gold	Silver	TEFLON	Mil Type	—	2-330063-1	69245-2	—	69422
B1	179, 179A, 179B, 161, 187, 187A Belden 9221	Hex Crimp	Gold	Nickel	Polymethyl-pentene	Commercial	—	413771-4	—	58436-3	—
		Dual Crimp	Gold	Nickel	TEFLON	Mil Type	—	225398-8	220009-1	—	220026-1
		Single Crimp	Gold	Silver	Polypro-pylene	Mil Type	—	2-329092-1	69245-1	—	69408
		Single Crimp	Gold	Silver	TEFLON	Mil Type	—	2-329458-1	69245-1	—	69408
B2	IBM 5353914 Brand Rex T-209A	Dual Crimp	Gold	Silver	TEFLON	Mil Type	—	2-331693-5	69477-2	—	69669-2
B3	Times RD316	Dual Crimp	Gold	Nickel	TEFLON	Mil Type	—	1-225398-5	69477-2	—	69669-2
C1	180, 180A 180B, 195; 195A	Hex Crimp	Gold	Nickel	Polymethyl-pentene	Commercial	—	413771-5	—	58436-3	—
		Dual Crimp	Gold	Nickel	TEFLON	Mil Type	—	225398-9	69477-2	—	69669-2
C2	Belden 9907, 89907, 8219 Comm/Scope 2104, 3104	Hex Crimp	Gold	Nickel	Polymethyl-pentene	Commercial	—	413771-6	—	58436-1	—
		Dual Crimp	Gold	Nickel	Polypro-pylene	Commercial	—	1-228980-6[2]	220187-1	58435-1[1]	220217-1
		Dual Crimp	Gold	Nickel	Polypro-pylene	Commercial	—	1-228980-5	220187-1	58435-1[1]	220217-1

†Refer to Appendix Pages for code specifications.
[1]Order PRO-CRIMPER II Coaxial "O" Crimp Hand Tool Assembly **Part No. 58433-1**, which includes dies **Part No. 58435-1**.
[2]For use with Belden 89907, Comm/Scope 2104 cable only.
Note: For Mil Type Dual Crimp Bulkhead Jacks, use Panel Insulating Bushing **Part No. 330620** (2 required).

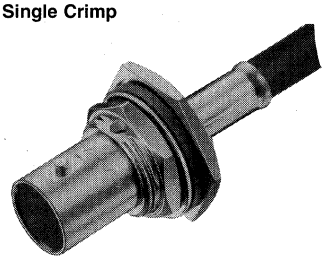
SOURCE: Catalog 82074

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

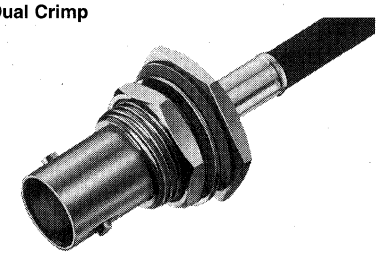
BNC Connectors, 50 Ohm
(Continued)

Bulkhead Jacks, Crimp
(Continued)

Single Crimp



Dual Crimp



Connector Cable Range Selection Code†	RG/U Cable	Termination Type	Center Contact Plating	Body Plating	Dielectric	Style	M39012/ Military No. and/or Comments	Part No.	CERTI-CRIMP Hand Tool with Integral Die	Interchangeable Dies for PRO-CRIMPER II Hand Tool	Interchangeable Dies for Hand Tool 69710-1 & Pneu. Tools 69365 & 69365-3
C3	Belden 8218	Dual Crimp	Gold	Silver	TEFLON	Mil Type	—	1-331693-0	69477-2	—	69669-2
D, D2	58, 58A, 58B 58C, Belden 88240, Berk-Tek BTDC-58, Comm/ Scope 2135	Hex Crimp	Gold	Nickel	Polymethyl-pentene	Commercial	—	413771-1	—	58436-1	—
D	58, 58A 58B, 58C	Dual Crimp	Gold	Nickel	TEFLON	Mil Type	—	225398-1	69478-1	220189-3	69727
		Dual Crimp	Gold	Nickel	Polypro-pylene	Commercial	—	228980-5	220187-1	58435-1[1]	220217-1
		Dual Crimp	Gold	Silver	TEFLON	Mil Type	19B0003	1-331693-1	69478-1	220189-3	69727
		Single Crimp	Gold	Silver	TEFLON	Mil Type	—	2-329456-1	69140-1	—	69223-1
E	223 55, 55A, 55B	Dual Crimp	Gold	Nickel	TEFLON	Mil Type	—	225398-3	69478-1	220189-3	69727
E1	142, 142A, 142B, 400	Dual Crimp	Gold	Nickel	TEFLON	Mil Type	—	225398-6	69478-1	220189-3	69727
		Single Crimp	Gold	Silver	TEFLON	Mil Type	—	2-329456-2	69331-1	—	69429-1
G	124, 140, 210, 62, 62A, 62B, 59, 59A, 59B, Belden 9291, 9209, 9269	Hex Crimp	Gold	Nickel	Polymethyl-pentene	Commercial	—	413771-2	—	58436-1	—
		Dual Crimp	Gold	Nickel	TEFLON	Mil Type	—	225398-2	69477-1	58537-1	69669-1
		Dual Crimp	Gold	Nickel	Polypro-pylene	Commercial	—	228980-6	220187-2	58435-1[1]	220217-2
		Dual Crimp	Gold	Silver	TEFLON	Mil Type	19B0007	331693	69477-1	58537-1	69669-1
		Single Crimp	Gold	Silver	TEFLON	Mil Type	—	2-329457-1	69141-1	—	69224-1
G4	Belden 9104, 9112, 9240, 9167, 9259, 9266 Times FM-59	Dual Crimp	Gold	Nickel	TEFLON	Mil Type	—	1-225398-2	69477-1	58537-1	69669-1
K2	Belden 8281, 9141, 9231, Western Electric 724, 728, 3049	Single Crimp	Gold	Silver	Polypro-pylene	Mil Type	—	331300	69652	—	220000

†Refer to Appendix Pages for code specifications.
[1]Order PRO-CRIMPER II Coaxial "O" Crimp Hand Tool Assembly **Part No. 58433-1**, which includes dies **Part No. 58435-1**.
Note: For Mil Type Dual Crimp Bulkhead Jacks, use Panel Insulating Bushing **Part No. 330620** (2 required).

SOURCE: Catalog 82074

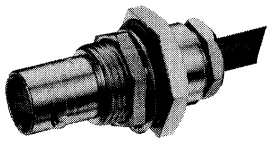
Specifications subject to change.

1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

BNC Connectors, 50 Ohm
(Continued)

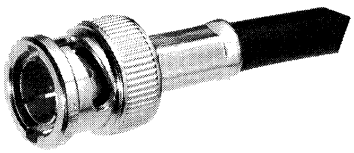
Bulkhead Jacks, Field Serviceable



Connector Cable Range Selection Code†	RG/U Cable	Termination Type	Center Contact Plating	Body Plating	Dielectric	Style	M39012/ Military No. and/or Comments	AMP Part No.
D, D1 E, E1	58, 58A, 58B, 58C, 141, 141A, 223, 55, 55A, 55B, 142, 142A, 142B, 400	Solder Clamp	Gold	Silver	TEFLON	Mil Type	19-0101 Category A	221313-1
G, G1 H	124, 140, 210, 62, 62A, 62B, 59, 59A, 59B, Belden 9291, 9209, 9269, 89269, 88241 Hi-Temp 62A, Times PL-62, Berk-Tek BTDC-59, BTDC-62, 302, 71, 71A, 71B	Solder Clamp	Gold	Silver	TEFLON	Mil Type	19-0102 Category A	221313-2

†Refer to Appendix Pages for code specifications.
Note: Use Panel Insulating Bushing **Part No. 330620** (2 required).

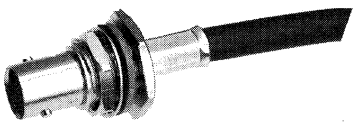
BNC Connectors, 50 Ohm and 75 Ohm, JIS Cable Connectors, Japanese Industry Standard



Plugs

JIS Cable	Termination Type	Impedance	Part No.	Interchangeable Dies for Hand Tool PRO-CRIMPER II
5C-2V	Hex Crimp	75 ohm	1-413589-2	852922-3
3C-2V	Hex Crimp	75 ohm	1-413589-1	852922-1
3C-2W	Hex Crimp	75 ohm	1-413589-4	852922-1
2.5C-2V	Hex Crimp	75 ohm	1-413589-6	852922-2
2.5C-2W	Hex Crimp	75 ohm	1-413589-5	852922-1
1.5C-2V	Hex Crimp	75 ohm	1-413589-3	852922-2
3D-2V	Hex Crimp	50 ohm	3-221128-1	58465-1
1.5D-2V	Hex Crimp	50 ohm	3-221128-2	58465-3

Bulkhead Jacks



JIS Cable	Termination Type	Impedance	Part No.	Interchangeable Dies for Hand Tool PRO-CRIMPER II
3C-2V	Hex Crimp	75 ohm	1-413590-4*	852922-1
3C-2W	Hex Crimp	75 ohm	1-413590-1*	852922-1
2.5C-2V	Hex Crimp	75 ohm	1-413590-3*	852922-2
2.5C-2W	Hex Crimp	75 ohm	1-413590-2*	852922-1
1.5C-2V	Hex Crimp	75 ohm	413590-4**	852922-2

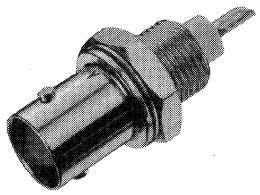
Note: All parts are packaged in 25 pieces per bag unless otherwise noted.
**Individually packaged.
**Packaged in 100 pieces per bag.

SOURCE: Catalog 82074

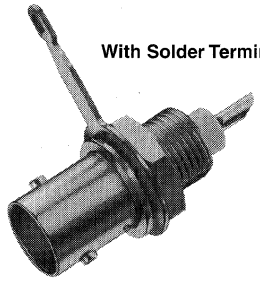
Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

BNC Connectors, 50 Ohm
(Continued)
Bulkhead Solder Jacks

Without Solder Terminal



With Solder Terminal



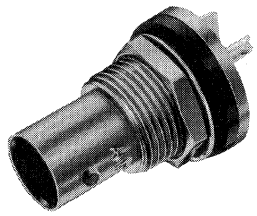
Contact Material	Dieletric	Style	Part Numbers: Without Solder Terminal*	Part Numbers: With Solder Terminal**	Panel Thickness	Insulating Bushing Part No.
Silver	VALOX	Commercial	227754-3	227755-3	**.046 -.125** 1.17 -3.18	227223-1 or 221951-1
Gold	VALOX	Commercial	227169-3	227169-7	**.046 -.250** 1.17 -6.35	
		Commercial	227754-2	227755-2	**.046 -.125** 1.17 -3.18	
	TEFLON	Commercial	227169-4	227169-8	**.046 -.250** 1.17 -6.35	
		Commercial	227715-3	227716-3	**.046 -.125** 1.17 -3.18	
Gold	VALOX	Commercial	222024-1	—	**.125** 3.18 Max.	221955-1

*Includes lockwasher and jam nut.
**Includes solder terminal and jam nut.

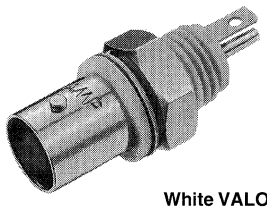
Sealed Bulkhead Solder Jack

Note: This connector is designed to prevent moisture from entering the interface from the rear of the connector.

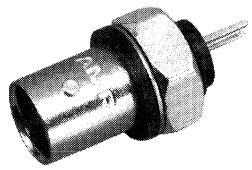
Part No. 227426-1



Isolated Bulkhead Solder Jacks



White VALOX



Black VALOX

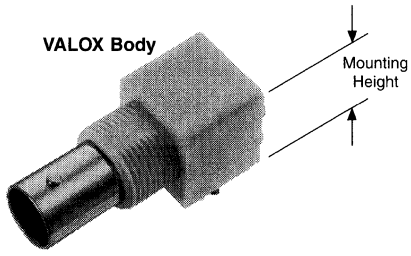
Center Contact Plating	Body Plating	Dielectric	Panel Thickness	Part No.
Tin	Nickel	White VALOX	**.046-.250** 1.17-6.35	227726-1
Silver			**.046-.250** 1.17-6.35	227726-2
Gold			**.046-.250** 1.17-6.35	227726-3
Gold		Black VALOX	**.046-.125** 1.17-3.18	414194-1

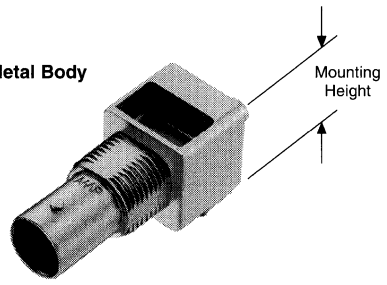
SOURCE: Catalog 82074

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

BNC Connectors, 50 Ohm
(Continued)

Right-Angle PC Board/Panel Mount Jacks

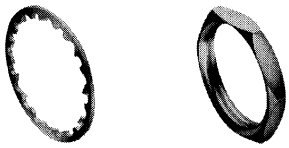




Body Material	Center Contact Plating	Mounting Height Dim.	Part Numbers	
			Without Mounting Posts	With Mounting Posts
VALOX, White	Tin-Lead	**.625** [15.88]	226990-1	227161-1
	Gold[1]	**.625** [15.88]	226990-3	227161-3
	Gold[1]	**.519** [13.18]	—	227161-7
	Tin-Lead	**.519** [13.18]	226990-7	—
VALOX, Black	Tin-Lead	**.625** [15.88]	226990-2	227161-2
	Gold[1]	**.625** [15.88]	226990-6	227161-6
	Gold[1]	**.519** [13.18]	—	227161-9
High Temperature Polyester, Grey	Gold[1]	**.519** [13.18]	—	1-227161-3
Metal	Tin-Lead	**.625** [15.88]	227433-1	227661-1
	Gold[1]	**.625** [15.88]	227676-1	227677-1
	Gold[1]	**.500** [12.70]	—	413879-1
	Gold[2]	**.500** [12.70]	—	413879-2

Plating:
[1] Gold—.000030 [0.00076] thick
[2] Gold—.000050 [0.00127] thick
Note: 1. If an Insulating Bushing is required, use **Part No. 330620**.
2. Maximum panel thickness .240 [6.1].

Lockwasher and Jam Nut



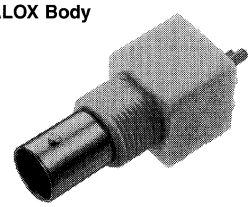
Part No. 1-329632-2 **Part No. 1-329631-2**

2-56 Self-Tapping Screw for panel thickness of 3/32 [2.38] or greater **Part No. 221108-2.**

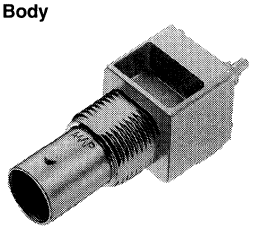
2-56 Self-Tapping Screw for panel thickness of less than 3/32 [2.38] **Part No. 221108-4.**

Vertical PC Board/ Panel Mount Jacks

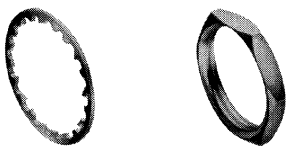
VALOX Body



Metal Body



Lockwasher and Jam Nut



Part No. 1-329632-2 **Part No. 1-329631-2**

2-56 Self-Tapping Screw for panel thickness of 3/32 [2.38] or greater **Part No. 221108-2.**

2-56 Self-Tapping Screw for panel thickness of less than 3/32 [2.38] **Part No. 221108-4.**

Body Material	Center Contact Plating	Part Numbers	
		Without Mounting Posts	With Mounting Posts
VALOX, White	Tin-Lead	226993-1	227222-1
	Gold	226993-3	227222-3
VALOX, Black	Tin-Lead	226993-2	227222-2
	Gold	226993-6	227222-6
Metal	Tin-Lead	227670-1	227671-1
	Gold	227672-1	227673-1

Notes: 1. If an Insulating Bushing is required, use **Part No. 330620**.
2. Maximum panel thickness .240 [6.1].

SOURCE: Catalog 82074

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

BNC Connectors, 50 Ohm
(Continued)

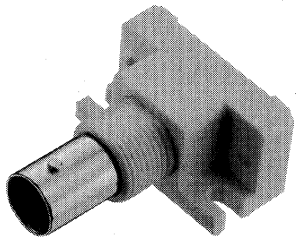
PC Board/Panel Mount Jacks with Mounting Flanges

Lockwasher and Jam Nut

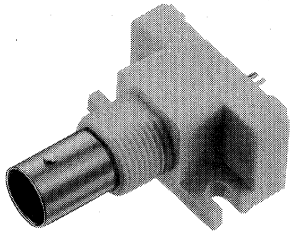
Part No. 1-329632-2

Part No. 1-329631-2

Right-Angle Mount



Vertical Mount

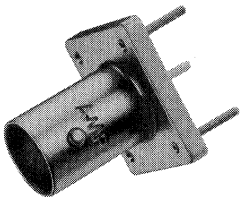


Body Material	Center Contact Plating	Part Numbers	
		Right-Angle Mount	Vertical Mount
VALOX, White	Tin	226978-1	—
	Gold	226978-3	226987-7

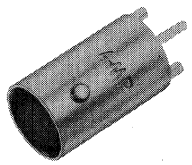
Note: Maximum panel thickness .240 [6.1].

Vertical Metalized PC Board Mount Jacks

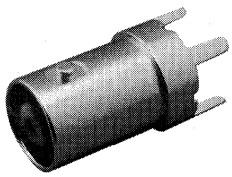
Style A



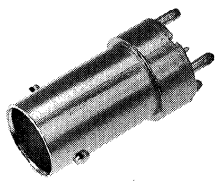
Style B



Style C



Style D

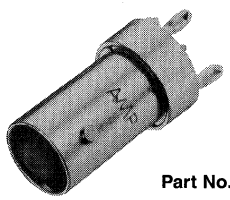


Style	Body Plating	Center Contact Plating	Dielectric	Part Numbers
A	Nickel	Silver	VALOX	227699-1
A		Gold	VALOX	227699-2
A		Tin	VALOX	227699-3
B		Gold	VALOX	221123-2
B		Tin	VALOX	221123-3
C		Silver	VALOX	222420-1
D		Silver	TEFLON	413969-1
D		Gold	TEFLON	413969-2
C	Tin-Lead	Silver	VALOX	414305-1[2]
C		Silver	VALOX	414305-2[3]
C		Gold	VALOX	414305-3[2]
A	Nickel	Gold	VALOX	414460-1[1]

[1] With .030 [.76] standoffs on top of legs.
[2] Leg Length .125 [3.18].
[3] Leg Length .175 [4.45].

Insulating Bushing
Part No. 222163-1

Press-Fit Terminal



Part No. 222006-1

Specifications subject to change.
1-800-522-6752
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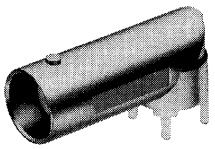
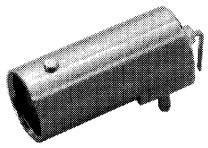
BNC Connectors, 50 Ohm
(Continued)

Right-Angle PC Board Mount Jacks



Style A

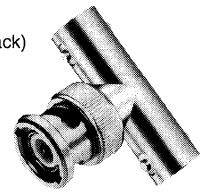


Style B

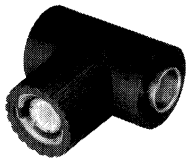
Style	Body Plating	Center Contact Leg Length	Part Number
A	Nickel	**.171** 4.34	413631-1
A	Tin-Lead	**.171** 4.34	413631-2
A	Nickel	**.131** 3.33	413631-3
B	Nickel	—	414373-1

Tee Adapters

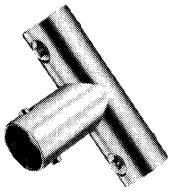
Style A (Jack-Plug-Jack)



Style B With Insulated Cover (Jack-Plug-Jack)



Style C (Jack-Jack-Jack)

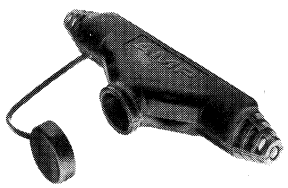


Style	Body Material and Plating	Center Contact Material and Plating	Dielectric	Part No.	Comparable UG/U Connector	Packaging Number Per Pkg.
A	Brass, Nickel	BE CU, Gold (30)[4]	TEFLON	221543-2	274A	Bulk (100)
	Zinc, Nickel	PH BR, Gold (15)[4]	Acetal	413592-2	—	Bulk (100)
		PH BR, Silver (200)[4]	Acetal	413592-4	—	Bulk (100)
		BE CU, Gold (30)[4]	Acetal	413592-6	—	Bulk (100)
		BE CU, Silver (200)[4]	Acetal	413592-8	—	Bulk (100)
		PH BR, Gold (15)[4]	Acetal	413592-9	—	Individual (1)[5]
		PH BR, Silver (200)[4]	Acetal	1-413592-0	—	Individual (1)[5]
		BE CU, Silver (200)[4]	Acetal	1-413592-1	—	Individual (1)
		BE CU, Gold (30)[4]	Acetal	1-413592-4	—	Bulk
		PH BR, Silver (200)[4]	Acetal	1-413592-5	—	Bulk (5)
		PH BR, Gold (15)[4]	Acetal	1-413592-7	—	Blister (5)
	Brass, Nickel	BE CU, Silver (200)[4]	TEFLON	329518	274B	Individual (1)
B	Zinc, Nickel	PH BR, Gold (15)[4]	Acetal	413366-1[1] 413366-2[2]	—	Bulk (100)
		PH BR, Gold (15)[4]	Acetal	413366-3[2,3]	—	Bulk (100)
C	Brass, Nickel	BE CU, Silver (200)[4]	TEFLON	221988-1	—	Bulk (100)
	Zinc, Nickel	PH BR, Gold (50)[4]	Acetal	414311-1	—	Bulk (100)

[1]Black insulation cover [2]Gray insulation cover [3]Without insulation cap [4](Microinches min thickness) [5](Special graphics)

Tee Adapter Covers

Color	Part No.
Black	221586-1
Ivory	221586-3



SOURCE: Catalog 82074

Specifications subject to change.
1-800-522-6752
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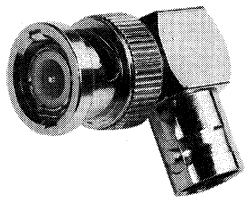
1-800-722-1111
Tooling/Technical Assistance Center

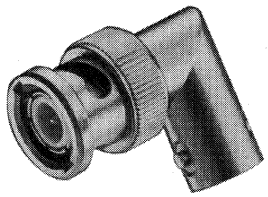
BNC Connectors, 50 Ohm
(Continued)

Right-Angle Adapters
(Jack-Plug)

Style A

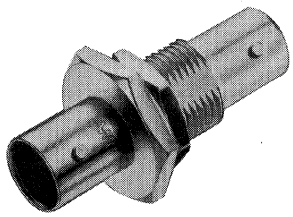


Style B



Style	Body Plating	Center Contact Plating	Dielectric	Part No.
A	Nickel	Silver	TEFLON	329517
A	Nickel	Gold	TEFLON	222165-2
B	Nickel	Gold	Polymethylpentene	414666-1

Bulkhead Jack Adapters
(Jack-Jack)



Isolated

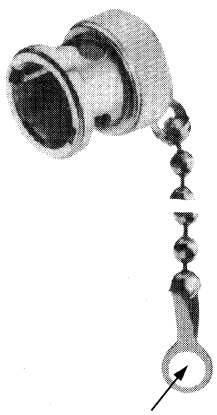
Body Plating	Center Contact Plating	Dielectric	Part No.
Nickel	Gold[1]	Polymethylpentene	414105-1
Nickel	Silver	Polymethylpentene	414105-2

Non-Isolated

Body Plating	Center Contact Plating	Dielectric	Part No.	Comparable UG/U Connector
Nickel	Silver	TEFLON	330024	492D
Nickel	Gold[1]	Polyethylene	228226-1	—
Nickel	Gold[2]	Polyethylene	228226-3	—

Plating:
[1]Gold—.000050 [0.00127] thick
[2]Gold—.000015 [0.00076] thick
Note: If an Insulating Bushing is required, use **Part No. 330620**.

Jack Covers



Body Plating	Part No.	Comparable UG/U Connector
Silver	330022	CW123-A
Nickel	1-330022-2	

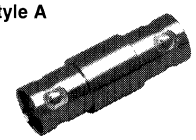
Note: Chain Length—2.00 [50.8].

SOURCE: Catalog 82074

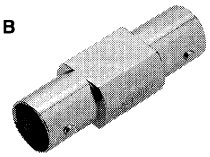
BNC Connectors, 50 Ohm
(Continued)

Feed-Thru Adapters
(Jack-Jack)

Style A

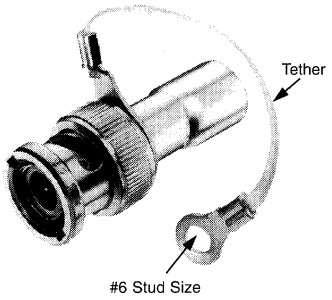


Style B



Style	Body Plating	Center Contact Plating	Dielectric	Part No.	Comparable UG/U Connector
A	Nickel	Silver	TEFLON	221551-1	914
A	Nickel	Gold	TEFLON	221551-3	
B	Nickel	Gold	Polymethyl-pentene	414414-1	—

Terminator Plugs 50, 75, 93 Ohm

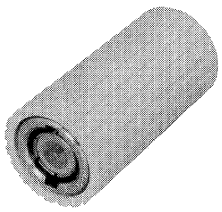


Resistor Specification	Part Numbers	
	With Tether	Without Tether
1 Watt, 50 Ohm	221629-1	221629-4
1 Watt, 75 Ohm	221629-2	221629-5
1 Watt, 93 Ohm	221629-3	221629-6
0.5 Watt, 75 Ohm	1-221629-1[2]	—
1 Watt, 50 Ohm	1-221629-6[1]	—

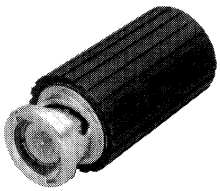
[1] Tether is conductive with #4 stud size
[2] With chain assembly

Insulated Terminators

Long Cover



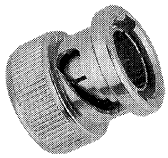
Short Cover*



Resistor Specification	Color	Cover Style	Part No.
1 Watt, 50 Ohm	Gray	Long	413557-1
		Short	413364-2
	Black	Long	413557-2
		Short	413364-1

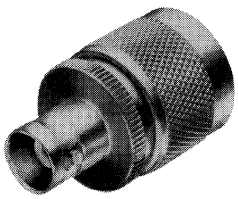
*The Short Cover is required when mating the Terminator with a Tee Adapter.

Shorting Caps

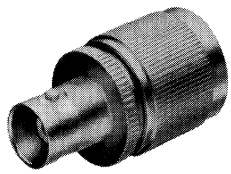


Part No. 413453-1

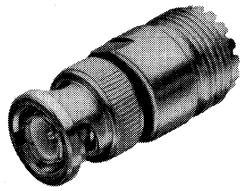
Adapters, Between Series



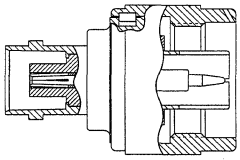
BNC Jack to N Plug
Part No. 222321-1



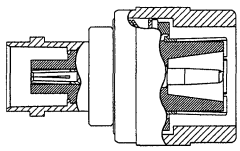
BNC Jack to UHF Plug
Part No. 222320-1



BNC Plug to UHF Jack
Part No. 222319-1



N Plug to BNC Jack
Part No. 447918-1



C Plug to BNC Jack
Part No. 447919-1

SOURCE: Catalog 82074

Specifications subject to change.
1-800-522-6752
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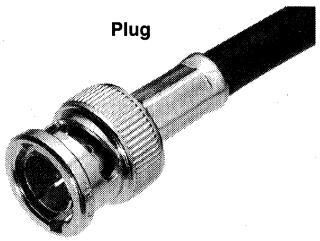
BNC Connectors, 75 Ohm

Plugs, Crimp

These connectors have been designed for optimum performance and have a true 75 ohm impedance the complete length of the connector. The crimp die tooling listed below is different from the equivalent 50 ohm connectors.



Connector Cable Range Selection Code†	RG/U Cable	Termination Type	Center Contact Plating	Body Plating	Dielectric	Style	M39012/ Military No. and/or Comments	Part No.	CERTI-CRIMP Hand Tool with Integral Die	Interchangeable Dies for PRO-CRIMPER II Hand Tool	Interchangeable Dies for Hand Tool 69710-1 & Pneu. Tools 69365 & 69365-3
B1	179, 179A, 179B, 187, 187A, 161, Belden 9221	Hex Crimp	Gold	Nickel	Polymethyl-pentene	Commercial	—	413589-8	—	58425-2	—
		Dual Crimp	Gold	Nickel	Polymethyl-pentene	Commercial	—	221185-8	—	58304-1	—
B4	AT&T 735A	Hex Crimp	Gold	Nickel	Polymethyl-pentene	Commercial	—	1-413589-0	—	58425-2	—
		Dual Crimp	Gold	Nickel	Polymethyl-pentene	Commercial	—	1-221185-8	—	58174-1	—
B5	AT&T KS 19224 L2	Hex Crimp	Gold	Nickel	Polymethyl-pentene	Commercial	—	413589-4	—	58425-2	—
C3	Belden 8218	Hex Crimp	Gold	Nickel	Polymethyl-pentene	Commercial	—	413589-3	—	58425-2	—
		Dual Crimp	Gold	Nickel	Polymethyl-pentene	Commercial	—	221185-3	—	58174-1	58248-3
G	140, 210, 62, 62A, 62B, 59, 59A, 59B, Belden 9291, 9209, 9269	Hex Crimp	Gold	Nickel	Polymethyl-pentene	Commercial	—	413589-2	—	58425-1	—
		Dual Crimp	Gold	Nickel	Polymethyl-pentene	Commercial	—	221185-2	—	58536-1	58248-2
G1	302, Belden 89269, 88241, Hi-Temp 62A, Times PL-62, Berk Tek BTDC-59, BTDC-62	Hex Crimp	Gold	Nickel	Polymethyl-pentene	Commercial	—	413589-1	—	58425-1	—
G4	Belden 8212, 9104, 9112, 9167, 9240, 9259, 9266, Times FM-59, (RG-59 Type with 20 AWG C.C.)	Hex Crimp	Gold	Nickel	Polymethyl-pentene	Commercial	—	413589-9	—	58425-1	—
		Dual Crimp	Gold	Nickel	Polymethyl-pentene	Commercial	—	221185-9	—	58536-1	58248-2
G5	Belden 9145, AT&T 734A	Hex Crimp	Gold	Nickel	Polymethyl-pentene	Commercial	—	413589-7	—	58425-1	—
		Dual Crimp	Gold	Nickel	Polymethyl-pentene	Commercial	—	1-221185-0	—	58536-1	—
J1	Belden 9248, 9114	Dual Crimp	Gold	Nickel	Polymethyl-pentene	Commercial	—	221185-1	—	58536-1	—
K	6, 6A	Dual Crimp	Gold	Nickel	Polymethyl-pentene	Commercial	—	221185-7	—	58538-1	58248-1
K2	Belden 8281, 9141, 9231, Western Electric 724, 728, 3049	Hex Crimp	Gold	Nickel	Polymethyl-pentene	Commercial	—	413589-5	—	58425-3	—
		Dual Crimp	Gold	Nickel	Polymethyl-pentene	Commercial	—	221185-5	—	58538-1	58248-1

†Refer to Appendix Pages for code specifications.

SOURCE: Catalog 82074

Specifications subject to change.

1-800-522-6752
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BNC Connectors, 75 Ohm

(Continued)

Right-Angle Plugs, Crimp

These connectors have been designed for optimum performance and have a true 75 ohm impedance the complete length of the connector. The crimp die tooling listed below is different from the equivalent 50 ohm connectors.

Right-Angle Plug

Connector Cable Range Selection Code†	RG/U Cable	Termination Type	Center Contact Plating	Body Plating	Dielectric	Style	M39012/ Military No. and/or Comments	Part No.	CERTI-CRIMP Hand Tool with Integral Die	Interchangeable Dies for PRO-CRIMPER II Hand Tool	Interchangeable Dies for Hand Tool 69710-1 & Pneu. Tools 69365 & 69365-3
B1	179, 179A, 179B, 187, 187A, 161 Belden 9221	Hex Crimp	Gold	Nickel	Polymethyl-pentene	Commercial	—	413588-8	—	58425-2	—
B4	AT&T 735A	Hex Crimp	Gold	Nickel	Polymethyl-pentene	Commercial	—	1-413588-0	—	852922-2	—
B5	AT&T KS 19224 L2	Hex Crimp	Gold	Nickel	Polymethyl-pentene	Commercial	—	413588-4	—	58425-2	—
C3	Belden 8218	Hex Crimp	Gold	Nickel	Polymethyl-pentene	Commercial	—	413588-3	—	58425-2	—
		Dual Crimp	Gold	Nickel	Polymethyl-pentene	Commercial	—	221402-3	—	58174-1	58248-3
G	140, 210, 62, 62A, 62B, 59, 59A, 59B, Belden 9291, 9209, 9269	Hex Crimp	Gold	Nickel	Polymethyl-pentene	Commercial	—	413588-2	—	58425-1	—
		Dual Crimp	Gold	Nickel	Polymethyl-pentene	Commercial	—	221402-2	—	58085-1	58248-2
G1	302, Belden 88241, 89269, Hi-Temp 62A, Times PL-62, Berk Tek BTDC-59, BTDC-62	Hex Crimp	Gold	Nickel	Polymethyl-pentene	Commercial	—	413588-1	—	58425-1	—
G3	Double Braided 59	Hex Crimp	Gold	Nickel	Polymethyl-pentene	Commercial	—	413588-6	—	58425-3	—
G4	Belden 8212, 9104, 9112, 9240, 9167, 9259, 9266, Times FM-59, (RG-59 Type with 20 AWG C.C.)	Hex Crimp	Gold	Nickel	Polymethyl-pentene	Commercial	—	413588-9	—	58425-1	—
G5	Belden 9145, AT&T 734A	Hex Crimp	Gold	Nickel	Polymethyl-pentene	Commercial	—	413588-7	—	58425-1	—
		Dual Crimp	Gold	Nickel	Polymethyl-pentene	Commercial	—	221402-4	—	58536-1	—
J1	Belden 9248, 9114	Dual Crimp	Gold	Nickel	Polymethyl-pentene	Commercial	—	221402-1	—	58086-1	—
K2	Belden 8281, 9141, 9231, Western Electric 724, 728, 3049	Hex Crimp	Gold	Nickel	Polymethyl-pentene	Commercial	—	413588-5	—	58425-3	—

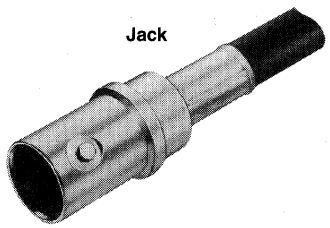
†Refer to Appendix Pages for code specifications.

SOURCE: Catalog 82074

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

BNC Connectors, 75 Ohm
(Continued)

Jacks, Crimp



Connector Cable Range Selection Code†	RG/U Cable	Termination Type	Center Contact Plating	Body Plating	Dielectric	Style	M39012/ Military No. and/or Comments	Part No.	CERTI-CRIMP Hand Tool with Integral Die	Interchangeable Dies for PRO-CRIMPER II Hand Tool	Interchangeable Dies for Hand Tool 69710-1 & Pneu. Tools 69365 & 69365-3
B1	179, 179A, 179B, 161, 187, 187A, Belden 9221	Hex Crimp	Gold	Nickel	Polymethyl-pentene	Commercial	—	413760-8	—	58425-2	—
		Dual Crimp	Gold	Nickel	Polymethyl-pentene	Commercial	—	221199-5	—	58304-1	—
B4	AT&T 735A	Dual Crimp	Gold	Nickel	Polymethyl-pentene	Commercial	—	221199-6	—	58174-1	—
B5	AT&T KS 19224 L2	Hex Crimp	Gold	Nickel	Polymethyl-pentene	Commercial	—	413760-4	—	58425-2	—
C3	Belden 8218	Hex Crimp	Gold	Nickel	Polymethyl-pentene	Commercial	—	413760-3	—	58425-2	—
G	140, 210, 62, 62A, 62B, 59, 59A, 59B, Belden 9291, 9209, 9269	Hex Crimp	Gold	Nickel	Polymethyl-pentene	Commercial	—	413760-2	—	58425-1	—
		Dual Crimp	Gold	Nickel	Polymethyl-pentene	Commercial	—	221199-2	—	58536-1	58248-2
G1	302, Belden 88241, 89269, Hi-Temp 62A, Times PL-62, Berk Tek BTDC-59, BTDC-62	Hex Crimp	Gold	Nickel	Polymethyl-pentene	Commercial	—	413760-1	—	58425-1	—
G3	Double Shielded RG-59	Hex Crimp	Gold	Nickel	Polymethyl-pentene	Commercial	—	413760-6	—	58425-3	—
G4	Belden 8212, 9104, 9112, 9240, 9167, 9259, 9266, Times FM-59, (RG-59 Type with 20 AWG C.C.)	Hex Crimp	Gold	Nickel	Polymethyl-pentene	Commercial	—	413760-9	—	58425-1	—
G5	AT&T 734A, Belden 9145	Hex Crimp	Gold	Nickel	Polymethyl-pentene	Commercial	—	413760-7	—	58425-1	—
J1	Belden 9248, 9114	Dual Crimp	Gold	Nickel	Polymethyl-pentene	Commercial	—	221199-1	—	58536-1	—
K2	Belden 8281, 9141, 9231, Western Electric 724, 728, 3049	Hex Crimp	Gold	Nickel	Polymethyl-pentene	Commercial	—	413760-5	—	58425-3	—

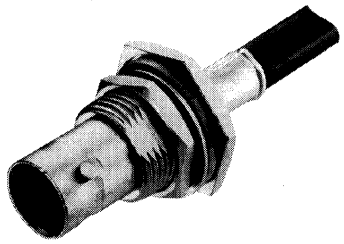
†Refer to Appendix Pages for code specifications.

SOURCE: Catalog 82074

BNC Connectors, 75 Ohm
(Continued)

Bulkhead Jacks, Crimp

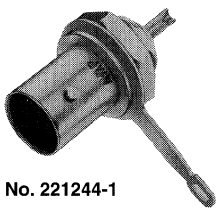
Bulkhead Jack



Connector Cable Range Selection Code†	RG/U Cable	Termination Type	Center Contact Plating	Body Plating	Dielectric	Style	M39012/ Military No. and/or Comments	Part No.	CERTI-CRIMP Hand Tool with Integral Die	Interchangeable Dies for PRO-CRIMPER II Hand Tool	Interchangeable Dies for Hand Tool 69710-1 & Pneu. Tools 69365 & 69365-3
B1	179, 179A, 179B, 161, 187, 187A, Belden 9221	Hex Crimp	Gold	Nickel	Polymethyl-pentene	Commercial	—	413590-8	—	58425-2	—
		Dual Crimp	Gold	Nickel	Polymethyl-pentene	Commercial	—	221221-5	—	58304-1	—
B5	AT&T KS 19224 L2	Hex Crimp	Gold	Nickel	Polymethyl-pentene	Commercial	—	413590-4	—	58425-2	—
C3	Belden 8218	Hex Crimp	Gold	Nickel	Polymethyl-pentene	Commercial	—	413590-3	—	58425-2	—
		Dual Crimp	Gold	Nickel	Polymethyl-pentene	Commercial	—	221221-3	—	58174-1	58248-3
G	140, 210, 62, 62A, 62B, 59, 59A, 59B, Belden 9291, 9209, 9269	Hex Crimp	Gold	Nickel	Polymethyl-pentene	Commercial	—	413590-2	—	58425-1	—
		Dual Crimp	Gold	Nickel	Polymethyl-pentene	Commercial	—	221221-2	—	58085-1	58248-2
G1	302, Belden 88241, 89269, Hi-Temp 62A, Times PL-62, Berk Tek BTDC-59, BTDC-62	Hex Crimp	Gold	Nickel	Polymethyl-pentene	Commercial	—	413590-1	—	58425-1	—
G3	Double Shield RG-59	Hex Crimp	Gold	Nickel	Polymethyl-pentene	Commercial	—	413590-6	—	58425-3	—
G4	Belden 8212, 9104, 9112, 9240, 9167, 9259, 9266, Times FM-59 (RG-59 Type with 20 AWG C.C.)	Hex Crimp	Gold	Nickel	Polymethyl-pentene	Commercial	—	413590-9	—	58425-1	—
		Dual Crimp	Gold	Nickel	Polymethyl-pentene	Commercial	—	221221-7	—	58536-1	58248-2
G5	AT&T 734A, Belden 9145	Hex Crimp	Gold	Nickel	Polymethyl-pentene	Commercial	—	413590-7	—	58425-1	—
J1	Belden 9114, 9248	Dual Crimp	Gold	Nickel	Polymethyl-pentene	Commercial	—	221221-1	—	58536-1	—
K2	Belden 8281, 9141, 9231, Western Electric 724, 728, 3049	Hex Crimp	Gold	Nickel	Polymethyl-pentene	Commercial	—	413590-5	—	58425-3	—

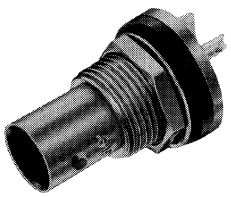
†Refer to Appendix Pages for code specifications.

Bulkhead Solder Jack



Part No. 221244-1

Sealed Bulkhead Solder Jack



Part No. 414217-1

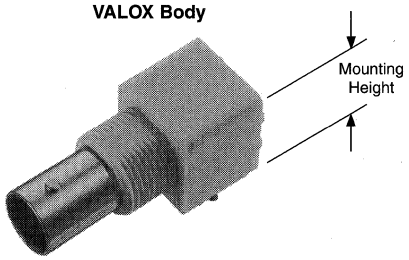
SOURCE: Catalog 82074

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

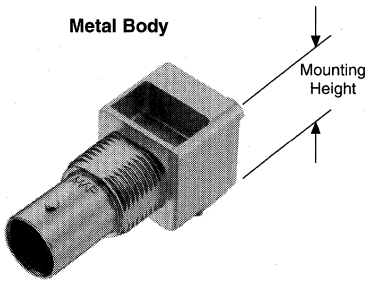
BNC Connectors, 75 Ohm
(Continued)

Right-Angle PC Board/Panel Mount Jacks

VALOX Body



Metal Body



Body Material	Center Contact Plating	Mounting Height Dim.	Part Number
VALOX, White	Gold[1]	**.519** 13.18	413194-1
VALOX, Black	Gold[1]	**.519** 13.18	413194-2
VALOX, White	Gold[2]	**.625** 15.88	414459-1
Metal	Gold[1]	**.625** 15.88	222092-1
Metal	Gold[1]	**.625** 15.88	222093-1*
Metal	Gold[1]	**.519** 13.18	414907-1

Plating:
[1] Gold—.000030 [0.00076] thick
[2] Gold—.000050 [0.00127] thick
* Without mounting posts
Notes: 1. If an Insulating Bushing is required use **Part No. 330620**.
2. Maximum panel thickness .240 [6.1].

Lockwasher and Jam Nut

Part No. 1-329632-2

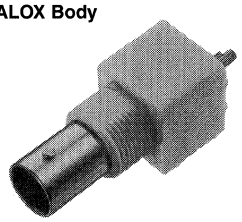
Part No. 1-329631-2

2-56 Self-Tapping Screw for panel thickness of 3/32 [2.38] or greater
Part No. 221108-2

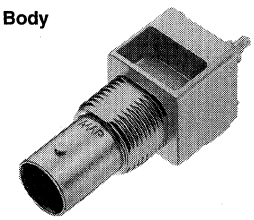
2-56 Self-Tapping Screw for panel thickness of less than 3/32 [2.38]
Part No. 221108-4

Vertical PC Board/Panel Mount Jacks

VALOX Body



Metal Body



Body Material	Center Contact Plating	Part Number
VALOX, Black	Gold[1]	413528-1
VALOX, Black	Silver	413528-2
VALOX, Black	Gold[2]	413528-3
Metal	Gold[1]	222132-1

Plating:
[1] Gold—.000030 [0.00076] thick
[2] Gold—.000050 [0.00127] thick
Notes: 1. If an Insulating Bushing is required use **Part No. 330620**.
2. Maximum panel thickness .240 [6.1].

Lockwasher and Jam Nut

Part No. 1-329632-2

Part No. 1-329631-2

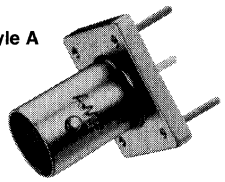
2-56 Self-Tapping Screw for panel thickness of 3/32 [2.38] or greater
Part No. 221108-2

2-56 Self-Tapping Screw for panel thickness of less than 3/32 [2.38]
Part No. 221108-4

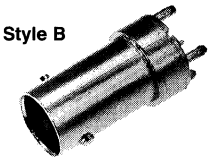
BNC Connectors, 75 Ohm
(Continued)

Vertical Metalized PC Board Mount Jacks

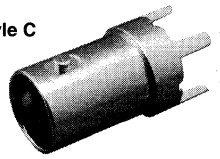
Style A



Style B



Style C

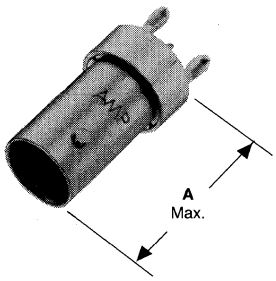


Insulating Bushing
Part No. 222163-1

Body Plating	Center Contact Plating	Part Numbers	Style
Nickel	Gold	413885-1	B
Tin-Lead	Gold	413885-3[1]	B
Tin-Lead	Gold	414353-1[2]	B
Tin-Lead	Gold	414394-1	C
Nickel	Silver	413986-1	A

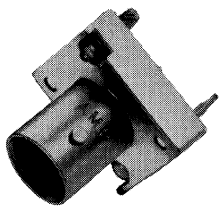
[1] Leg length .130 [3.30]
[2] Leg length .250 [6.35]

Press-Fit Jacks



Dim. A	Part No.
.810 20.57	222462-1
.640 16.26	414088-1

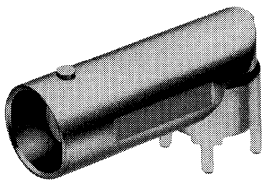
Press-Fit Vertical Metalized Pc Board Mount Jacks



Pc Board Thickness .093 [2.36] Min.
Part No. 221336-1

Pc Board Thickness .125 [3.18] Min.
Part No. 221336-3

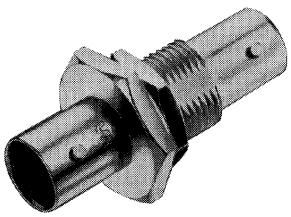
Right-Angle PC Board Mount Jack



Part No. 413558-1
Body Plating—Nickel

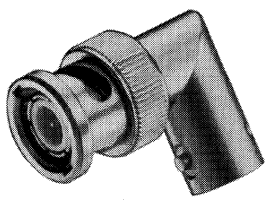
Part No. 413558-2
Body Plating—Tin-Lead

Bulkhead Jack Adapter



Part No. 222117-1

Right-Angle Adapter
(Jack-Plug)



Part No. 415020-1

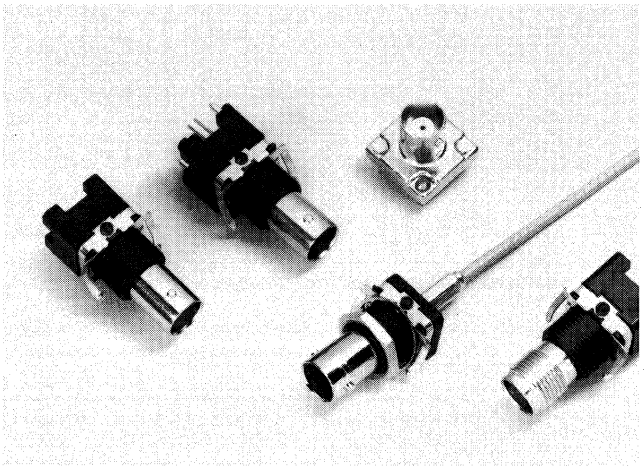
SOURCE: Catalog 82074

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

Decoupled Connectors

Product Facts

- **Built-in chip capacitors filter high-frequency noise to panel ground**
- **Pc board mounting with vertical and standard or low-profile right-angle configurations**
- **Cable mount bulkhead BNC version available**
- **Drop-in replacement for AMP standard BNC printed circuit board connectors**
- **One-piece design and robotic capacity to reduce assembly time**



AMP Capacitively Decoupled connectors provide the fast, sure way to reduce noise and eliminate ground loops on coaxial interconnections. The high-frequency noise generated by fast rise times can cause both false triggering of circuits as well as emissions that can be radiated or conducted outside the equipment. Such emissions can interfere with nearby equipment. Ground loops are also a problem for networked systems. Ground loops are caused when two interconnected units are at different voltage potentials.

The typical way to handle such EMI and ground loop problems is to decouple the cable shield from the ground panel by soldering a ceramic disk capacitor between the cable shield and the panel. The capacitor shunts high-frequency noise to ground. While effective, this approach is time consuming and expensive.

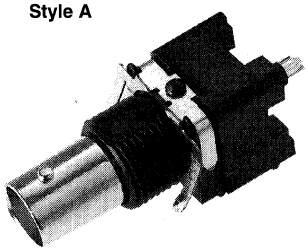
The Capacitively Decoupled connector has built-in chip capacitors. These capacitors establish the electrical contact between the outer shield and a clip. This clip provides a short electrical path between the capacitors and panel. As a result, high-frequency noise is effectively shunted to ground, while the DC path is blocked.

The connectors offer compatibility in design and manufacture. The same footprint and dimensional envelope make them a drop-in replacement for AMP standard BNC or TNC printed circuit board connectors. In addition, they can be robotically picked and placed for high-speed automated assembly to pc boards.

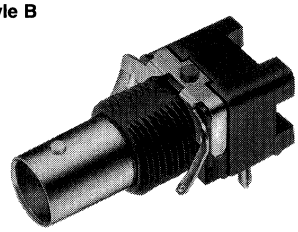
Pc Board/Panel Mount Capacitively Decoupled Jacks

Note: All styles are shown with a standard clip.

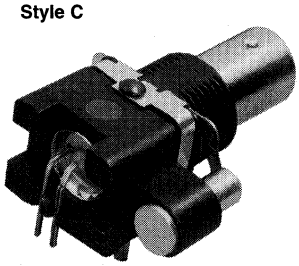
Vertical Mount BNC
Style A



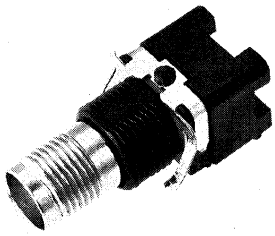
Right-Angle Mount BNC
Style B



Right-Angle Mount BNC with Mounting Ear
Style C



Right-Angle Mount TNC
Style D

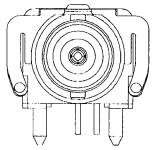


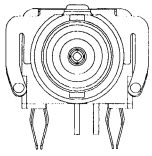
Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

Decoupled Connectors
(Continued)

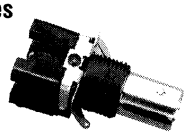
Pc Board/Panel Mount Capacitively Decoupled Jacks

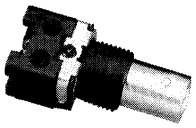
Mounting Post Styles

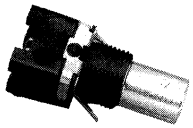

Standard

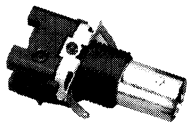

Compliant

Clip Styles


Standard


Flush
For closer centerline-to-centerline connector spacing


Extended
For use with or without a jam nut


Short Electrical Path
For reduced series inductance in ground path

Description	Capacitance/ Voltage	Clip	Mounting Post	Style[1]	Part No.
Vertical	9400pF 1500V	Standard	Standard	A	413476-2
	9400pF 1500V	Flush	Standard	A	413476-4
	9400pF 1500V	Standard	Standard	A	413476-5
Low Profile Right-Angle	9400pF 1500V	Standard	Standard	B	413515-2
	20000pF 500V	Standard	Standard	B	413515-3
	9400pF 1500V	Flush	Standard	B	413515-5
	7900pF 1600V	Standard	Compliant	B	413515-6[2]
	7900pF 1600V	Standard	Compliant	B	413515-7[3]
	9400pF 1500V	Standard	Compliant	B	413515-8[2]
	9400pF 1500V	Standard	Compliant	B	413515-9[3]
Standard Right-Angle	9400pF 1500V	Standard	Standard	B	413524-2
	9400pF 1500V	Flush	Standard	B	413524-4
	9400pF 1500V	Standard	Compliant	B	413524-5
Low Profile Right-Angle W/Mounting Ear	7900pF 1600V	Standard	Standard	C	413711-1
	7900pF 1600V	Standard	Compliant	C	413711-2[2]
	7900pF 1600V	Standard	Compliant	C	413711-3[3]
Low Profile Right-Angle 75 Ohm	9400pF 500V	Standard	Standard	B	414094-1
Low Profile Right-Angle TNC	5400pF 1500V	Standard	Standard	D	414138-1
Standard Right-Angle W/O Mounting Post	9400pF 1500V	Standard	—	B	414215-1
Low Profile Right-Angle W/Special Clip & High Temperature Housing	9400pF 500V	Extended	Compliant	B	414284-1[2]
	9400pF 500V	Extended	Compliant	B	414284-2[3]
Low Profile Right-Angle W/High Temperature Housing	9400pF 500V	Flush	Compliant	B	414352-1
Low Profile Right-Angle Shortened Electrical Path Clip	9400pF 1500V	Short Electrical Path	Compliant	B	414458-1

[1]See page 4026 for Connector Styles
[2]Mounting post length .185 [4.70]
[3]Mounting post length .110 [2.79]

SOURCE: Catalog 82074

Specifications subject to change.
1-800-522-6752
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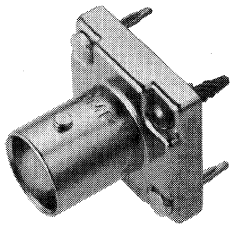
1-800-722-1111
Tooling/Technical Assistance Center

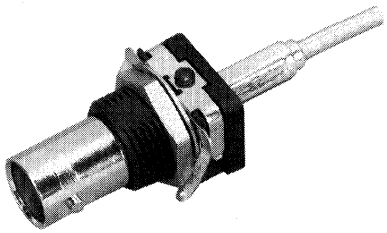
Decoupled Connectors
(Continued)

BNC Jack, PC Board
ACTION PIN Contacts



Part No. 414553-1, 50 Ohm
Part No. 414493-1, 75 Ohm

BNC Bulkhead Jacks, Crimp



Connector Cable Range Selection Code†	RG/U Cable	Termination Type	Center Contact Plating	Body Plating	Dielectric	Style	Part No.	Interchangeable Dies for Hand Tool 69710-1 & Pneu. Tools 69365 & 69365-3
D	RG58, 58A, 58B, 58C	Hex Crimp	Gold	Nickel	Polymethylpentene	Commercial	414758-1	58465-1
B	RG174, 174A, 316, 188, 188A	Hex Crimp	Gold	Nickel	Polymethylpentene	Commercial	414758-2	58465-3

†Refer to Appendix Pages for code specifications.

SOURCE: Catalog 82074

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
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Self-Terminating Pc Board Connectors

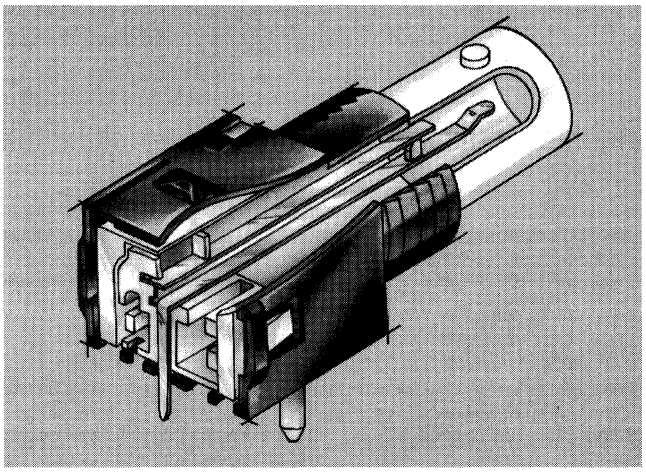
Product Facts

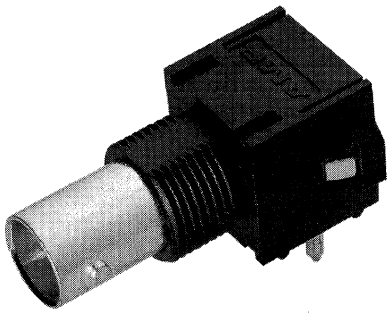
- **Built-in chip resistor terminates the signal line to the proper characteristic impedance when in the unmated state**
- **Can be ordered with standard resistance values (50, 75 and 100 ohms)**
- **Fits into printed circuit board footprint of standard BNC PCB connectors**
- **One-piece design is compatible with robotic insertion and wave soldering**

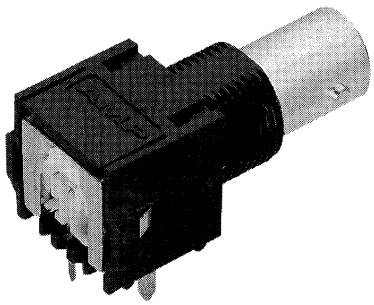
AMP Self-Terminating printed circuit board BNC connectors provide the capability to automatically terminate an input-output port to the system characteristic impedance. This feature eliminates the need for external terminators when an I/O port is not being used. The Self-Terminating BNC jack contains a chip resistor which bridges the signal and ground paths when the connector is not mated to a BNC plug. When mated, the resistor is switched out of the circuit for direct signal transmission to the board.

The footprint of this connector is compatible with standard BNC connectors, allowing it to be easily installed into existing circuit board designs and suitable for robotic insertion for high speed automated assembly onto the Pc board.

The Self-Terminating BNC jack is available in standard resistance values for use in networking and video systems. Contact AMP for new designs that include switching and capacitively decoupled versions.







Material

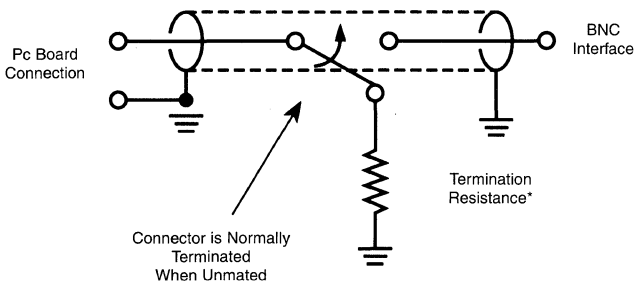
Body—Polyester, PBT, black

Dielectric—Polyester, PBT, natural

Plating

Shell—Tin lead

Center Contact—Gold on mating end and tin-lead on solder tails



Description	Termination Resistance*	Part Number
Self-Terminating BNC PCB	50Ω	414367-1
	75Ω	414367-2
	100Ω	414367-3

SOURCE: Catalog 82074

Specifications subject to change.
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1-800-722-1111
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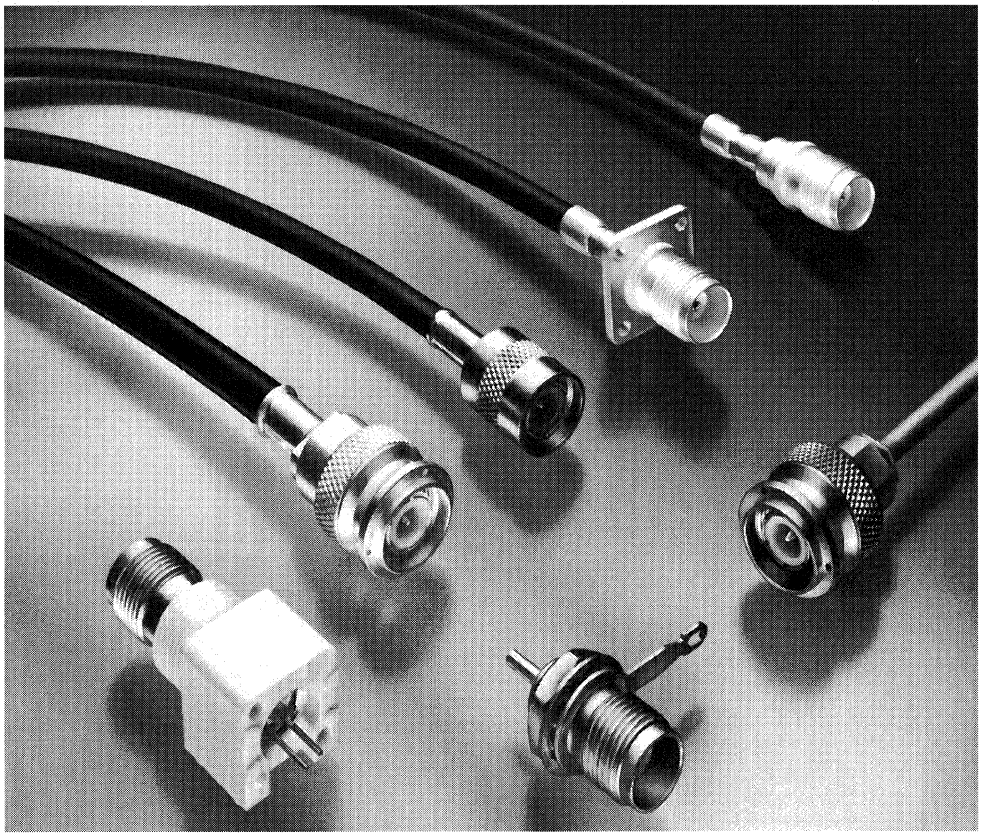
TNC Connectors



Product Facts

Single Crimp Connectors

- **Fast application—one crimping operation terminates inner conductor, outer braid and cable support**
- **Low application cost**

Dual Crimp Connectors

- **Manufactured in accordance with all requirements of MIL-C-39012, Class II, Category B**
- **Choice of dielectric materials**
- **Standard and weatherproof versions available**
- **Plugs available for high temperature cable**
- **Low cost commercial type available**
- **Commercial type is smaller and lighter weight**
- **Provides excellent performance at frequencies up to 7 GHz**
- **Tarnish resistant nickel finish**
- **50 and 75 ohm commercial versions available**

Connectors for Semi-Rigid Cable

- **Standard cable stripping dimensions**
- **Universal cable termination common to all configurations**

The AMP TNC RF connector family, with 7/16-28 threaded couplings, provides low noise levels and optimum stability, and can withstand the shock and vibration often present in hostile environments.

Available in both 50 and 75 ohm versions, these connectors feature numerous styles including cable plugs and jacks, adapters and printed circuit board connectors. These connectors accept a wide range of coaxial cables and are intermateable with industry standard connectors designed to MIL-C-39012 specifications.

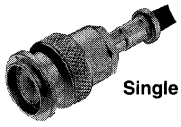
Single crimp connectors provide reduced application time and lower applied costs. This is accomplished by using AMP one-crimp operation tooling which simultaneously terminates the inner conductor, outer braid and cable support with one controlled stroke.

When applications require military approved connectors, note that various dual crimp connectors meet or exceed all the requirements in specification MIL-C-39012, Class II, Category B, and carry the appropriate military designation number. For reduced cost with a high degree of reliability, these same connectors are offered in a tarnish-resistant nickel finish.

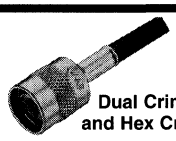
AMP can also supply low-cost alternatives with a commercial type product line. These connectors are designed around the mil-specifications, offering comparable mechanical and electrical performance.

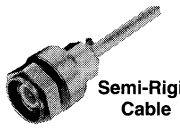
SOURCE: Catalog 82074

TNC Connectors, 50 Ohm
Plugs, Crimp


Single Crimp

Mil Type Dual Crimp


Dual Crimp and Hex Crimp


Semi-Rigid Cable

Connector Cable Range Selection Code†	RG/U Cable	Termination Type	Center Contact Plating	Body Plating	Dielectric	Style	M39012/ Military No. and/or Comments	Part No.	CERTI-CRIMP Hand Tool with Integral Die	Interchangeable Dies for PRO-CRIMPER II Hand Tool	Interchangeable Dies for Hand Tool 69710-1 & Pneu. Tools 69365 & 69365-3
B	174, 188, 188A, 316	Hex Crimp	Gold	Nickel	Polypropylene	Commercial	—	222506-5	—	58465-3	—
		Dual Crimp	Gold	Nickel	Polypropylene	Commercial	—	5-227000-0	220009-5	220210-1	—
B1	179, 179A, 179B 161, 187, 187A Belden 9221	Hex Crimp	Gold	Nickel	Polypropylene	Commercial	—	222506-6	—	58465-3	—
		Single Crimp	Gold	Silver	TEFLON	Mil Type	—	331103	69245-1	—	64908
B3	RD316 188 Double Braid	Hex Crimp	Gold	Nickel	Polypropylene	Commercial	—	222506-9	—	58465-3	—
		Dual Crimp	Gold	Nickel	Polypropylene	Commercial	—	5-227000-1	69477-4	58330-1	—
C1	180, 180A, 180B 195, 195A	Hex Crimp	Gold	Nickel	Polypropylene	Commercial	—	222506-7	—	58465-3	—
D	58, 58A, 58B, 58C	Hex Crimp	Gold	Nickel	Polypropylene	Commercial	—	222506-1	—	58436-1[2]	—
		Dual Crimp	Gold	Silver	TEFLON	Mil Type	26B0005	225550-2	220045-2	—	—
		Dual Crimp	Gold	Nickel	TEFLON	Mil Type	Weatherproof	225555-2	220045-2	—	—
		Single Crimp	Gold	Silver	TEFLON	Mil Type	—	330953	69376-3	—	69815
D, D1	58, 58A, 58B, 58C 141, 141A, 303	Dual Crimp	Gold	Nickel	Polypropylene	Commercial	—	227000-5	220187-1	58435-1[1]	220217-1
D1	141, 141A, 303	Dual Crimp	Gold	Nickel	TEFLON	Mil Type	Weatherproof	225555-5	220045-2	—	—
D1	Belden 9907, 89907 Comm/Scope 3104, 2104, RG141, 141A, 303	Hex Crimp	Gold	Nickel	Polypropylene	Commercial	—	222506-8	—	58465-1	—
E	223, 55, 55A, 55B	Dual Crimp	Gold	Silver	TEFLON	Mil Type	26B0016 Weatherproof	225550-1	220045-2	—	—
		Single Crimp	Gold	Silver	TEFLON	Mil Type	Weatherproof	2-330953-3	69376-3	—	69815
		Hex Crimp	Gold	Nickel	Polypropylene	Commercial	—	1-222506-1	—	58465-1	—
E1	142, 142A 142B 400	Hex Crimp	Gold	Nickel	Polypropylene	Commercial	—	222506-4	—	58465-1	—
		Dual Crimp	Gold	Silver	TEFLON	Mil Type	26B0006	225345-6	220045-2	—	—
		Dual Crimp	Gold	Nickel	Polypropylene	Commercial	—	4-227000-6	220187-1	58435-1[1]	220217-1
		Dual Crimp	Gold	Silver	TEFLON	Mil Type	26B0006 Weatherproof	225550-6	220045-2	—	—
		Dual Crimp	Gold	Nickel	TEFLON	Mil Type	Weatherproof	225555-6	220045-2	—	—
		Single Crimp	Gold	Silver	TEFLON	Mil Type	Weatherproof	2-330953-2	69376	—	69493-1
G	124, 140, 210 62, 62A, 62B 59, 59A, 59B Belden 9291 9209, 9269	Hex Crimp	Gold	Nickel	Polypropylene	Commercial	—	222506-2	—	58436-1[2]	—
		Dual Crimp	Gold	Silver	TEFLON	Mil Type	26B0007 Weatherproof	225550-3	220045-3	—	—
		Dual Crimp	Gold	Nickel	TEFLON	Mil Type	Weatherproof	225555-3	220045-3	—	—
		Dual Crimp	Gold	Nickel	Polypropylene	Commercial	—	227000-7	220187-2	58435-1[1]	220217-2
		Single Crimp	Gold	Silver	TEFLON	Mil Type	—	331100	69141-1	—	69224-1
J1	Belden 9248, 9114	Dual Crimp	Tin-Lead	Nickel	Polypropylene	Commercial	—	1-227000-7	220247-1	220244-1	—
M	8, 8A, 213	Dual Crimp	Gold	Nickel	TEFLON	Mil Type	Weatherproof	225555-7	220015-1	—	—
M3	Alpha 9847, Belden 8213, 9292	Dual Crimp	Gold	Silver	TEFLON	Mil Type	Weatherproof	1-225550-3	220015-1	—	—
M4	225, 393	Dual Crimp	Gold	Silver	TEFLON	Mil Type	Weatherproof	1-225550-2	220015-1	—	—

[1]Order PRO-CRIMPER II Coaxial "O" Crimp Hand Tool Assembly **Part No. 58433-1**, which includes dies **Part No. 58435-1.**
[2]Order PRO-CRIMPER II Coaxial Hex Crimp Hand Tool Assembly **Part No. 58433-2**, which includes dies **Part No. 58436-1.**
†Refer to Appendix Pages for code specifications.

SOURCE: Catalog 82074

Specifications subject to change.

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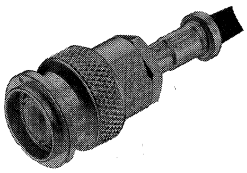
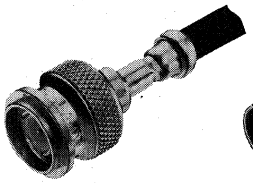
Tooling/Technical Assistance Center

TNC Connectors, 50 Ohm
(Continued)

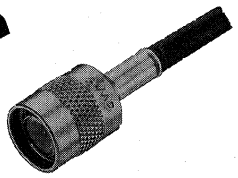
Plugs, Crimp
(Continued)



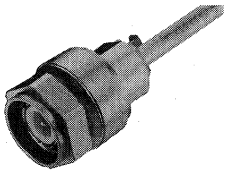
Single Crimp



Mil Type Dual Crimp



Dual Crimp and Hex Crimp

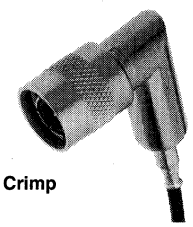


Semi-Rigid Cable

Connector Cable Range Selection Code†	RG/U Cable	Termination Type	Center Contact Plating	Body Plating	Dielectric	Style	M39012/ Military No. and/or Comments	Part No.	CERTI-CRIMP Hand Tool with Integral Die	Interchangeable Dies for PRO-CRIMPER II Hand Tool	Interchangeable Dies for Hand Tool 69710-1 & Pneu. Tools 69365 & 69365-3
N	9, 9A, 9B, 214	Dual Crimp	Gold	Silver	TEFLON	Mil Type	Weatherproof	225550-8	220015-1	—	—
		Dual Crimp	Gold	Nickel	TEFLON	Mil Type	Weatherproof	225555-8	220015-1	—	—
		Dual Crimp	Gold	Silver	TEFLON	Mil Type	—	225345-8	220015-1	—	—
O	402 Semi-Rigid/.141	Crimp	Gold	Nickel	TEFLON	Commercial	—	228179-2	—	[1]	[2]
		Crimp	Gold	Nickel	TEFLON	Commercial	Weatherproof	228179-3	—	[3]	[4]

†Refer to Appendix Pages for code specifications.
[1]Hand Tool **Part No. 59980-1**, requires (2) Crimping Dies **Part No. 312253-1** and (1) Locator **Part No. 220220-2.**
[2]Pneumatic Tool **Part No. 58318-1**, requires (2) Crimping Dies **Part No. 313720-1** and (1) Locator **Part No. 220241-1**.
[3]Hand Tool **Part No. 59980-1**, requires (2) Crimping Dies **Part No. 312253-1** and (1) Locator **Part No. 312644-1**.
[4]Pneumatic Tool **Part No. 59964-1**, requires (2) Crimping Dies **Part No. 220243-1** and (1) Locator **Part No. 312645-1**.

Right-Angle Plugs, Crimp



Dual Crimp

Weatherproof

Connector Cable Range Selection Code†	RG/U Cable	Termination Type	Center Contact Plating	Body Plating	Dielectric	Style	M39012/ Military No. and/or Comments	Part No.	CERTI-CRIMP Hand Tool with Integral Die	Interchangeable Dies for PRO-CRIMPER II Hand Tool	Interchangeable Dies for Hand Tool 69710-1 & Pneu. Tools 69365 & 69365-3
B	174, 174A, 188 188A, 316	Dual Crimp	Gold	Nickel	Polymethyl-pentene	Commercial	—	414173-3	—	220210-1	—
B3	RD 188, 316 Double Braid	Dual Crimp	Gold	Nickel	Polymethyl-pentene	Commercial	—	414173-4	—	58330-1	—
D	58, 58A, 58B 58C	Dual Crimp	Gold	Silver	TEFLON	Mil Type	Weatherproof	225554-2	220045-2	—	—
		Dual Crimp	Gold	Nickel	TEFLON	Mil Type	Weatherproof	225559-2	220045-2	—	—
D, D1	58, 58A, 58B, 58C 141, 141A, 303	Dual Crimp	Gold	Nickel	Polymethyl-pentene	Commercial	—	414173-1	—	220189-1	—
D1	141, 141A, 303	Dual Crimp	Gold	Silver	TEFLON	Mil Type	—	225349-5	220045-2	—	—
E	55, 55A, 55B 223	Dual Crimp	Gold	Nickel	Polymethyl-pentene	Commercial	—	414173-6	—	220189-1	—
E1	142, 142A, 142B 400	Dual Crimp	Gold	Silver	TEFLON	Mil Type	Weatherproof	225554-6	220045-2	—	—
		Dual Crimp	Gold	Nickel	Polymethyl-pentene	Commercial	—	414173-5	—	220189-1	—
G	124, 140, 210, 62 62A, 62B, 59, 59A 59B, Belden 9291 9209, 9269	Dual Crimp	Gold	Nickel	TEFLON	Mil Type	—	225403-3	220045-3	—	—
		Dual Crimp	Gold	Nickel	Polymethyl-pentene	Commercial	—	414173-2	—	220189-2	—
M	8, 8A, 213	Dual Crimp	Gold	Nickel	TEFLON	Mil Type	Weatherproof	225559-8	220015-1	—	—
M4	393, 225	Dual Crimp	Gold	Silver	TEFLON	Mil Type	Weatherproof	1-225554-1	220015-1	—	—
N	9, 9A, 9B, 214	Dual Crimp	Gold	Silver	TEFLON	Mil Type	—	225349-9	220015-1	—	—
		Dual Crimp	Gold	Silver	TEFLON	Mil Type	Weatherproof	225554-9	220015-1	—	—

†Refer to Appendix Pages for code specifications.

SOURCE: Catalog 82074

Specifications subject to change.

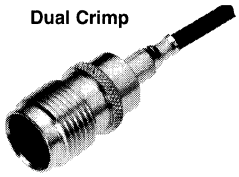
1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

TNC Connectors, 50 Ohm
(Continued)

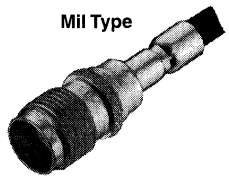
Jacks, Crimp

Dual Crimp



Weatherproof

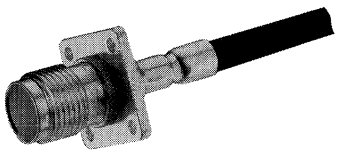
Mil Type



Connector Cable Range Selection Code†	RG/U Cable	Termination Type	Center Contact Plating	Body Plating	Dielectric	Style	M39012/ Military No. and/or Comments	Part No.	CERTI-CRIMP Hand Tool with Integral Die	Interchangeable Dies for PRO-CRIMPER II Hand Tool	Interchangeable Dies for Hand Tool 69710-1 & Pneu. Tools 69365 & 69365-3
B	174, 174A, 188 188A, 316	Dual Crimp	Gold	Nickel	Polymethyl-pentene	Commercial	—	414171-3	—	220210-1	—
B3	RD 188, 316 Double Braid	Dual Crimp	Gold	Nickel	Polymethyl-pentene	Commercial	—	414171-4	—	58330-1	—
D	58, 58A, 58B 58C	Dual Crimp	Gold	Nickel	TEFLON	Mil Type	—	225400-2	220045-2	—	—
		Dual Crimp	Gold	Silver	TEFLON	Mil Type	27B0005 Weatherproof	225551-2	220045-2	—	—
D, D1	58, 58A, 58B, 58C 141, 141A, 303	Dual Crimp	Gold	Nickel	Polymethyl-pentene	Commercial	—	414171-1	—	220189-1	—
D1	141, 141A, 303	Dual Crimp	Gold	Silver	TEFLON	Mil Type	27B0015 Weatherproof	225551-5	220045-2	—	—
E	55, 55A, 55B 223	Dual Crimp	Gold	Silver	TEFLON	Mil Type	27B0016	225551-1	220045-2	—	—
		Dual Crimp	Gold	Nickel	Polymethyl-pentene	Commercial	—	414171-6	—	220189-1	—
E1	142, 142A, 142B 400	Dual Crimp	Gold	Silver	TEFLON	Mil Type	27B0006 Weatherproof	225551-6	220045-2	—	—
		Dual Crimp	Gold	Nickel	Polymethyl-pentene	Commercial	—	414171-5	—	220189-1	—
G	124, 140, 210, 62 62A, 62B, 59, 59A 59B, Belden 9291 9209, 9269	Dual Crimp	Gold	Nickel	TEFLON	Mil Type	—	225400-3	220045-3	—	—
		Dual Crimp	Gold	Nickel	Polymethyl-pentene	Commercial	—	414171-2	—	220189-2	—

†Refer to Appendix Pages for code specifications.

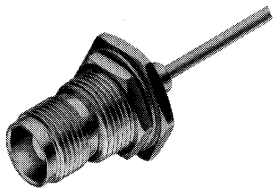
Panel Jacks, Crimp



Connector Cable Range Selection Code†	RG/U Cable	Termination Type	Center Contact Plating	Body Plating	Dielectric	Style	M39012/ Military No. and/or Comments	Part No.	CERTI-CRIMP Hand Tool with Integral Die
D	58, 58A, 58B 58C	Dual Crimp	Gold	Silver	TEFLON	Mil Type	29B0005	225348-2	220045-2

†Refer to Appendix Pages for code specifications.

Bulkhead Jacks for Semi-Rigid Cable, Rear Mount



Connector Cable Range Selection Code†	RG/U Cable	Termination Type	Center Contact Plating	Body Plating	Dielectric	Style	M39012/ Military No. and/or Comments	Part No.	CERTI-CRIMP Hand Tool with Integral Die
0	402 Semi-Rigid/.141	Crimp	Gold	Nickel	TEFLON	Mil Type	—	228502-1	*
P	405 Semi-Rigid/.086	Crimp	Gold	Nickel	TEFLON	Mil Type	—	228507-1	**

†Refer to Appendix Pages for code specifications.
*Tooling—Hand Tool **Part No. 59980-1**, requires (2) Crimping Dies **Part No. 312253-1** and (1) Locator **Part No. 220220-1**.
Pneumatic Tool, **Part No. 58318-1**, requires (2) Crimping Dies **Part No. 313720-1** and (1) Locator **Part No. 220241-1**.
Tooling—Hand Tool **Part No. 59980-1, requires (2) Crimping Dies **Part No. 312253-2** and (1) Locator **Part No. 220221-2.**
Pneumatic Tool **Part No. 58318-1**, requires (2) Crimping Dies **Part No. 313719-1** and (1) Locator **Part No. 308075-2.**

SOURCE: Catalog 82074

Specifications subject to change.

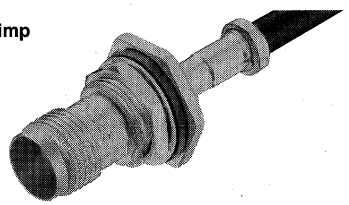
1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

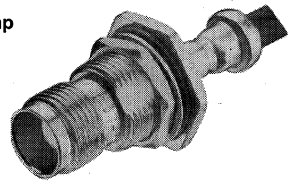
TNC Connectors, 50 Ohm
(Continued)

Bulkhead Jacks, Crimp

Single Crimp



Dual Crimp

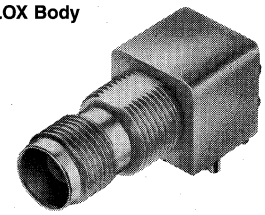


Connector Cable Range Selection Code†	RG/U Cable	Termination Type	Center Contact Plating	Body Plating	Dielectric	Style	M39012/ Military No. and/or Comments	Part No.	CERTI-CRIMP Hand Tool with Integral Die	Interchangeable Dies for PRO-CRIMPER II Hand Tool	Interchangeable Dies for Hand Tool 69710-1 & Pneu. Tools 69365 & 69365-3
B	174, 174A, 316 188, 188A	Dual Crimp	Gold	Nickel	Polymethyl-pentene	Commercial	—	414168-3	—	220210-1	—
		Single Crimp	Gold	Silver	TEFLON	Mil Type	—	331237	69245-1	—	69422
B1	179, 179A, 179B 161, 187, 187A Belden 9221	Single Crimp	Gold	Nickel	TEFLON	Mil Type	—	331238	69245-1	—	69408
B3	RD 188, 316 Double Braid	Dual Crimp	Gold	Nickel	Polymethyl-pentene	Commercial	—	414168-4	—	58330-1	—
C1	180, 180A, 180B 195, 195A	Single Crimp	Gold	Silver	TEFLON	Mil Type	—	331239	69346-1	—	69423
D	58, 58A, 58B, 58C	Dual Crimp	Gold	Silver	TEFLON	Mil Type	Weatherproof	1-225552-1	220045-2	—	—
		Dual Crimp	Gold	Nickel	TEFLON	Mil Type	Weatherproof	225557-2	220045-2	—	—
		Single Crimp	Gold	Silver	TEFLON	Mil Type	Weatherproof	331325	69376-3	—	69815
D, D1	58, 58A, 58B, 58C 141, 141A, 303	Dual Crimp	Gold	Nickel	Polymethyl-pentene	Commercial	—	414168-1	—	220189-1	—
D1	141, 141A, 303	Dual Crimp	Gold	Nickel	TEFLON	Mil Type	Weatherproof	225557-5	220045-2	—	—
E	223 55, 55A, 55B	Dual Crimp	Gold	Silver	TEFLON	Mil Type	28B0016	225347-1	220045-2	—	—
		Dual Crimp	Gold	Nickel	Polymethyl-pentene	Commercial	—	414168-6	—	220189-1	—
E1	142, 142A 142B, 400	Dual Crimp	Gold	Nickel	TEFLON	Mil Type	Weatherproof	225557-6	220045-2	—	—
		Dual Crimp	Gold	Nickel	Polymethyl-pentene	Commercial	—	414168-5	—	220189-1	—
G	120, 240, 210 62, 62A, 62B 59, 59A, 59B Belden 9291 9209, 9269	Dual Crimp	Gold	Nickel	TEFLON	Mil Type	—	225401-3	220045-3	—	—
		Dual Crimp	Gold	Nickel	Polymethyl-pentene	Commercial	—	414168-2	—	220189-2	—

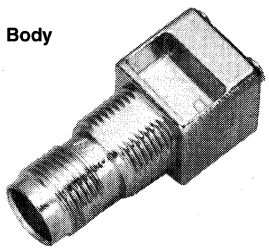
†Refer to Appendix Pages for code specifications.

Right-Angle PC Board/Panel Mount Jacks

VALOX Body



Metal Body



Body Material	Center Contact Plating	Part Numbers	
		Without Mounting Posts	With Mounting Posts
VALOX, White	Gold	227812-1	227818-1
Metal	Gold	227838-1	227839-1

Note: Maximum panel thickness .240 [6.10].
2-56 Self-Tapping Screw for panel thickness of 3/32 [2.38] or greater **Part No. 221108-2**.
2-56 Self-Tapping Screw for panel thickness of less than 3/32 [2.38] **Part No. 221108-4**.

Lockwasher and Jam Nut

Part No. 1-329632-2

Part No. 1-329631-2

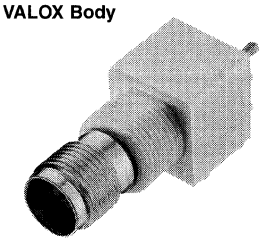
SOURCE: Catalog 82074

Specifications subject to change.
1-800-522-6752 Product Information Center/ AMP FAX Service
1-800-722-1111 Tooling/Technical Assistance Center

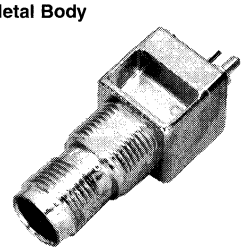
TNC Connectors, 50 Ohm
(Continued)

Vertical PC Board/Panel Mount Jacks

VALOX Body



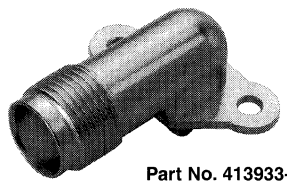
Metal Body



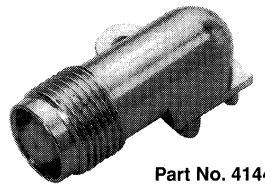
Body Material	Center Contact Plating	Part Numbers	
		Without Mounting Posts	With Mounting Post
VALOX, White	Gold	227816-1	227820-1
VALOX, Black	Gold	227817-1	—
Metal	Gold	—	227835-1

Note: Maximum panel thickness .240 [6.1]
2.56 Self-Tapping Screws for panel thickness of 3/32 [2.38] or greater **Part No. 221108-2.**
2-56 Self-Tapping Screws for panel thickness of less than 3/32 [2.38] **Part No. 221108-4.**

Right-Angle PC Board/ Panel Mount Jacks



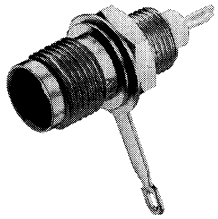
Part No. 413933-1



Part No. 414449-1

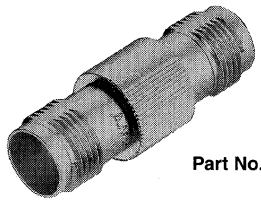
Bulkhead Solder Jacks

Insulation Bushing
Part No. 227223-1



Panel Thickness	Part Numbers	
	With Solder Terminal	Without Solder Terminal
.040-.156 1.02-3.96	227760-2	227758-2
.046-.250 1.17-6.35	227762-2	227764-2

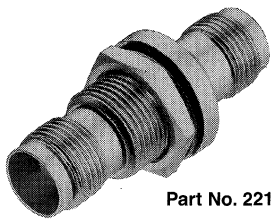
Jack Adapters



Part No. 221325-1

Bulkhead Jack Adapters

Note: Maximum panel thickness .250 [6.35].



Part No. 221500-1

TNC Dust Cap with Chain

Part No. 414910-1

SOURCE: Catalog 82074

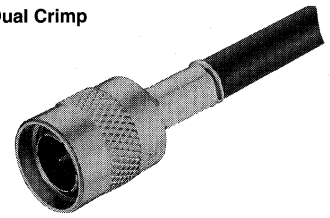
Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

TNC Connectors, 75 Ohm

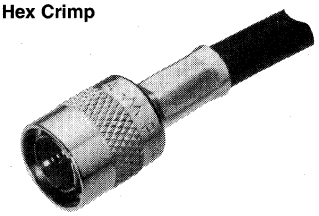
Plugs, Crimp

These connectors have been designed for optimum performance and have a true 75 ohm impedance the complete length of the connector. The crimp die tooling listed below is different from the equivalent 50 ohm connectors.

Dual Crimp



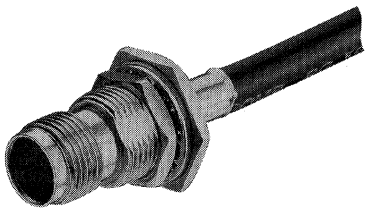
Hex Crimp



Connector Cable Range Selection Code†	RG/U Cable	Termination Type	Center Contact Plating	Body Plating	Dielectric	Style	M39012/ Military No. and/or Comments	Part No.	CERTI-CRIMP Hand Tool with Integral Die	Interchangeable Dies for PRO-CRIMPER II Hand Tool	Interchangeable Dies for Hand Tool 69710-1 & Pneu. Tools 69365 & 69365-3
B1	179, 179A, 179B 187, 187A Belden 9221	Hex Crimp	Gold	Nickel	Polymethyl-pentene	Commercial	—	413591-8	—	852922-2	—
		Dual Crimp	Gold	Nickel	Polymethyl-pentene	Commercial	—	221506-3	—	58304-1	—
B4	AT&T 735A	Dual Crimp	Gold	Nickel	Polymethyl-pentene	Commercial	—	221506-5	—	58174-1	58248-3
B5	AT&T KS 19224 L2	Hex Crimp	Gold	Nickel	Polymethyl-pentene	Commercial	—	413591-4	—	852922-2	—
C3	Belden 8218	Hex Crimp	Gold	Nickel	Polymethyl-pentene	Commercial	—	413591-3	—	852922-2	—
G	210, 62, 62A, 62B, 59, 59A, 59B, Belden 9291, 9209 9269	Hex Crimp	Gold	Nickel	Polymethyl-pentene	Commercial	—	413591-2	—	852922-1	—
		Dual Crimp	Gold	Nickel	Polymethyl-pentene	Commercial	—	221506-1	—	58085-1	58248-2
G1	302 Belden 88241 89269 Hi-Temp 62A Times PL62, Berk-Tek BTDC-59, BTDC-62	Hex Crimp	Gold	Nickel	Polymethyl-pentene	Commercial	—	413591-1	—	852922-1	—
G3	Double Shield RG-59	Hex Crimp	Gold	Nickel	Polymethyl-pentene	Commercial	—	413591-6	—	852922-3	—
G4	Belden 9104, 9112 9240, 9167, 9259, 9266, Times FM-59	Hex Crimp	Gold	Nickel	Polymethyl-pentene	Commercial	—	413591-9	—	852922-1	—
G5	Belden 9145 AT&T 734A	Hex Crimp	Gold	Nickel	Polymethyl-pentene	Commercial	—	413591-7	—	852922-1	—
		Dual Crimp	Gold	Nickel	Polymethyl-pentene	Commercial	—	221506-4	—	58085-1	58248-2
K2	Belden 8281 9141, 9231	Hex Crimp	Gold	Nickel	Polymethyl-pentene	Commercial	—	413591-5	—	852922-3	—
		Dual Crimp	Gold	Nickel	Polymethyl-pentene	Commercial	—	221506-2	—	58538-1	58248-1

†Refer to Appendix Pages for code specifications.

Bulkhead Jack, Crimp



Connector Cable Range Selection Code†	RG/U Cable	Termination Type	Center Contact Plating	Body Plating	Dielectric	Style	M39012/ Military No. and/or Comments	Part No.	CERTI-CRIMP Hand Tool with Integral Die	Interchangeable Dies for PRO-CRIMPER II Hand Tool	Interchangeable Dies for Hand Tool 69710-1 & Pneu. Tools 69365 & 69365-3
G	210, 62, 62A, 62B, 59, 59A, 59B, Belden 9291, 9209, 9269	Dual Crimp	Gold	Nickel	Polymethyl-pentene	Commercial	—	221509-1	—	58085-1	—

†Refer to Appendix Pages for code specifications.
Note: Maximum panel thickness .250 [6.35].

SOURCE: Catalog 82074

Specifications subject to change.

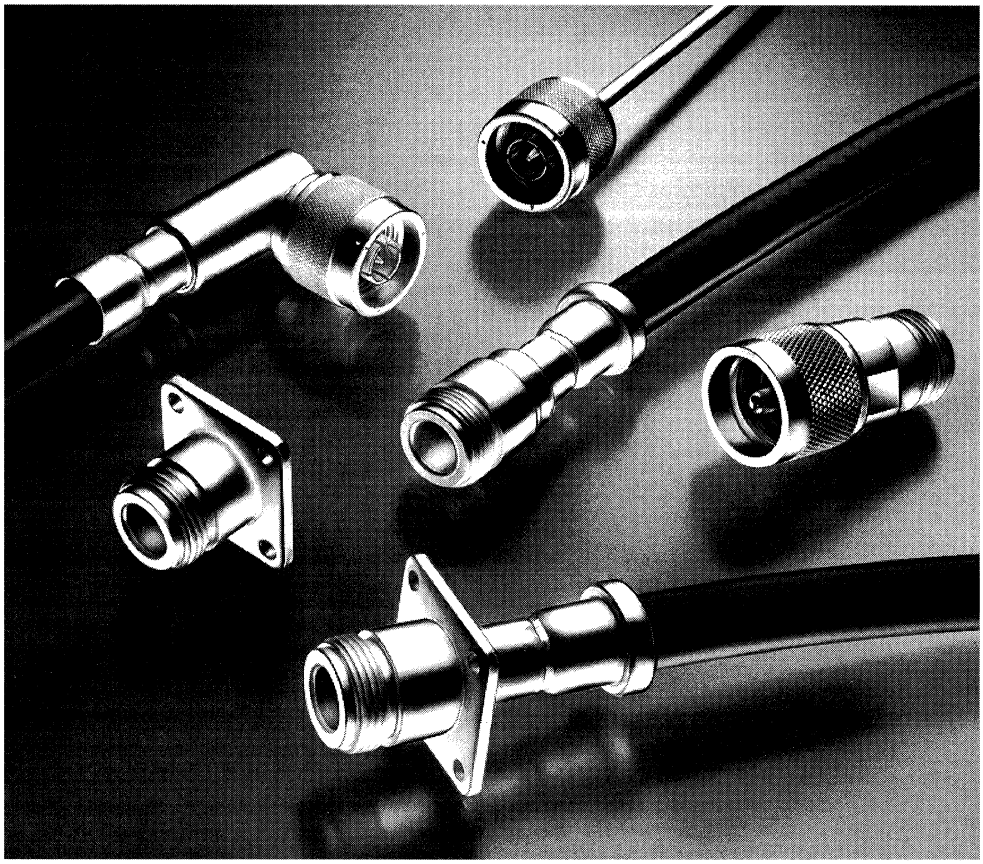
1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

N Connectors

Product Facts

- **Designated connectors are MIL-C-39012, Class II, Category B qualified**
- **Captive center contacts**
- **Completely crimpable application—one hand tool crimps all cables with single or double braided shields of a given size**
- **Impedance matching crimps**
- **Broadband performance—low VSWR**
- **Superior cable retention**
- **TEFLON dielectric**
- **Silver or nickel finish**
- **Fully intermateable with MIL-C-39012 connectors**



The AMP N Connector, featuring a 5/8 [15.88] - 24 threaded coupling for optimum stability, is highly suited for critical applications and environments. This medium-sized connector can withstand shock and vibration to provide a low noise level and has a constant impedance of 50 ohms. It also features a captive center contact and provides excellent performance at frequencies up to 11 GHz, with voltages to 1000 volts rms.

This connector offers the added benefits of low overall applied cost with a labor-saving two-crimp assembly. The contact is simply crimped to the cable's center conductor, then both braid and cable support are simultaneously crimped to complete the termination.

N Series Connectors are available in standard and weatherproof versions as well as plug, jack, panel jack, bulkhead jack and right-angle plug configurations. A smaller, lightweight commercial version that meets all the performance requirements of MIL-C-39012 is also available. Those connectors with a military designation (M39012) are furnished in accordance with all requirements of specification MIL-C-39012, Class II, Category B.

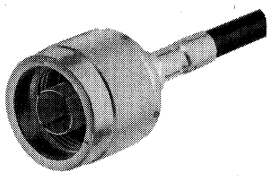
SOURCE: Catalog 82074

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

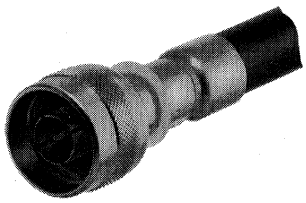
N Connectors, 50 Ohm

Plugs, Crimp

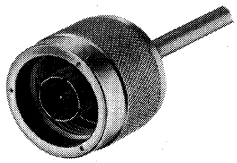
Mil Type Dual Crimp



Commercial Dual Crimp



Semi-Rigid Cable



Connector Cable Range Selection Code†	RG/U Cable	Termination Type	Center Contact Plating	Body Plating	Dielectric	Style	M39012/ Military No. and/or Comments	Part No.	Integral Die Hand Tool
D	58, 58A, 58B 58C	Hex Crimp	Gold	Nickel	TEFLON	Commercial	—	414160-9	58436-1**
		Dual Crimp	Gold	Nickel	TEFLON	Mil Type	—	1-225661-2*	220045-2
		Dual Crimp	Gold	Silver	TEFLON	Mil Type	—	225361-1*	220045-2
		Dual Crimp	Gold	Silver	TEFLON	Mil Type	Weatherproof	225392-7*	220045-2
D1	141, 141A, 303	Dual Crimp	Gold	Nickel	TEFLON	Mil Type	Weatherproof	1-225662-4*	220045-2
E	223 55, 55A, 55B	Hex Crimp	Gold	Nickel	TEFLON	Commercial	—	414160-7	58436-1**
		Dual Crimp	Gold	Nickel	TEFLON	Mil Type	—	1-225661-3*	220045-2
		Dual Crimp	Gold	Silver	TEFLON	Mil Type	—	225361-2*	220045-2
		Dual Crimp	Gold	Silver	TEFLON	Mil Type	Weatherproof	225392-1*	220045-2
E1	142, 142A, 142B 400	Hex Crimp	Gold	Nickel	TEFLON	Commercial	—	414160-7	58436-1**
		Dual Crimp	Gold	Nickel	TEFLON	Mil Type	—	1-225661-5*	220045-2
		Dual Crimp	Gold	Silver	TEFLON	Mil Type	—	225361-4*	220045-2
		Dual Crimp	Gold	Nickel	TEFLON	Mil Type	Weatherproof	225699-1*	220045-2
		Dual Crimp	Gold	Silver	TEFLON	Mil Type	Weatherproof	225392-2*	220045-2
G	59, 62	Hex Crimp	Gold	Nickel	TEFLON	Commercial	—	414160-8	58436-1**
L	115A Belden 89880 9880	Hex Crimp	Gold	Nickel	TEFLON	Commercial	—	414160-3	58485-1***
		Dual Crimp	Gold	Nickel	TEFLON	Mil Type	—	225092-8	220015-1

† Refer to Appendix Pages for code specifications.
* Hand Tool **Part No. 69710-1,** Pneumatic Tools **Part Nos. 69365 and 69365-3**, with Die Insert **Part No. 220062-1**, are available to terminate these connectors.
** Order PRO-CRIMPER II Coaxial Hex Crimp Hand Tool Assembly **Part No. 58433-2**, which includes dies **Part No. 58436-1**.
*** Order PRO-CRIMPER II Coaxial Hex Crimp Hand Tool Assembly **Part No. 58501-1**, which includes dies **Part No. 58485-1**.

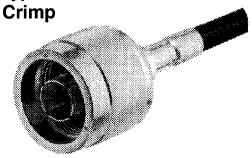
SOURCE: Catalog 82074

Specifications subject to change.
1-800-522-6752 Product Information Center/ AMP FAX Service
1-800-722-1111 Tooling/Technical Assistance Center

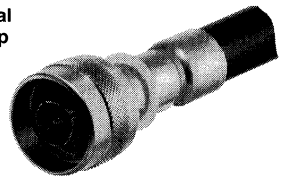
N Connectors, 50 Ohm
(Continued)

Plugs, Crimp
(Continued)

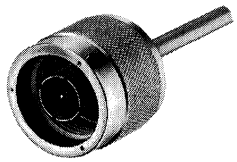
Mil Type
Dual Crimp



Commercial
Dual Crimp



Semi-Rigid Cable



Connector Cable Range Selection Code†	RG/U Cable	Termination Type	Center Contact Plating	Body Plating	Dielectric	Style	M39012/ Military No. and/or Comments	Part No.	Integral Die Hand Tool
M	8, 8A 213	Hex Crimp	Gold	Nickel	TEFLON	Commercial	—	414160-1	58485-1***
		Dual Crimp	Gold	Nickel	TEFLON	Commercial	—	1-227086-0	220015-1
		Dual Crimp	Gold	Nickel	TEFLON	Mil Type	—	225661-2	220015-1
		Dual Crimp	Gold	Silver	TEFLON	Mil Type	01B0007	51692-2	220015-1
		Dual Crimp	Gold	Nickel	TEFLON	Mil Type	Weatherproof	225662-2	220015-1
		Dual Crimp	Gold	Silver	TEFLON	Mil Type	01B0007 Weatherproof	225092-2	220015-1
M1	11, 11A 216	Hex Crimp	Gold	Nickel	TEFLON	Commercial	—	414160-6	58485-1***
		Dual Crimp	Gold	Silver	TEFLON	Mil Type	01B0013	51692-4	220015-1
M3	393	Hex Crimp	Gold	Nickel	TEFLON	Commercial	—	414160-5	58485-2**
		Dual Crimp	Gold	Nickel	TEFLON	Mil Type	Weatherproof	1-225662-1	220015-1
		Dual Crimp	Gold	Silver	TEFLON	Mil Type	Weatherproof	1-225092-1	220015-1
		Dual Crimp	Gold	Silver	TEFLON	Mil Type	Weatherproof	1-225662-8	220015-1
M4	225	Dual Crimp	Gold	Silver	TEFLON	Mil Type	01B0012 Weatherproof	225092-7	220015-1
M5	Belden 8214	Hex Crimp	Gold	Nickel	TEFLON	Commercial	—	414160-4	58485-2**
		Dual Crimp	Gold	Nickel	TEFLON	Mil Type	—	1-225661-6	220015-1
N	9, 9A, 9B 214	Hex Crimp	Gold	Nickel	TEFLON	Commercial	—	414160-2	58485-2**
		Dual Crimp	Gold	Nickel	TEFLON	Mil Type	—	225661-1	220015-1
		Dual Crimp	Gold	Silver	TEFLON	Mil Type	01B0008	51692-1	220015-1
		Dual Crimp	Gold	Nickel	TEFLON	Mil Type	Weatherproof	225662-1	220015-1
		Dual Crimp	Gold	Silver	TEFLON	Mil Type	01B0008 Weatherproof	225092-1	220015-1
		Dual Crimp	Gold	Nickel	TEFLON	Commercial	—	1-227086-1	220015-1
0	402 Semi-Rigid/.141	Crimp	Gold	Nickel	TEFLON	Mil Type	—	228440-1	*

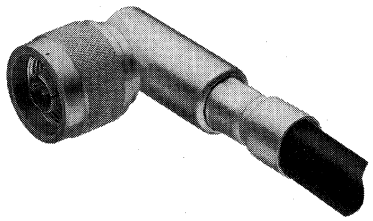
†Refer to Appendix Pages for code specifications.
*Tooling—Hand Tool **Part No. 59980-1**, requires (2) Crimping Dies **Part No. 312253-1** and (1) Locator **Part No. 220220-2.**
Pneumatic Tool **Part No. 58318-1**, requires (2) Crimping Dies **Part No. 313720-1** and (1) Locator **Part No. 220241-1**.
Order PRO-CRIMPER II Coaxial Hex Crimp Hand Tool Assembly **Part No. 58501-2, which includes dies **Part No. 58485-2**.
***Order PRO-CRIMPER II Coaxial Hex Crimp Hand Tool Assembly **Part No. 58501-1**, which includes dies **Part No. 58485-1**.

SOURCE: Catalog 82074

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

N Connectors, 50 Ohm
(Continued)

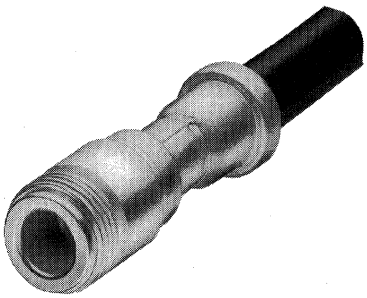
Right-Angle Plugs, Crimp



Connector Cable Range Selection Code†	RG/U Cable	Termination Type	Center Contact Plating	Body Plating	Dielectric	Style	M39012/ Military No. and/or Comments	Part No.	Integral Die Hand Tool
D	58, 58A, 58B, 58C	Dual Crimp	Gold	Silver	TEFLON	Mil Type	Weatherproof	225394-4*	220045-2
E	223 55, 55A, 55B	Dual Crimp	Gold	Silver	TEFLON	Mil Type	Weatherproof	225394-1*	220045-2
E1	142, 142A, 142B, 400, Belden 9246	Dual Crimp	Gold	Silver	TEFLON	Mil Type	Weatherproof	225394-2*	220045-2
M	8, 8A, 213	Dual Crimp	Gold	Nickel	TEFLON	Mil Type	—	225669-2	220015-1
		Dual Crimp	Gold	Silver	TEFLON	Mil Type	05B0002	225014-2	220015-1
		Dual Crimp	Gold	Silver	TEFLON	Mil Type	05B0002 Weatherproof	225389-2	220015-1
M3	393	Dual Crimp	Gold	Silver	TEFLON	Mil Type	Weatherproof	225389-6	220015-1
M4	225	Dual Crimp	Gold	Silver	TEFLON	Mil Type	Weatherproof	225389-3	220015-1
N	9, 9A, 9B 214	Dual Crimp	Gold	Nickel	TEFLON	Mil Type	—	225669-1	220015-1
		Dual Crimp	Gold	Silver	TEFLON	Mil Type	05B0003	225014-3	220015-1
		Dual Crimp	Gold	Silver	TEFLON	Mil Type	05B0003 Weatherproof	225389-4	220015-1

†Refer to Appendix Pages for code specifications.
*Hand Tool **Part No. 69710-1**, Pneumatic Tools **Part Nos. 69365 and 69365-3**, with Die Insert **Part No. 220062-1**, are available to terminate these connectors.

Jacks, Crimp



Connector Cable Range Selection Code†	RG/U Cable	Termination Type	Center Contact Plating	Body Plating	Dielectric	Style	M39012/ Military No. and/or Comments	Part No.	Integral Die Hand Tool
D	58, 58A, 58B, 58C	Dual Crimp	Gold	Nickel	TEFLON	Mil Type	Weatherproof	1-225664-2*	220045-2
E1	142, 142A 142B, 400	Dual Crimp	Gold	Nickel	TEFLON	Mil Type	—	1-225663-5*	220045-2
M	8, 8A, 213	Dual Crimp	Gold	Nickel	TEFLON	Mil Type	Weatherproof	225664-2	220015-1
		Dual Crimp	Gold	Silver	TEFLON	Mil Type	02B0008	225093-2	220015-1
N	9, 9A, 9B 214	Dual Crimp	Gold	Nickel	TEFLON	Mil Type	Weatherproof	225664-1	220015-1
		Dual Crimp	Gold	Silver	TEFLON	Mil Type	02B0009	225093-1	220015-1

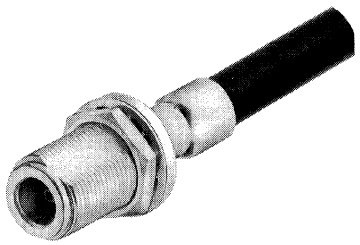
†Refer to Appendix Pages for code specifications.
*Hand Tool **Part No. 69710-1**, Pneumatic Tools **Part Nos. 69365 and 69365-3**, with Die Insert **Part No. 220062-1**, are available to terminate these connectors.

SOURCE: Catalog 82074

Specifications subject to change.
1-800-522-6752 Product Information Center/ AMP FAX Service
1-800-722-1111 Tooling/Technical Assistance Center

N Connectors, 50 Ohm
(Continued)

Bulkhead Jacks, Crimp

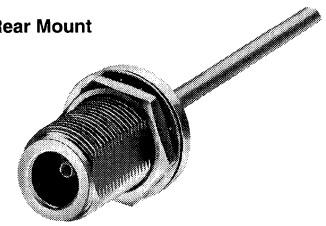


Connector Cable Range Selection Code†	RG/U Cable	Termination Type	Center Contact Plating	Body Plating	Dielectric	Style	M39012/ Military No. and/or Comments	Part No.	Integral Die Hand Tool
D	58, 58A, 58B 58C	Dual Crimp	Gold	Silver	TEFLON	Mil Type	—	225363-1*	220045-2
		Dual Crimp	Gold	Silver	TEFLON	Mil Type	Weatherproof	1-225668-2*	220045-2
E	223 55, 55A, 55B	Dual Crimp	Gold	Silver	TEFLON	Mil Type	—	225363-2*	220045-2
		Dual Crimp	Gold	Silver	TEFLON	Mil Type	Weatherproof	225393-1*	220045-2
E1	142, 142A 142B, 400	Dual Crimp	Gold	Silver	TEFLON	Mil Type	—	225363-4*	220045-2
G	124, 140, 210 62, 62A, 62B 59, 59A, 59B Belden 9291, 9209, 9269, 89269	Dual Crimp	Gold	Silver	TEFLON	Mil Type	—	225363-6	220045-3
		Dual Crimp	Gold	Nickel	TEFLON	Mil Type	—	1-225667-6	220045-3
M	8, 8A, 213	Dual Crimp	Gold	Silver	TEFLON	Mil Type	03B0004 Weatherproof	225094-2	220015-1
M3	393	Dual Crimp	Gold	Nickel	TEFLON	Mil Type	Weatherproof	1-225668-1	220015-1
N	9, 9A, 9B 214	Dual Crimp	Gold	Nickel	TEFLON	Mil Type	—	225667-1	220015-1
		Dual Crimp	Gold	Silver	TEFLON	Mil Type	03B0005 Weatherproof	225094-1	220015-1

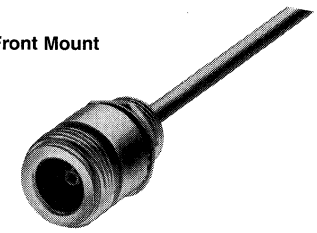
†Refer to Appendix Pages for code specifications.
*Hand Tool **Part No. 69710-1**, Pneumatic Tools **Part Nos. 69365 and 69365-3**, with Die Insert **Part No. 220062-1**, are available to terminate these connectors.
Note: Maximum panel thickness .250 [6.35].

Bulkhead Jacks for Semi-Rigid Cable

Rear Mount



Front Mount



Connector Cable Range Selection Code†	RG/U Cable	Termination Type	Center Contact Plating	Body Plating	Dielectric	Style	M39012/ Military No. and/or Comments	Part No.	Integral Die Hand Tool
O	402 Semi-Rigid/.141	Crimp	Gold	Nickel	TEFLON	Mil Type	Rear Mount	228658-1	*
		Crimp	Gold	Nickel	TEFLON	Mil Type	Front Mount	228448-1	*

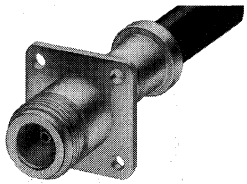
†Refer to Appendix Pages for code specifications.
*Tooling—Hand Tool **Part No. 59980-1**, requires (2) Crimping Dies **Part No. 312253-1** and (1) Locator **Part No. 220220-2.**
Pneumatic Tool **Part No. 58318-1**, requires (2) Crimping Dies **Part No. 313720-1** and (1) Locator **Part No. 220241-1.**
Note: Maximum panel thickness .250 [6.35].

SOURCE: Catalog 82074

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

N Connectors, 50 Ohm
(Continued)

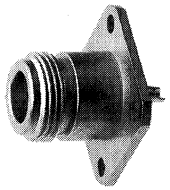
Panel Jacks, Crimp



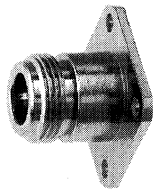
Connector Cable Range Selection Code†	RG/U Cable	Termination Type	Center Contact Plating	Body Plating	Dielectric	Style	M39012/ Military No. and/or Comments	Part No.	Integral Die Hand Tool
D	58, 58A, 58B, 58C	Dual Crimp	Gold	Silver	TEFLON	Mil Type	Weatherproof	225606-4*	220045-2
M	8, 8A, 213	Dual Crimp	Gold	Nickel	TEFLON	Mil Type	Weatherproof	225666-2	220015-1
		Dual Crimp	Gold	Silver	TEFLON	Mil Type	02B0016 Weatherproof	225089-2	220015-1
N	9, 9A, 9B 214	Dual Crimp	Gold	Silver	TEFLON	Mil Type	02B0017 Weatherproof	225089-1	220015-1

†Refer to Appendix Pages for code specifications.
*Hand Tool **Part No. 69710-1**, Pneumatic Tools **Part Nos. 69365 and 69365-3**, with Die Insert **Part No. 220062-1**, are available to terminate these connectors.

Panel Jacks, Solder

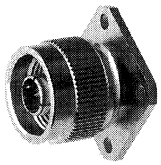


Part No. 134866-1



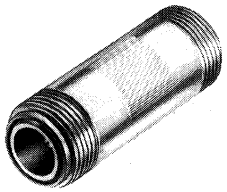
Part No. 135014-1

Panel Plug, Solder



Part No. 135012-1

Feed-Thru Jack Adapter
(Jack-Jack)

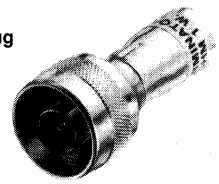


Contact—Silver plated
Part No. 227945-1

Contact—Gold plated
Part No. 227945-2

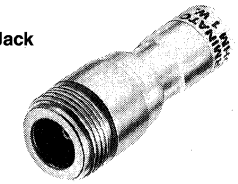
Terminators

Plug



Contact—Gold plated
Part No. 227953-1

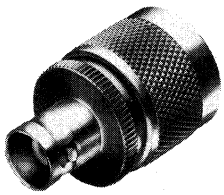
Jack



Contact—Gold plated
Part No. 227997-1

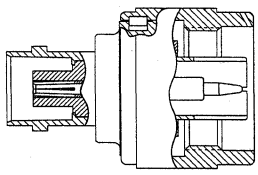
Adapter

N Plug to BNC Jack



Part No. 222321-1

N Plug to BNC Jack



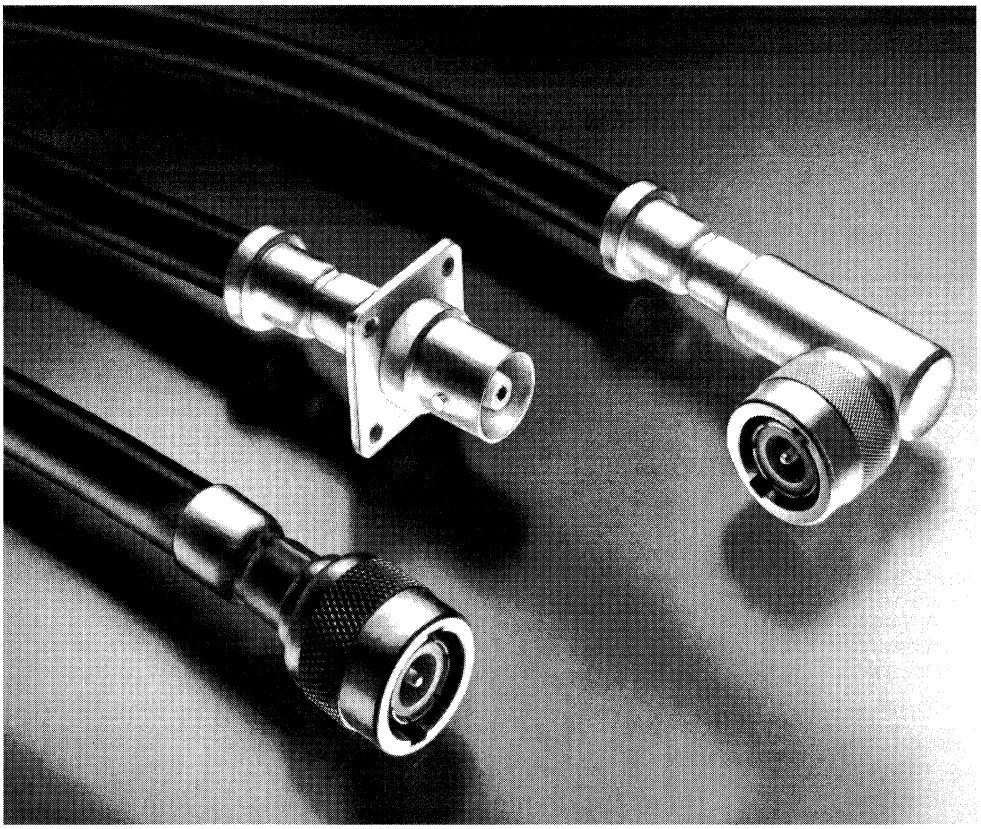
Part No. 447918-1

SOURCE: Catalog 82074

C Connectors

Product Facts

- **Captive center contacts**
- **TEFLON dielectric**
- **Completely crimpable application—one hand tool crimps both center conductor and braid for maximum savings in time and labor**
- **Precision matched tooling applies impedance matching crimps**
- **No danger of heat damage to coaxial cable**
- **Low VSWR**
- **Superior cable retention**



The C Connector, featuring a bayonet-locking coupling for quick connect/disconnect termination, is rated for use in applications where voltages do not exceed 1000 volts peak. Having a constant impedance of 50 ohms, this medium size connector is intended for use with medium size cables such as RG-8A, 9B, 213 and 214 but can be used with 75 ohm cables where impedance matching is not critical. It also provides excellent performance at frequencies up to 11 GHz.

The connector is also designed to provide optimum mechanical and RF performance at the lowest overall applied cost. It features a captivated center contact and is fully crimpable to coaxial cable using matching AMP tooling. Only one hand tool is required to completely terminate a given size cable with either a single- or double-braided shield.

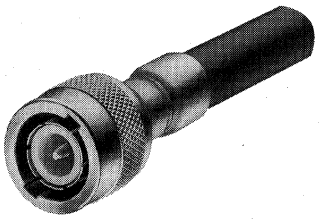
C Series Connectors are available in both standard and weatherproof versions and can be furnished in a variety of configurations, including plug, panel jack and right-angle plug.

SOURCE: Catalog 82074

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

C Connectors, 50 Ohm
(Continued)

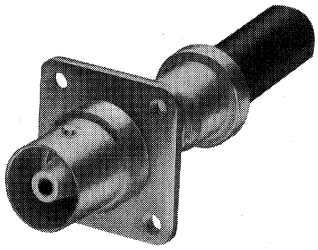
Plugs, Crimp



Connector Cable Range Selection Code†	RG/U Cable	Termination Type	Center Contact Plating	Body Plating	Dielectric	Style	M39012/ Military No. and/or Comments	Part No.	Integral Die Hand Tool
M	8, 8A, 213	Dual Crimp	Gold	Silver	TEFLON	Mil Type	Weatherproof	225407-2	220015-1
N	9, 9A, 9B, 214	Dual Crimp	Gold	Silver	TEFLON	Mil Type	Weatherproof	225407-1	220015-1
—	Microdot 250-4172, 250-4208	Dual Crimp	Gold	Silver	TEFLON	Mil Type	Weatherproof	225407-8	220015-3

†Refer to Appendix Pages for code specifications.

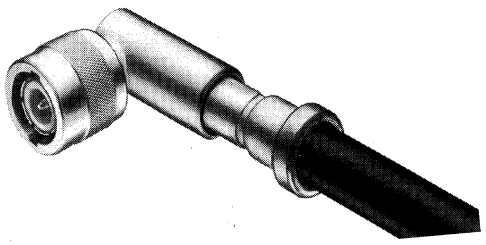
Panel Jacks, Crimp



Connector Cable Range Selection Code†	RG/U Cable	Termination Type	Center Contact Plating	Body Plating	Dielectric	Style	M39012/ Military No. and/or Comments	Part No.	Integral Die Hand Tool
N	9, 9A, 9B, 214	Dual Crimp	Gold	Silver	TEFLON	Mil Type	Weatherproof	225409-1	220015-1

†Refer to Appendix Pages for code specifications.
Note: Maximum panel thickness .188 [4.78].

Right-Angle Plugs, Crimp

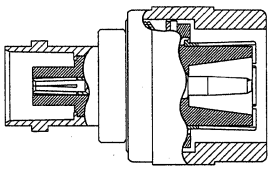


Connector Cable Range Selection Code†	RG/U Cable	Termination Type	Center Contact Plating	Body Plating	Dielectric	Style	M39012/ Military No. and/or Comments	Part No.	Integral Die Hand Tool
M	8, 8A, 213	Dual Crimp	Gold	Nickel	TEFLON	Mil Type	Weatherproof	225680-2	220015-1
M4	225	Dual Crimp	Gold	Silver	TEFLON	Mil Type	Weatherproof	225411-3	220015-1
N	9, 9A, 9B, 214	Dual Crimp	Gold	Silver	TEFLON	Mil Type	Weatherproof	225411-1	220015-1

†Refer to Appendix Pages for code specifications.

Adapter

C Plug to BNC Jack



Part No. 447919-1

SOURCE: Catalog 82074

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

SHV Connectors

Product Facts

- **Safe-tested at 5,000 volts DC**
- **Polarized center contacts**
- **Heat-resistant TEFLON insulators**
- **Crimp contacts for low-cost applications**
- **Quick connect/disconnect bayonet coupling**
- **Positive insulation grip**

SHV Connectors are lightweight, weatherproof connectors designed to provide shielded disconnects for high-voltage applications up to 5,000 volts DC. They can be used with a wide range of small coaxial cables such as RG-58C, 59B, 62B and 188.

For maximum operating performance, the SHV Connector has been designed to comply with the National Bureau of Standards' specification ND-545. In addition, the connector meets all specifications for the NIM standard high-voltage connector of the Nuclear Regulatory Commission. This connector has non-constant impedance characteristics and features polarized center contacts which are recessed in the dielectric. The connector also has a bayonet-locking coupling similar to BNC connectors; however, the SHV connector will not intermate with the standard bayonet-type connector.

To reduce unit cost, the center contact of the plug is crimped to the center conductor prior to assembly. With the crimped contact inserted into the plug, a ferrule is simply dressed over the braid, then crimped to complete the assembly.

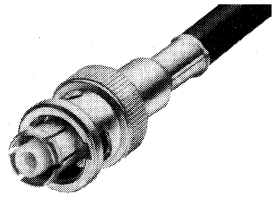
Panel or bulkhead solder jacks can be pre-positioned in a panel or bulkhead, since no crimping preparation is required.

SOURCE: Catalog 82074

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

SHV Connectors
(Continued)

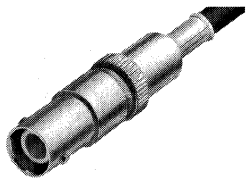
Plugs, Crimp



Connector Cable Range Selection Code†	RG/U Cable	Termination Type	Center Contact Plating	Body Plating	Dielectric	Part No.	CERTI-CRIMP Hand Tool with Integral Die	Integral Die Hand Tool	Die Insert for Tools: Hand Tool 69710-1 Pneu. 69365, 69365-3
B	174, 188, 188A, 316	Dual Crimp	Gold	Silver	TEFLON	51426-7	220009-1	—	—
		Dual Crimp	Gold	Nickel	TEFLON	51426-8	220009-1	—	—
D	58, 58A, 58B, 58C	Dual Crimp	Gold	Nickel	TEFLON	51426-4	—	220022-1	—
		Dual Crimp	Gold	Silver	TEFLON	51426-1	—	220022-1	—
G	124, 140, 210 62, 62A, 62B 59, 59A, 59B Belden 9291, 9209, 9269	Dual Crimp	Gold	Nickel	TEFLON	51426-5	—	220022-2	220028-2
		Dual Crimp	Gold	Silver	TEFLON	51426-2	—	220022-2	220028-2

†Refer to Appendix Pages for code specifications.

Jacks, Crimp

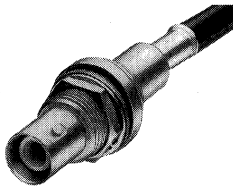


Connector Cable Range Selection Code†	RG/U Cable	Termination Type	Center Contact Plating	Body Plating	Dielectric	Part No.	CERTI-CRIMP Hand Tool with Integral Die	Integral Die Hand Tool	Die Insert for Tools: Hand Tool 69710-1 Pneu. 69365, 69365-3
D	58, 58A, 58B, 58C	Dual Crimp	Gold	Nickel	TEFLON	225087-4	—	220022-1	—
G	124, 140, 210 62, 62A, 62B 59, 59A, 59B Belden 9291, 9209, 9269	Dual Crimp	Gold	Silver	TEFLON	225087-5	—	220022-2	220028-2

†Refer to Appendix Pages for code specifications.

Bulkhead Jack, Crimp

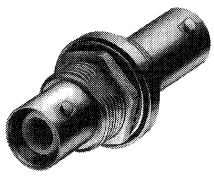
Note: Maximum panel thickness .250 [6.35].



Part No. 225059-3

Bulkhead Jack Adapter
(Jack-Jack)

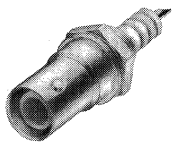
Note: Maximum panel thickness .250 [6.35].



Part No. 225064-2

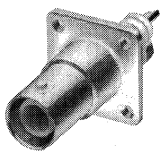
Bulkhead Solder Jacks

Note: Maximum panel thickness .187 [4.75].



Silver Plated Body—Part No. 51494-1
Nickel Plated Body—Part No. 51494-2

Panel Jack, Solder

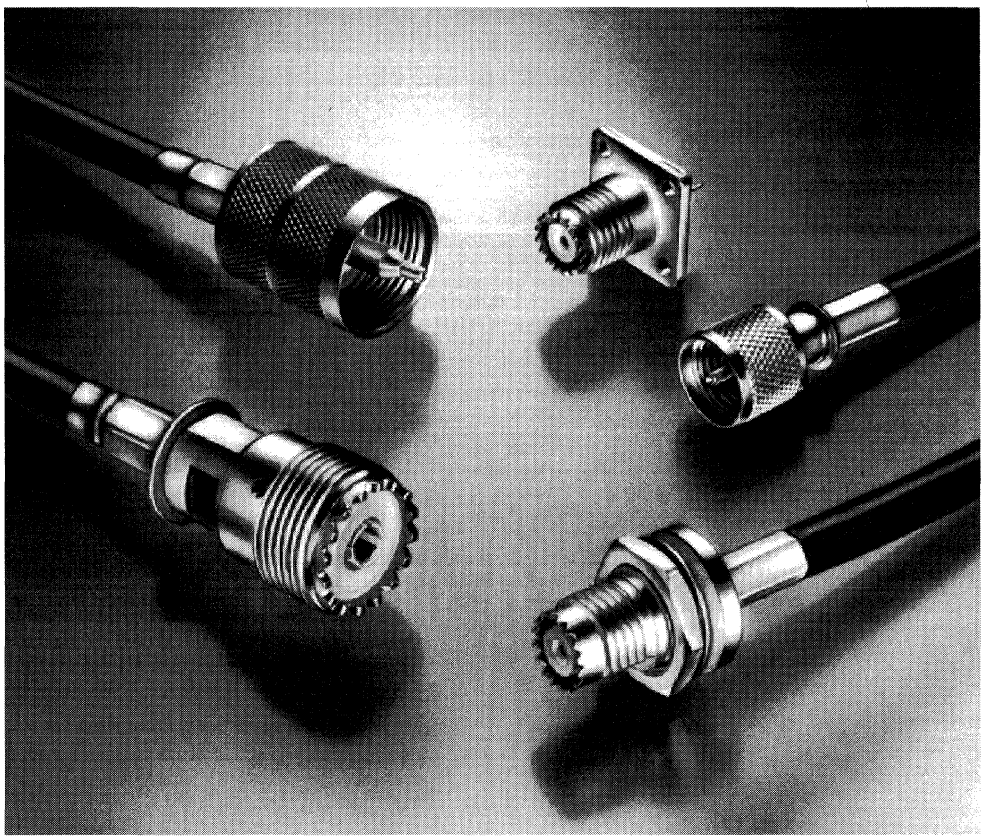


Silver Plated Body—Part No. 51421-1
Nickel Plated Body—Part No. 51421-2

SOURCE: Catalog 82074

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

Miniature and Standard UHF Connectors



Product Facts

Miniature

- Compact design
- Crimp type requires no solder
- Low applied cost
- Excellent performance characteristics for frequencies to 2.0 GHz
- Excellent cable retention
- Resists vibration, shock and hostile environments
- Accommodates RG/U 58, 58A, 58B, 58C, 59, 59A, 59B, 188 and Tensolite 25850/28P-1
- Low VSWR characteristics
- Hand tool or machine terminations

Standard

- Solderless single crimp connection—center conductor and braid simultaneously
- Insulation support
- Resists vibration, shock and other hostile environments
- High cable retention
- Plugs and jacks are fully intermateable with all standard UHF plugs and jacks
- Hand tool or machine applied

AMP UHF Connectors are available in miniature and standard sizes.

The miniature size connectors are compact and lightweight. They are especially suited to applications where miniaturization is essential. These connectors accommodate RG/U 58 and RG/U 59, as well as some other coaxial cables. They are intended for use at frequencies up to 2.0 GHz and at peak voltages to 335 volts.

They are available in plug, jack, bulkhead jack, metric right-angle plug and panel solder jack configurations.

The standard size connector has found wide acceptance, particularly in the mobile communications field. Low initial cost and low applied cost, coupled with quality terminations and performance capabilities up to 500 MHz are a few of the benefits this connector offers.

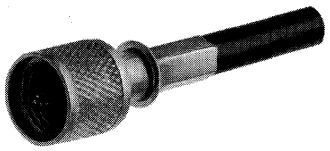
Standard size connectors are available in plug and jack configurations. Adapters are also available to allow these connectors to interface with BNC and N type connectors.

SOURCE: Catalog 82074

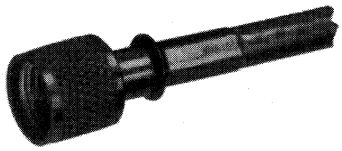
Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

UHF Connectors, Miniature

Plugs, Crimp



Nickel Plating

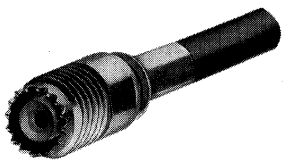


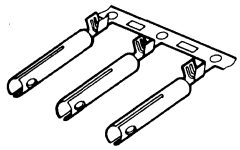
Black Conductive

Connector Cable Range Selection Code†	RG/U Cable	Termination Type	Center Contact Plating	Body Plating	Dielectric	Part No.	Integral Die Hand Tool	Die Insert for Tools: Hand Tool 69710-1 Pneu. 69365, 69365-3	Dies for AMP-O-LECTRIC Machine 220152-1
D	58, 58A, 58B, 58C	Dual Crimp	Tin	Nickel	Polypropylene	226600-1	220149-1	58158-1	220162-1
		Dual Crimp	Tin	Black Conductive	Polypropylene	226600-8	220149-1	58158-1	220162-1

†Refer to Appendix Pages for code specifications.

Jacks, Crimp





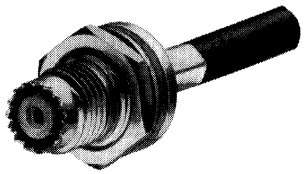
(Stamped and Formed Contacts **Part Nos. 414478-2** and **226853-2** for use with **Part Nos. 414477-1** and **226849-1,** respectively)

Connector Cable Range Selection Code†	RG/U Cable	Termination Type	Center Contact Plating	Body Plating	Dielectric	Part No.	Integral Die Hand Tool	Die Insert for Tools: Hand Tool 69710-1 Pneu. 69365, 69365-3	Dies for AMP-O-LECTRIC Machine 220152-1
B	316	Dual Crimp	Gold	Nickel	Polymethyl-pentene	414477-1***	—	314976-1	—
D	58, 58A, 58B, 58C	Dual Crimp	Tin	Nickel	Polypropylene	226602-1	220149-1 58124-1**	58158-1	220162-1
		Dual Crimp	Tin	Nickel	Polypropylene	226849-1*	—	—	—

†Refer to Appendix Pages for code specifications.
*Connector to body and ferrule only. For volume production, order stamped and formed center contact **Part No. 226853-2** (illustrated above).
To terminate stamped and formed center contact, use AMP-O-LECTRIC Machine **Part No. 565435-5** with Applicator **Part No. 466689-2**.
To terminate the ferrule use AMP-O-LECTRIC Machine **Part No. 220152-1** with dies **Part No. 220162-1**.
**Economy hand tool does not have CERTI-CRIMP ratchet feature.
***To terminate stamped and formed center contact, **Part No. 414478-2**, use AMP-O-LECTRIC Machine **Part No. 565435-5** with Applicator **Part No. 567386-2**.

UHF Connectors, Miniature
(Continued)

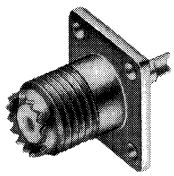
Bulkhead Jacks, Crimp



Connector Cable Range Selection Code†	RG/U Cable	Termination Type	Center Contact Plating	Body Plating	Dielectric	Flange Shape	Rubber Gasket	Part No.	Integral Die Hand Tool	Die Insert for Tools: Hand Tool 69710-1 Pneu. 69365, 69365-3
B	174, 316 188, 188A	Dual Crimp	Tin	Nickel	Polypropylene	Hex	No	228665-2	58124-1**	58159-1
		Dual Crimp	Tin	Nickel	Polypropylene	Round	Yes	228903-2	59983-1 58124-1**	58159-1
		Dual Crimp	Tin	Nickel	Polypropylene	Round	No	228903-4	59983-1 58124-1**	58159-1
D	58, 58A, 58B, 58C	Dual Crimp	Tin	Nickel	Polypropylene	Round	No	228903-3[1]	220149-1 58124-1**	58158-1
		Dual Crimp	Tin	Nickel	Polypropylene	Round	No	1-228903-3[2]	220149-1 58124-1**	58158-1

†Refer to Appendix Pages for code specifications.
**Economy hand tool–does not have CERTI-CRIMP ratchet feature.
Note: Maximum panel thickness .100 [2.54].
[1]Use Contact **Part No. 226853-2**, which is strip form (10,000/Reel); also Bulkhead Jack Assembly, **Part No. 414046-1**.
[2]Use Contact **Part No. 226610-2**, which is loose piece screw machine version, all other components called out in customer drawing.

Panel Jacks, Solder

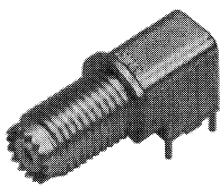


Part No. 226601-1

Termination Type	Center Contact Plating	Body Plating	Dielectric	Part No.
Solder	Tin	Nickel	TEFLON	226601-1*
Solder	Tin	Nickel	TPX	226601-2** (Post-Plated)
Solder	Tin	Nickel	TPX	226601-3** (Pre-Plated)
Solder	Tin	Nickel	TPX	226601-4*
Solder	Tin	Black Conductive	TPX	226601-5** (Pre-Plated)

* Screw machined contact.
** Stamped and formed contact.

Right-Angle PC Board Jack



Part No. 414293-1

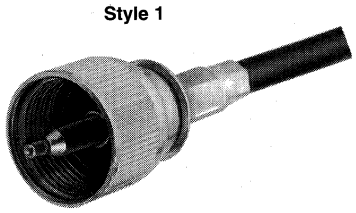
SOURCE: Catalog 82074

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

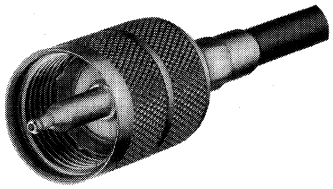
UHF Connectors, Standard

Plugs, Crimp

Style 1



Style 2

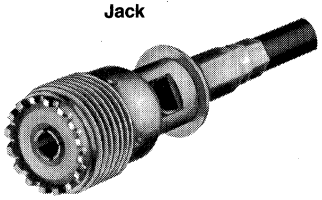


Connector Cable Range Selection Code†	RG/U Cable	Termination Type	Center Contact Plating	Body Plating	Dielectric	Style	Part No.	Integral Die Hand Tool	Crimping Dies for AMP-O-LECTRIC Machine 220152-1
D	58, 58A, 58B, 58C	Single Crimp	Tin	Nickel	Polypropylene	1	226279-1	220094-1* 220148-1** or 58506-1***	220157-2
		Single Crimp	Silver	Nickel	Polypropylene	2	1-226208-3	220094-1* 220148-1** or 58506-1***	—
G	124, 140, 210 59, 59A, 59B, 62, 62A, 62B, Belden 9291, 9209, 9269, 89269	Single Crimp	Silver	Nickel	Polypropylene	1	226208-6	220094-1* 220148-1** or 58506-1***	—
		Single Crimp	Tin	Nickel	Polypropylene	1	226279-3	220094-1* 220148-1** or 58506-1***	—
		Single Crimp	Silver	Nickel	Polypropylene	2	1-226208-6	220094-1* 220148-1** or 58506-1***	—
M	8, 8A, 213	Single Crimp	Tin	Nickel	Polypropylene	1	226279-2	220095-1 or 58506-1***	—

†Refer to Appendix Pages for code specifications.
*CERTI-CRIMP Hand Tool.
**Stamped Hand Tool does not have CERTI-CRIMP ratchet feature.
***PRO-CRIMPER II Hand Tool with Die Assembly.

Jack, Crimp

Jack

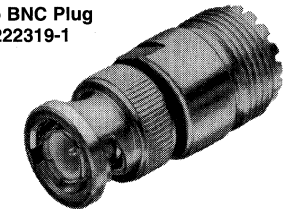


Connector Cable Range Selection Code†	RG/U Cable	Connector Type	Termination Type	Center Contact Plating	Body Plating	Dielectric	Part No.	Integral Die Hand Tool	Crimping Dies for AMP-O-LECTRIC Machine 220152-1
D	58, 58A, 58B, 58C	Jack	Single Crimp	Tin	Nickel	Polypropylene	226694-1	—	220165-1

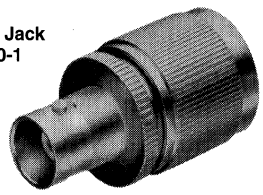
†Refer to Appendix Pages for code specifications.

Adapters

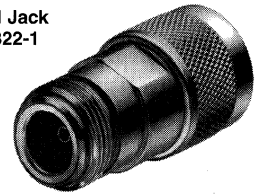
UHF Jack to BNC Plug
Part No. 222319-1



UHF Plug to BNC Jack
Part No. 222320-1



UHF Plug to N Jack
Part No. 222322-1



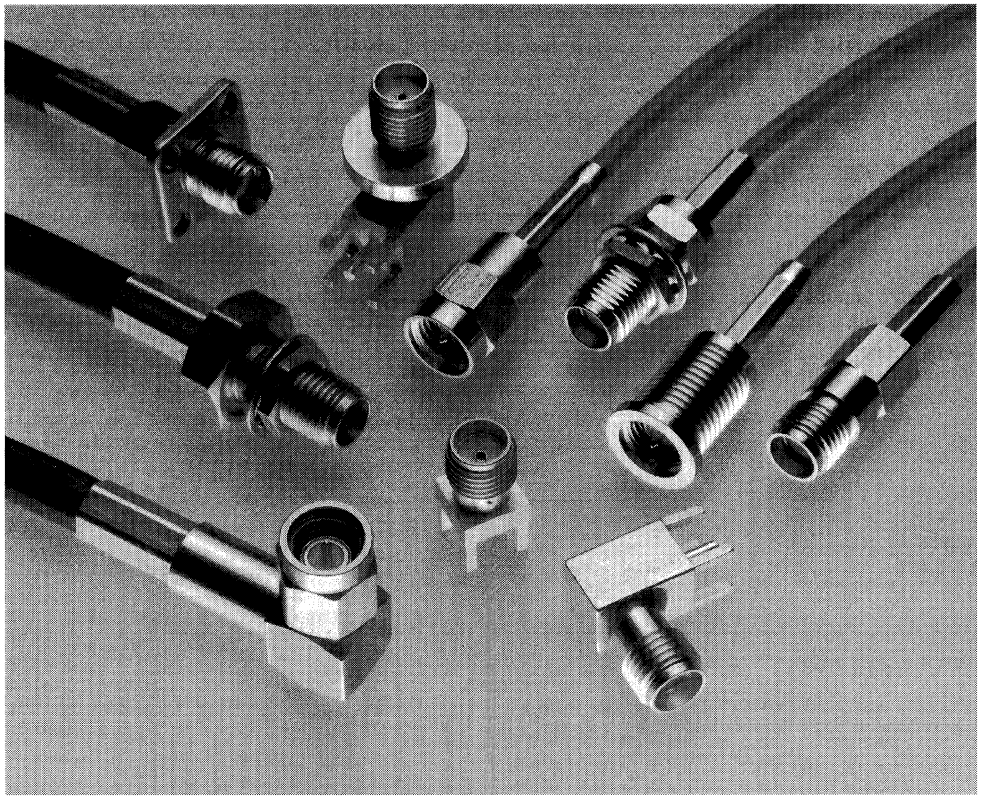
SOURCE: Catalog 82074

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

Hex Crimp and Printed Circuit Board SMA Connectors

Product Facts

- Time-saving three-component assembly
- Performance to 12.4 GHz
- Uses industry standard crimp tools
- Meets all performance requirements of MIL-C-39012
- Swept right-angle plug contact reduces assembly time and error
- Crimp center contacts



The AMP Hex Crimp SMA product is designed for 12.4 GHz performance, and accommodates most popular cables such as RG58, RG142, RG316, RD316, RG55 and RG223. By having only three components to assemble, cable assembly complexity is greatly reduced.

The AMP right-angle connectors use a swept center contact which eliminates costly and reliability-reducing end cap assembly, and allows crimping of the coaxial center conductor. These connectors meet the performance criteria of MIL-C-39012.

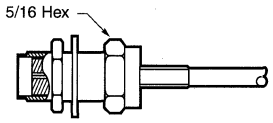
The new AMP design also uses an industry standard indent crimp for center contact crimping, thereby reducing overall assembly costs and increasing reliability.

Using industry standard crimp tools eliminates the need for special manufacturing processes.

SOURCE: Catalog 82074

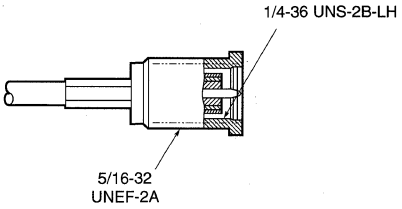
Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

Hex Crimp and Printed Circuit Board SMA Connectors
(Continued)

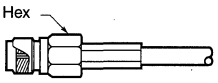


Bulkhead Jack
Part No. 449486-1
(Brass body, nickel plated)

Antenna Connector Plug, Flange Mounted
Part No. 448773-1
(Brass body, nickel plated, left-hand internal thread)

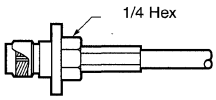


Jacks



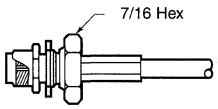
RG/U	Part No.	Body Material and Finish	Center Contact Crimp			Ferrule Crimp	
			Military Tool	Positioner	Setting	Military Tool	Die Part No.
58, 58A, 58B, 58C	447648-1	Brass, Ni plated	M22520/2-01	K997	6	M22520/5-01	M22520/5-11 A
142, 142A, 142B	447648-2	Brass, Ni plated	M22520/2-01	K997	7	M22520/5-01	M22520/5-11 A
174, 174A, 188, 188A, 316	447648-3	Brass, Ni plated	M22520/2-01	K997	4	M22520/5-01	M22520/5-35 B
174DB, 188DB, 316DB	447648-4	Brass, Ni plated	M22520/2-01	K997	4	M22520/5-01	M22520/5-35 B

Panel Jacks



RG/U	Part No.	Body Material and Finish	Center Contact Crimp			Ferrule Crimp	
			Military Tool	Positioner	Setting	Military Tool	Die Part No.
58, 58A, 58B, 58C	447649-1	Brass, Ni plated	M22520/2-01	K997	6	M22520/5-01	M22520/5-11 A
142, 142A, 142B	447649-2	Brass, Ni plated	M22520/2-01	K997	7	M22520/5-01	M22520/5-11 A
174, 174A, 188, 188A, 316	447649-3	Brass, Ni plated	M22520/2-01	K997	4	M22520/5-01	M22520/5-35 B
	447649-6	SST, passivated					
174DB, 188DB, 316DB	447649-4	Brass, Ni plated	M22520/2-01	K997	4	M22520/5-01	M22520/5-35 B
Belden YR20621 (RG58 Type)	447649-5	SST, passivated	M22520/2-01	K997	6	M22520/5-01	M22520/5-11 A

Bulkhead Jacks



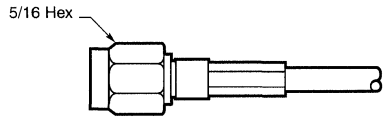
RG/U	Part No.	Body Material and Finish	Center Contact Crimp			Ferrule Crimp	
			Military Tool	Positioner	Setting	Military Tool	Die Part No.
58, 58A, 58B, 58C	447650-1	Brass, Ni plated	M22520/2-01	K997	6	M22520/5-01	M22520/5-11 A
142, 142A, 142B	447650-2	Brass, Ni plated	M22520/2-01	K997	7	M22520/5-01	M22520/5-11 A
	447650-7	SST, passivated					
174, 174A, 188, 188A, 316	447650-3	Brass, Ni plated	M22520/2-01	K997	4	M22520/5-01	M22520/5-35 B
	447650-6	SST, passivated					
174DB, 188DB, 316DB	447650-4	Brass, Ni plated	M22520/2-01	K997	4	M22520/5-01	M22520/5-35 B
	447650-8	SST, passivated					
Belden YR20621 (RG58 Type)	447650-5	SST, passivated	M22520/2-01	K997	6	M22520/5-01	M22520/5-11 A

SOURCE: Catalog 82074

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

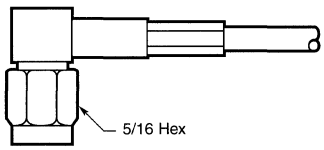
Hex Crimp and Printed Circuit Board SMA Connectors
(Continued)

Plugs



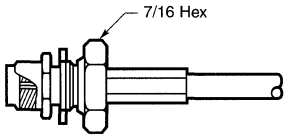
RG/U	Part No.	Body Material and Finish	Center Contact Crimp			Ferrule Crimp	
			Military Tool	Positioner	Setting	Military Tool	Die Part No.
58, 58A, 58B, 58C	447647-1	Brass, Ni plated	M22520/2-01	M22520/2-20	6	M22520/5-01	M22520/5-11 A
RG142, 142A, 142B	447647-2	Brass, Ni plated	M22520/2-01	M22520/2-20	7	M22520/5-01	M22520/5-11 A
	447647-7	SST, passivated					
	1-447647-2	Brass, Ni plated					
174, 174A, 188, 188A, 316	447647-3	Brass, Ni plated	M22520/2-01	M22520/2-20	4	M22520/5-01	M22520/5-35 B
	447647-6	SST, passivated					
174DB, 188DB, 316DB	447647-4	Brass, Ni plated	M22520/2-01	M22520/2-20	4	M22520/5-01	M22520/5-35 B
	447647-8	SST, passivated					
Belden YR20621 (RG58 Type)	447647-5	SST, passivated	M22520/2-01	M22520/2-20	6	M22520/5-01	M22520/5-11 A
RG174, 188, 316	447647-9	Brass, Ni plated	M22520/2-01	M22520/2-20	4	M22520/5-01	M22520/5-35 B
	1-447647-4	Brass, Gold Plated					
RG55, 55A, 223	1-447647-0	Brass, Ni plated	M22520/2-01	M22520/2-20	7	M22520/5-01	M22520/5-11 A
Belden YR20621	1-447647-1	Brass, Ni plated	M22520/2-01	M22520/2-20	6	M22520/5-01	M22520/5-11 A
	1-447647-3	Brass, Gold Plated					

Right-Angle Plugs



RG/U	Part No.	Body Material and Finish	Center Contact Crimp			Ferrule Crimp	
			Military Tool	Positioner	Setting	Military Tool	Die Part No.
RG55, 55A, 223	1-447651-2	Brass, Ni plated	M22520/2-01	K997	7	M22520/5-01	M22520/5-11 A
	1-447651-3	Brass, Gold plated					
58, 58A, 58B, 58C	447651-1	Brass, Ni plated	M22520/2-01	K997	6	M22520/5-01	M22520/5-11 A
	447651-9	SST, passivated					
142, 142A, 142B	447651-2	Brass, Ni plated	M22520/2-01	K997	7	M22520/5-01	M22520/5-11 A
	447651-7	SST, passivated					
	1-447651-1	Brass, Ni plated					
174, 174A, 188, 188A, 316	447651-3	Brass, Ni plated	M22520/2-01	K997	4	M22520/5-01	M22520/5-35 B
	447651-6	SST, passivated					
174DB, 188DB, 316DB	447651-4	Brass, Ni plated	M22520/2-01	K997	4	M22520/5-01	M22520/5-35 B
	447651-8	SST, passivated					
Belden YR20621 (RG58 Type)	447651-5	SST, passivated	M22520/2-01	K997	6	M22520/5-01	M22520/5-11 A
Belden YR20621	1-447651-0	Brass, Ni plated	M22520/2-01	K997	6	M22520/5-01	M22520/5-11 A

Bulkhead Jacks



RG/U	Part No.	Body Material and Finish	Center Contact Crimp			Ferrule Crimp	
			Military Tool	Positioner	Setting	Military Tool	Die Part No.
142, 142A, 142B	448103-1	Brass, Ni plated	M22520/2-01	K997	7	M22520/5-01	M22520/5-11 A
174, 174A, 188, 188A, 316	448103-2	Brass, Ni plated	M22520/2-01	K997	4	M22520/5-01	M22520/5-35 B
	448103-4	SST, passivated					
Belden YR20621 (RG58 Type)	448103-3	SST, passivated	M22520/2-01	K997	6	M22520/5-01	M22520/5-11 A

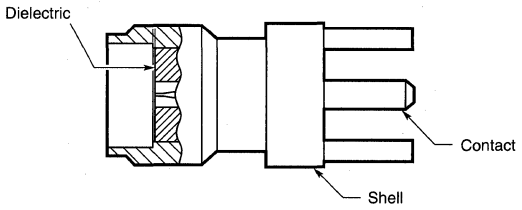
SOURCE: Catalog 82074

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

Hex Crimp and Printed Circuit Board SMA Connectors
(Continued)

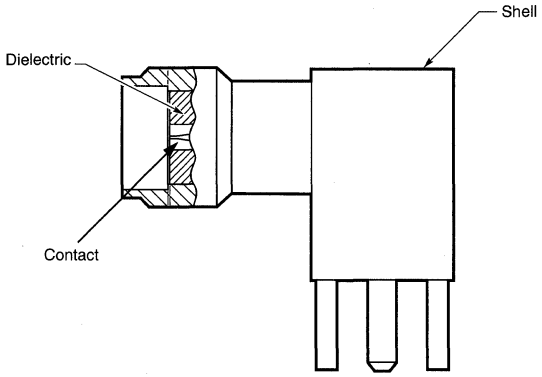
Vertical Printed Circuit Board Jacks

M39012/93-3001
Part No. 447920-1
(Stainless steel body, gold plated)
Part No. 447920-2
(Brass body, gold plated)

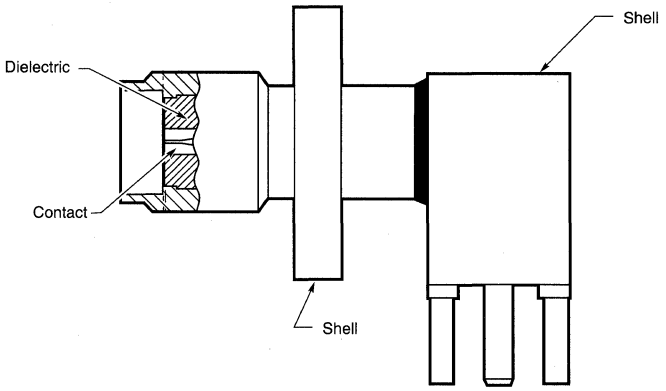


Right-Angle Printed Circuit Board Jacks

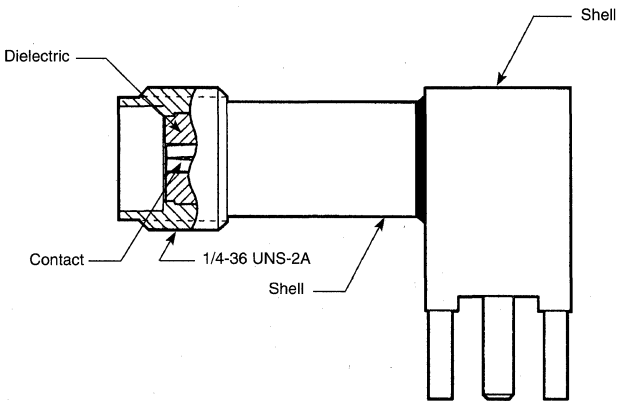
M39012/94-3001
Part No. 447921-1
(Stainless steel body, gold plated)
Part No. 447921-2
(Brass body, gold plated)



Part No. 448774-1
(Brass body, nickel plated, left-hand thread)



Part No. 449709-1
(Brass body, nickel plated)

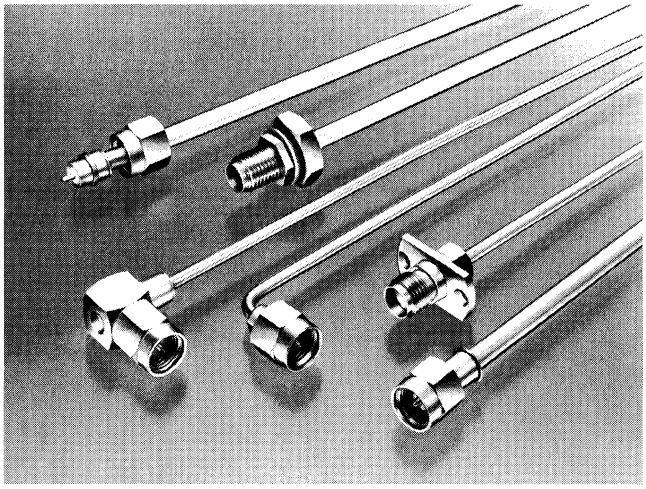


SOURCE: Catalog 82074

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

SMA Connectors for Semi-Rigid and Flexible Cable

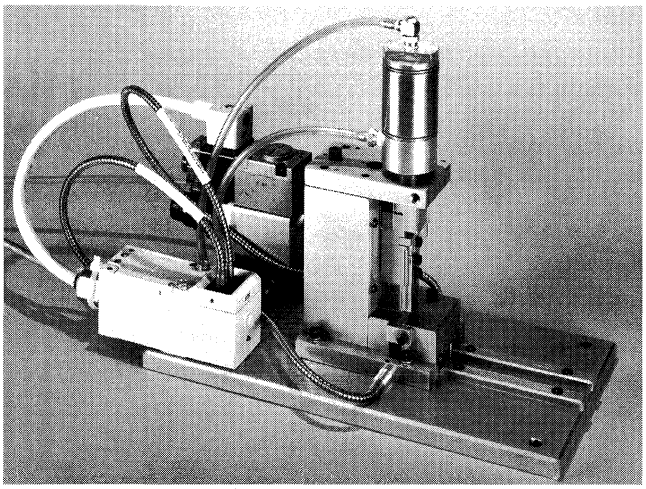
Semi-Rigid Cable Connectors



Product Facts

- Completely preassembled plug and jack
- Qualified to MIL-C-39012
- No heat or soldering required for termination
- Available in two performance ranges: 0-18 GHz, 0-26.5 GHz
- Environmentally sealed versions resistant to moisture and salt fog penetration
- Standard cable stripping dimensions
- Speed of assembly; plug or jack can be terminated in less than one minute with cable preparation machine and pneumatic tool
- Intermateable with all SMA connectors currently available
- Stainless steel shells with gold or passivated finish

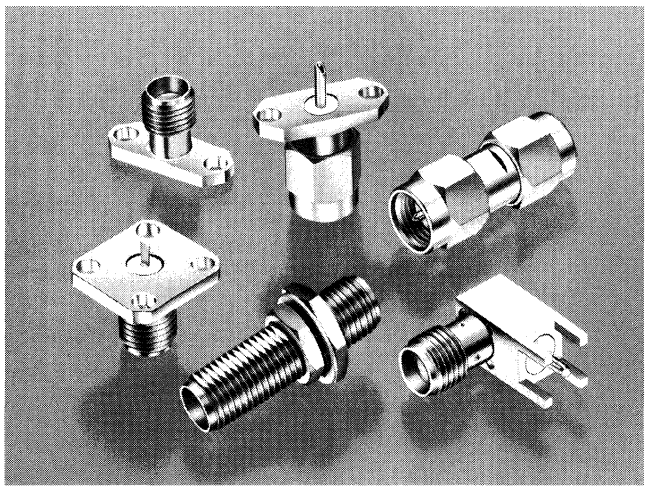
Flexible Cable Connectors



Product Facts

- Low VSWR
- Captive center conductor contacts
- Solderless application to cable—no heat damage
- Crimped terminations give consistent electrical and mechanical performance
- Rapid assembly to cable—no special skills required
- Qualified to MIL-C-39012, Class 2, Category B
- Lower cost commercial versions offer equivalent performance and intermateability with military connectors

Microstrip/Strip Line Launchers



Product Facts

- Completely preassembled
- Intermateable with all SMA connectors currently available
- Variety of configurations available
- Meet cable performance criteria

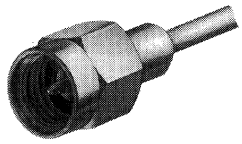
SOURCE: Catalog 82074

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

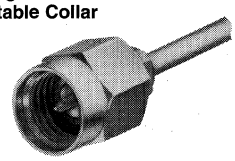
SMA Connectors for Semi-Rigid Cable

Plugs, Compression Crimp

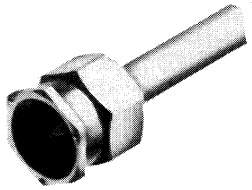
Plug with Center Contact



Plug with Retractable Collar



Plug with Safety Wire Holes



Connector Cable Range Selection Code†	RG/U Cable	Connector Configuration	Frequency Max.	Body Finish	Part No.	Connector Part Numbers*				Tooling Part Numbers			
						Category B		Category F		Hand Tool Kit No. 59981-1		Pneumatic Tool No. 58318-1	
						M39012/ Military No.	AMP Part No.	M39012/ Military No.	AMP Part No.	Die Set (M22520/)	Locator (M22520/)	Die Set[2]	Locator
0	402 Semi-Rigid/ .141 [3.58]	Plug with Center Contact	18 GHz	Passivated	—	79B3104	227743-1	79-3308	228634-1	312253-1 (36-03)	220221-2 (36-04)	313720-1	308075-2
				Gold Plated	228634-2	—	—	—	—				
			26.5 GHz Environmentally Sealed	Passivated	221328-1	—	—	—	—	312253-1 (36-03)	220221-2 (36-04)	313720-1	308075-2
		Plug with Center Contact & Safety Wire Holes	18 GHz	Passivated	—	79B3004	227743-3	79-3208	228634-3	312253-1 (36-03)	220221-2 (36-04)	313720-1	308075-2
				Gold Plated	228634-4	—	—	—	—				
			26.5 GHz Environmentally Sealed	Passivated	221328-2	—	—	—	—	312253-1 (36-03)	220221-2 (36-04)	313720-1	308075-2
		Plug without Center Contact	18 GHz	Passivated	—	92B3101	227531-1	92-3301	228635-1	312253-1 (36-03)	220220-2 (36-06)	313720-1	220241-1
				Gold Plated	228635-2	—	—	—	—				
			26.5 GHz Environmentally Sealed	Passivated	221329-1	—	—	—	—	312253-1 (36-03)	313585-1[1]	313720-1	**
		Plug without Center Contact, with Safety Wire Holes	18 GHz	Passivated	—	92B3001	227531-3	92-3201	228635-3	312253-1 (36-03)	220220-2 (36-06)	313720-1	220241-1
				Gold Plated	228635-4	—	—	—	—				
			26.5 GHz Environmentally Sealed	Passivated	221329-2	—	—	—	—	312253-1 (36-03)	313585-1[1]	313721-1	**
		Plug without Center Contact, with Retractable Collar	18 GHz	Passivated	227531-5	—	—	—	—	312962-1[1]	220220-2 (36-06)	313721-1	220241-1
				Gold Plated	227531-6	—	—	—	—				
			26.5 GHz Environmentally Sealed	Passivated	221329-3	—	—	—	—	312962-1[1]	313585-1[1]	313721-1	**
		Plug without Center Contact, with Retractable Collar & Safety Wire Holes	26.5 GHz Environmentally Sealed	Passivated	221329-4	—	—	—	—	312962-1[1]	313585-1[1]	313721-1	**

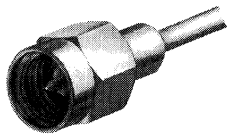
†Refer to Appendix Pages for code specifications.
[1]Not included in Hand Tool Kit **Part No. 59981-1**; must be purchased separately.
[2]Not included with Pneumatic Tool Kit **Part No. 58318-1**; must be purchased separately.
*Consult latest issue of MIL-C-39012 and QPL for current military dash numbers.
**For tooling information call AMP Tooling/Technical Assistance Center.

SOURCE: Catalog 82074

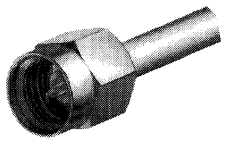
SMA Connectors for Semi-Rigid Cable
(Continued)

Plugs, Compression Crimp
(Continued)

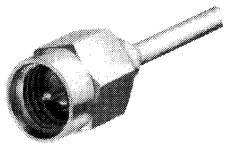
Plug with Center Contact



Short Plug with Center Contact



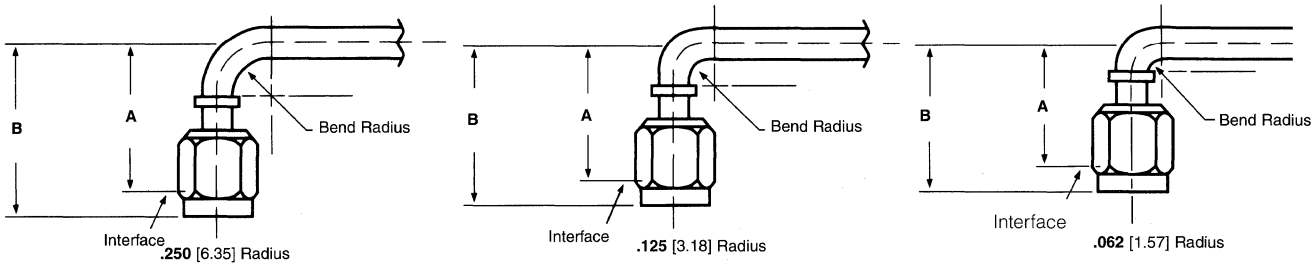
Plug with Retractable Collar



Connector Cable Range Selection Code†	RG/U Cable	Connector Configuration	Frequency Max.	Body Finish	Part No.	Connector Part Numbers* Category B M39012/ Military No.	Category B AMP Part No.	Category F M39012/ Military No.	Category F AMP Part No.	Tooling Part Numbers Hand Tool Kit No. 59981-1 Die Set (M22520/)	Hand Tool Kit No. 59981-1 Locator (M22520/)	Pneumatic Tool No. 58318-1 Die Set[4]	Pneumatic Tool No. 58318-1 Locator
P	405 Semi-Rigid/ .086 [2.18]	Plug with Center Contact	18 GHz	Passivated	—	79B3103	227868-1	79-3307	228639-1	312253-2 (36-02)	220221-2 (36-04)	313719-1	308075-2
				Gold Plated	228639-2	—	—	—	—				
		Plug with Center Contact & Safety Wire Holes	18 GHz	Passivated	—	79B3003	227868-3	79-3207	228639-3	312253-2 (36-02)	220221-2 (36-04)	313719-1	308075-2
				Gold Plated	228639-4	—	—	—	—				
		Short Plug with Center Contact	18 GHz	Passivated	221447-1[1]	—	—	—	—	313113-1[2,3]	220221-3[2]	313719-1	313123-1[4]
				Gold Plated	221447-2[1]	—	—	—	—				
			26.5 GHz Environmentally Sealed	Passivated	221812-1	—	—	—	—	313113-1[2,3]	220221-3[2]	313719-1	313123-1[4]
		Short Plug with Center Contact & Safety Wire Holes	18 GHz	Passivated	221447-3[1]	—	—	—	—	313113-1[2,3]	220221-3[2]	313719-1	313123-1[4]
				Gold Plated	221447-4[1]	—	—	—	—				
			26.5 GHz Environmentally Sealed	Passivated	221812-2	—	—	—	—	313113-1[2,3]	220221-3[2]	313719-1	313123-1[4]
		Short Plug with Center Contact & Retractable Collar	18 GHz	Passivated	221447-5	—	—	—	—	313113-1[2,3]	220221-3[2]	313719-1	313123-1[4]

* Consult latest issue of MIL-C-39012 and QPL for current military dash numbers.
[1]Meets or exceeds Air Force Drawing.
[2]Not included in Hand Tool Kit **Part No. 59981-1**; must be purchased separately.
[3]Die Set **Part No. 312253-2** also may be used; consult AMP for straight cable length requirements.
[4]Not included with Pneumatic Tool **Part No. 58318-1**; must be purchased separately.
†Refer to Appendix Pages for code specifications.

Right-Angle Bend Specifications



Semi-Rigid Cable	SMA Plugs Configuration	SMA Plugs Part No.	Dimensions .250 [3.18] Radius A	.250 [3.18] Radius B	.125 [3.18] Radius A	.125 [3.18] Radius B	.062 [1.57] Radius A	.062 [1.57] Radius B
RG-402/U (.141 [3.58] O.D.)	Plugs without Center Contact	227531-1 228635-1 thru -4	**.578** 14.68	**.713** 18.11	**.453** 11.51	**.588** 14.94	—	—
	Plugs with Center Contact	227743-1, 228634-1 thru -4	**.755** 19.18	**.890** 22.61	**.630** 16.00	**.765** 19.43	—	—
RG-405/U (.086 [2.18] O.D.)	Plugs with Center Contact	227868-1 & -3, 228639-1 thru -4	—	—	**.603** 15.32	**.738** 18.75	**.540** 13.72	**.675** 17.15
	Short Plugs with Center Contact	221447-1 thru -4	—	—	**.500** 12.70	**.625** 15.00	**.437** 11.10	**.562** 14.27

SOURCE: Catalog 82074

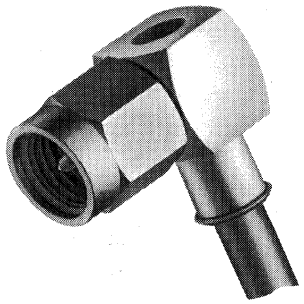
Specifications subject to change.

1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

SMA Connectors for Semi-Rigid Cable
(Continued)

Right-Angle Plugs, Compression Crimp



Connector Cable Range Selection Code†	RG/U Cable	Connector Configuration	Frequency Max.	Body Finish	Part No.	Connector Part Numbers*				Tooling Part Numbers			
						Category B		Category F		Hand Tool Kit No. 59981-1		Pneumatic Tool No. 58318-1	
						M39012/ Military No.	AMP Part No.	M39012/ Military No.	AMP Part No.	Die Set (M22520/)	Locator[1] (M22520/)	Die Set[2]	Locator[2]
O	402 Semi-Rigid/ .141 [3.58]	Right-Angle Plug with Center Contact	18 GHz	Passivated	—	—	—	80-3308	228626-1	312253-1 (36-03)	312173-1	313720-1	59966-1
				Gold Plated	228626-2	—	—	—	—				
			26.5 GHz Environmentally Sealed	Passivated	222066-1	—	—	—	—	312253-1 (36-03)	312173-1	313720-1	59966-1
		Right-Angle Plug with Center Contact & Safety Wire Holes	18 GHz	Passivated	—	—	—	80-3208	228626-3	312253-1 (36-03)	312173-1	313720-1	59966-1
				Gold Plated	228626-4	—	—	—	—				
			26.5 GHz Environmentally Sealed	Passivated	222066-2	—	—	—	—	312253-1 (36-03)	312173-1	313720-1	59966-1
P	405 Semi-Rigid/ .086 [2.18]	Right-Angle Plug with Center Contact	18 GHz	Passivated	—	—	—	80-3307	228583-1	312253-2 (36-02)	312173-1	313719-1	59966-1
				Gold Plated	228583-2	—	—	—	—				
			26.5 GHz Environmentally Sealed	Passivated	222264-1	—	—	—	—	312253-2 (36-02)	312173-1	313719-1	59966-1
		Right-Angle Plug with Center Contact & Safety Wire Holes	18 GHz	Passivated	—	—	—	80-3207	228583-3	312253-2 (36-02)	312173-1	313719-1	59966-1
				Gold Plated	228583-4	—	—	—	—				
			26.5 GHz Environmentally Sealed	Passivated	222264-2	—	—	—	—	312253-2 (36-02)	312173-1	313719-1	59966-1

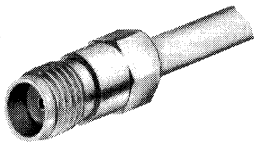
†Refer to Appendix Pages for code specifications.
*Consult latest issue of MIL-C-39012 and QPL for current military dash numbers.
[1]Not included in Hand Tool Kit **Part No. 59981-1**; must be purchased separately.
[2]Not included with Pneumatic Tool **Part No. 58318-1**; must be purchased separately.

SOURCE: Catalog 82074

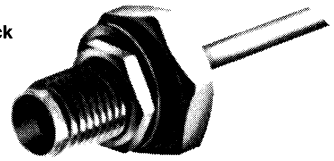
SMA Connectors for Semi-Rigid Cable
(Continued)

Jacks and Bulkhead Jacks, Compression Crimp

Jack



Bulkhead Jack

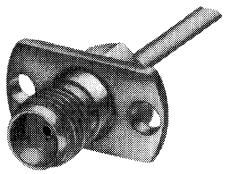


Connector Cable Range Selection Code†	RG/U Cable	Connector Configuration	Frequency Max.	Body Finish	Part No.	Connector Part Numbers*				Tooling Part Numbers			
						Category B		Category F		Hand Tool Kit No. 59981-1		Pneumatic Tool No. 58318-1	
						M39012/ Military No.	AMP Part No.	M39012/ Military No.	AMP Part No.	Die Set (M22520/)	Locator (M22520/)	Die Set¹	Locator
0	402 Semi-Rigid/ .141 [3.58]	Jack	18 GHz	Passivated	—	81B3004	227744-1	81-3208	228636-1	312253-1 (36-03)	220222-2 (36-05)	313720-1	308075-2
				Gold Plated	228636-2	—	—	—	—				
		Bulkhead Jack	18 GHz	Passivated	227746-3	83B3004	227746-1	83-3208	228638-1	312253-1 (36-03)	220222-2 (36-05)	313720-1	308075-2
				Gold Plated	228638-2	—	—	—	—				
P	405 Semi-Rigid/ .086 [2.18]	Jack	18 GHz	Passivated	—	81B3003	227869-1	81-3207	228640-1	312253-2 (36-02)	220222-2 (36-05)	313719-1	308075-2
				Gold Plated	228640-2	—	—	—	—				
		Bulkhead Jack	18 GHz	Passivated	227871-3	83B3003	227871-1	83-3207	228642-1	312253-2 (36-02)	220222-2 (36-05)	313719-1	308075-2
				Gold Plated	228642-2	—	—	—	—				

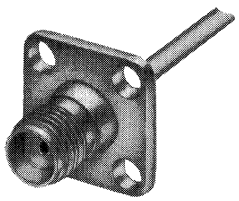
†Refer to Appendix Pages for code specifications.
*Consult latest issue of MIL-C-39012 and QPL for current military dash numbers.
¹Not included with Pneumatic Tool **Part No. 58318-1**; must be purchased separately.
Note: Panel thickness .055-.103 [1.4-2.62].

Panel Jacks, Compression Crimp

2-Hole Panel Jack



4-Hole Panel Jack



Connector Cable Range Selection Code†	RG/U Cable	Connector Configuration	Frequency Max.	Body Finish	Part No.	Connector Part Numbers*				Tooling Part Numbers			
						Category B		Category F		Hand Tool Kit No. 59981-1		Pneumatic Tool No. 58318-1	
						M39012/ Military No.	AMP Part No.	M39012/ Military No.	AMP Part No.	Die Set (M22520/)	Locator (M22520/)	Die Set¹	Locator
0	402 Semi-Rigid/ .141 [3.58]	2-Hole Panel Jack	18 GHz	Passivated	221676-1	—	—	—	—	312253-1 (36-03)	220222-2 (36-05)	313720-1	308075-2
		4-Hole Panel Jack	18 GHz	Passivated	—	82B3004	227745-1	82-3208	228637-1	312253-1 (36-03)	220222-2 (36-05)	313720-1	308075-2
				Gold Plated	228637-2	—	—	—	—				
P	405 Semi-Rigid/ .086 [2.18]	2-Hole Panel Jack	18 GHz	Passivated	221666-1	—	—	—	—	312253-2 (36-02)	220222-2 (36-05)	313719-1	308075-2
		4-Hole Panel Jack	18 GHz	Passivated	—	82B3003	227870-1	82-3207	228641-1	312253-2 (36-02)	220222-2 (36-05)	313719-1	308075-2
				Gold Plated	228641-2	—	—	—	—				

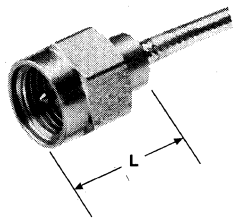
†Refer to Appendix Pages for code specifications.
*Consult latest issue of MIL-C-39012 and QPL for current military dash numbers.
¹Not included with Pneumatic Tool **Part No. 58318-1**; must be purchased separately.
Note: Maximum panel thickness .095 [2.41].

SOURCE: Catalog 82074

Specifications subject to change.
1-800-522-6752 Product Information Center/ AMP FAX Service
1-800-722-1111 Tooling/Technical Assistance Center

SMA Connectors for Semi-Rigid Cable, One-Step Solder

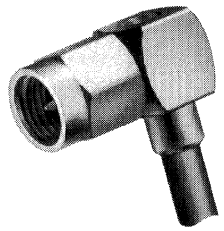
Plugs



Connector Cable Range Selection Code†	RG/U Cable	Frequency Max.	Dim. L	Part No.
0	402 Semi-Rigid/ .141 [3.58]	18 GHz	**.460** 11.68	446736-1
P	405 Semi-Rigid/ .086 [2.18]	26.5 GHz	**.440** 11.18	413071-1
			.330 8.38	447924-1

†Refer to Appendix Pages for code specifications.

Right-Angle Plugs

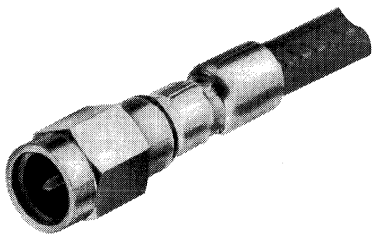


Connector Cable Range Selection Code†	RG/U Cable	Frequency Max.	Part No.
0	402 Semi-Rigid/ .141 [3.58]	18 GHz	446734-1
P	405 Semi-Rigid/ .086 [2.18]	26.5 GHz	413072-1

†Refer to Appendix Pages for code specifications.

SMA Connectors for Flexible Cable

Plugs, Crimp



Connector Cable Range Selection Code†	RG/U Cable	Body and Coupling Nut Material and Plating	Style	M39012/ Military No. and/or Comments	Part No.	Integral Die Hand Tool	Die Insert for Pneumatic Tools 69365, 69365-3
B	174 188, 188A, 316	Stainless Steel, Passivated	Mil Type	55B3019	225532-4	220061-1	220091-1
		Brass, Nickel	Commercial	—	221117-2	220061-1	220091-1
B1	179, 179A, 179B 161, 187, 187A Belden 9221	Stainless Steel, Passivated	Mil Type	—	225532-8	220061-1	220091-1
C1	180, 180A, 180B 195, 195A	Stainless Steel, Passivated	Mil Type	—	225532-7	220061-1	220091-1
D	58, 58A, 58B, 58C	Stainless Steel, Passivated	Mil Type	55B3021	225532-1	220061-1	220091-1
D1	141, 141A, 303	Stainless Steel, Passivated	Mil Type	55B3024	225532-9	220061-1	220091-1
E	223 55, 55A, 55B	Stainless Steel, Passivated	Mil Type	55B3023	1-225532-0	220061-1	220091-1
E1	142, 142A, 142B 400 Belden 84142	Stainless Steel, Passivated	Mil Type	55B3022	225532-3	220061-1	220091-1
		Brass, Nickel	Commercial	—	221117-1	220061-1	220091-1
—	Gore CXN 1384	Stainless Steel, Passivated	Mil Type	—	227781-1	220061-1	—
—	Gore CXN 1362	Stainless Steel, Passivated	Mil Type	—	227781-2	220061-1	—
—	188 Double Braid 316 Double Braid	Stainless Steel, Passivated	Mil Type	—	1-225532-1	59962-1	—
		Brass, Nickel	Commercial	—	221117-3	59962-1	—
—	Insulated Wire #50H155	Stainless Steel, Passivated	Mil Type	—	1-225532-2	220061-1	—

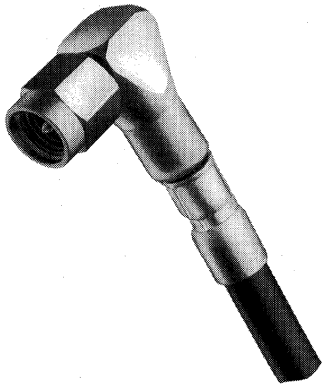
†Refer to Appendix Pages for code specifications.

SOURCE: Catalog 82074

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

SMA Connectors for Flexible Cable
(Continued)

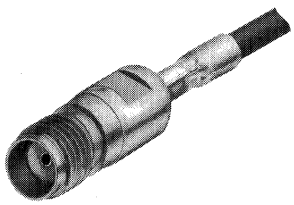
Right-Angle Plugs, Crimp



Connector Cable Range Selection Code†	RG/U Cable	Body and Coupling Nut Material and Plating	Style	M39012/ Military No. and/or Comments	Part No.	Integral Die Hand Tool*	Die Insert for Pneumatic Tools 69365, 69365-3
B	174 188, 188A, 316	Stainless Steel, Passivated	Mil Type	56B3019	225609-4	220061-1	220091-1
		Brass, Nickel	Commercial	—	221171-2	220061-1	220091-1
B1	179, 179A, 179B 161, 187, 187A Belden 9221	Stainless Steel, Passivated	Mil Type	—	225609-8	220061-1	220091-1
D	58, 58A, 58B, 58C	Stainless Steel, Passivated	Mil Type	56B3021	225609-1	220061-1	220091-1
E	223 55, 55A, 55B	Stainless Steel, Passivated	Mil Type	—	1-225609-0	220061-1	220091-1
E1	142, 142A, 142B 400 Belden 84142	Stainless Steel, Passivated	Mil Type	56B3022	225609-3	220061-1	220091-1
		Brass, Nickel	Commercial	—	221171-1	220061-1	220091-1
—	188 Double Braid 316 Double Braid	Brass, Nickel	Commercial	—	221171-3	220061-1	—

†Refer to Appendix Pages for code specifications.
*Integral Die Hand Tool **Part No. 59962-1** can also be used.

Jacks, Crimp



Connector Cable Range Selection Code†	RG/U Cable	Body and Coupling Nut Material and Plating	Style	M39012/ Military No. and/or Comments	Part No.	Integral Die Hand Tool*	Die Insert for Pneumatic Tools 69365, 69365-3
B	174, 188, 188A, 316	Stainless Steel, Passivated	Mil Type	57B3019	225542-4	220061-1	220091-1
		Brass, Nickel	Commercial	—	221119-2	220061-1	220091-1
D	58, 58A, 58B, 58C	Stainless Steel, Passivated	Mil Type	57B3021	225542-1	220061-1	220091-1
E1	142, 142A, 142B 400 Belden 9246	Stainless Steel	Mil Type	57B3022	225542-3	220061-1	220091-1
		Passivated	Commercial	—	221119-1	220061-1	220091-1
—	188 Double Braid 316 Double Braid	Brass, Nickel	Commercial	—	221119-3	220061-1	—

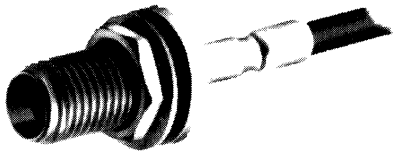
†Refer to Appendix Pages for code specifications.
*Integral Die Hand Tool **Part No. 59962-1** can also be used.

SOURCE: Catalog 82074

Specifications subject to change.
1-800-522-6752 Product Information Center/ AMP FAX Service
1-800-722-1111 Tooling/Technical Assistance Center

SMA Connectors for Flexible Cable
(Continued)

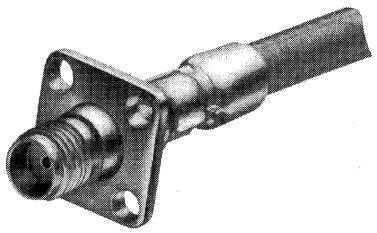
Bulkhead Jacks, Crimp



Connector Cable Range Selection Code†	RG/U Cable	Body and Coupling Nut Material and Plating	Style	M39012/ Military No. and/or Comments	Part No.	Integral Die Hand Tool	Die Insert for Pneumatic Tools 69365, 69365-3
B	174, 188, 188A, 316	Stainless Steel, Passivated	Mil Type	—	225608-4	220061-1	220091-1
		Brass, Nickel	Commercial	—	221169-2	220061-1	220091-1
D1	141, 141A, 303	Stainless Steel, Passivated	Mil Type	59B3024	225608-9	220061-1	220091-1
E1	142, 142A, 142B 400, Belden 9246	Stainless Steel, Passivated	Mil Type	59B3022	225608-3	220061-1	220091-1
		Brass, Nickel	Commercial	—	221169-1	220061-1	220091-1
—	188 Double Braid 316 Double Braid	Stainless Steel, Passivated	Mil Type	—	1-225608-1	59962-1 or 220061-1	—
		Brass, Nickel	Commercial	—	221169-3	59962-1 or 220061-1	—

†Refer to Appendix Pages for code specification.

Panel Jacks, Crimp (4 Holes)



Connector Cable Range Selection Code†	RG/U Cable	Body and Coupling Nut Material and Plating	Style	M39012/ Military No. and/or Comments	Part No.	Integral Die Hand Tool	Die Insert for Pneumatic Tools 69365, 69365-3
B	174 188, 188A, 316	Brass, Nickel	Commercial	—	221126-2	220061-1	220091-1
E1	142, 142A, 142B 400, Belden 9246	Brass, Nickel	Commercial	—	221126-1	220061-1	220091-1
—	188 Double Braid 316 Double Braid	Brass, Nickel	Commercial	—	221126-3	59962-1 or 220061-1	—

†Refer to Appendix Pages for code specification.
Note: Maximum panel thickness .095 [2.41].

Panel Jacks, Crimp (2 Holes)

Connector Cable Range Selection Code†	RG/U Cable	Body and Coupling Nut Material and Plating	Style	M39012/ Military No. and/or Comments	Part No.	Integral Die Hand Tool	Die Insert for Pneumatic Tools 69365, 69365-3
E1	142	Stainless Steel, Passivated	Commercial	—	448834-1	220061-1	220091-1
B	316, 188, 174	Stainless Steel, Passivated	Commercial	—	448834-2	220061-1	220091-1
—	316, 188 Double Braid	Stainless Steel, Passivated	Commercial	—	448834-3	59962-1	—

†Refer to Appendix Pages for code specification.
Note: Maximum panel thickness .095 [2.41].

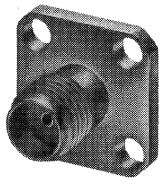
SOURCE: Catalog 82074

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

SMA Adapters and PC Board Connectors

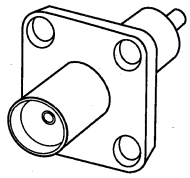
Micro-Strip/Strip Line Launchers

Panel Jack with Tab



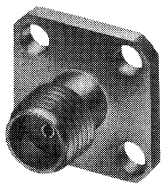
Part No. 221972-1

Panel Jack (Solder Version)

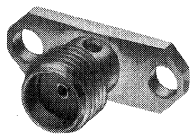


Part No. 447922-1

Field Replaceable Panel Jacks



4-Hole Mount



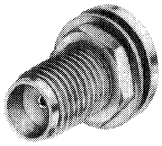
2-Hole Mount

Note: Maximum panel thickness .095 [2.41].

Pin Dia. Accepted	Mounting Style	Part No.
.011 0.28	4-Hole	221963-1
.015 0.38	4-Hole	221964-1
.020 0.51	4-Hole	221965-1
.011 0.28	2-Hole	221966-1
.015 0.38	2-Hole	221967-1
.020 0.51	2-Hole	221968-1

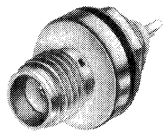
Bulkhead Solder Jacks

Rear Mount



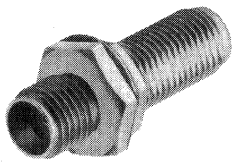
Brass Body, Nickel Plated
Part No. 228496-1

Front Mount



Brass Body, Nickel Plated
Part No. 228497-1

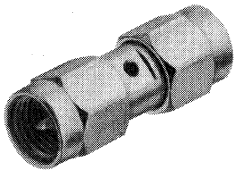
Bulkhead Jack Adapter
(Jack-Jack)



Part No. 221643-1

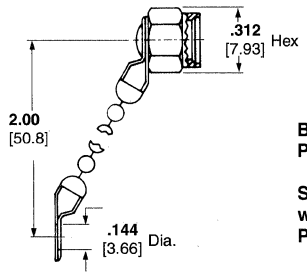
Note: Panel thickness .055/.103 [1.40/2.62].

Plug Adapter
(Plug-Plug)



Part No. 221639-1

Protective Cap



Brass, Nickel Plated
Part No. 501368-1

Stainless Steel, Passivated with Safety Wire Holes
Part No. 501369-1

SOURCE: Catalog 82074

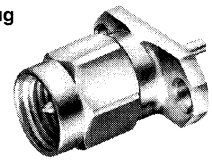
Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

SMA Adapters and PC Board Connectors
(Continued)

Panel Solder Plugs and Jacks

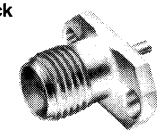
Note: Maximum panel thickness .095 [2.41].

2-Hole Plug



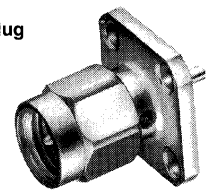
Part No. 221674-1

2-Hole Jack



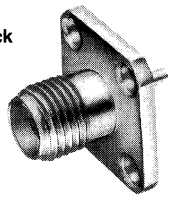
Part No. 221641-1

4-Hole Plug



Part No. 221670-1

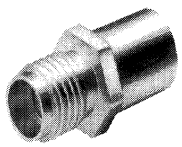
4-Hole Jack



Part No. 221640-1

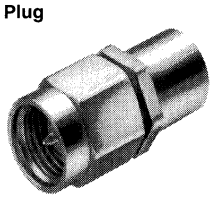
Adapters

SMA Jack to 3.5 mm Blind Mate Plug



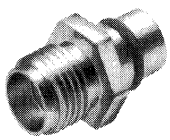
Part No. 222699-1

SMA Plug to 3.5 mm Blind Mate Plug



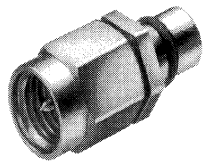
Part No. 222695-1

SMA Jack to 3.5 mm Blind Mate Jack



Part No. 222692-1

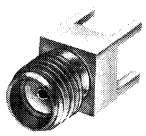
SMA Plug to 3.5 mm Blind Mate Jack



Part No. 222689-1

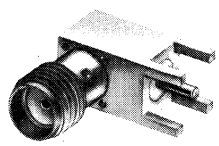
PC Board Connectors

Vertical Jack



Brass Body, Gold Plated
Part No. 221789-1

Right-Angle Jack

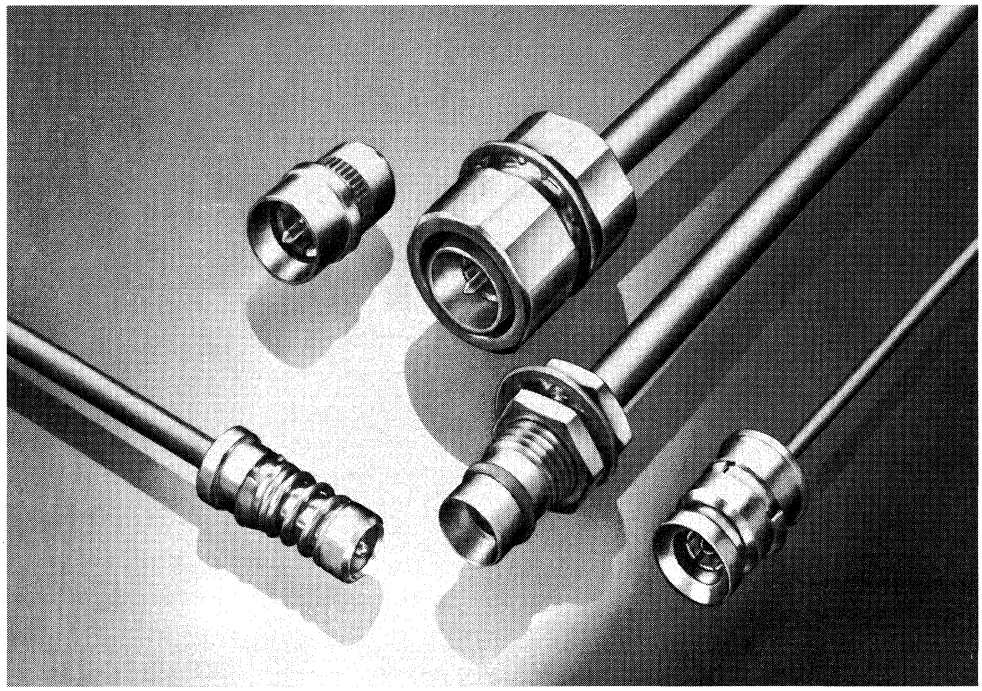


Stainless Steel Body, Gold Plated
Part No. 221790-1

SOURCE: Catalog 82074

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

Blind Mate Connectors for Semi-Rigid Cable

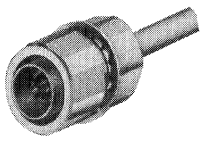


Product Facts

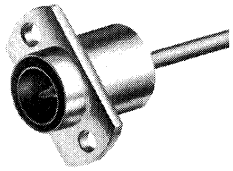
- 26.5 or 40 GHz performance
- Superior performance of air dielectric interface
- Solid telescoping alignment; no interface damage
- Shielded outer contact; low RF leakage
- Configurations include bulkhead jacks and plugs for panel and bulkhead applications
- 3.5 mm Blind Mate Connector has interchangeable mounting/ panel spacing with other blind mate designs per DESC specification
- Crimped with standard military SMA hand tool and special locator inserts

3.5 mm Blind Mate Connectors for Semi-Rigid Cable

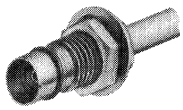
Bulkhead Plug



2-Hole Panel Plug



Bulkhead Jack



Connector Cable Range Selection Code†	RG/U Cable	Connector Configuration	Part No.	Hand Tool Kit Part No. 59981-1	
				Die Set	Locator*
0	402 Semi-Rigid/ .141 [3.58]	Bulkhead Plug	222201-1	312253-1	313745-1
		2-Hole Panel Plug	222200-1	312253-1	313745-1
		Bulkhead Jack (BMA Mount Cutout)	222198-1	312253-1	313746-1
		Bulkhead Jack (BMB Mount Cutout)	222199-1	312253-1	313746-1
P	405 Semi-Rigid/ .086 [2.18]	Bulkhead Plug	222197-1	312253-2	313745-1
		2-Hole Panel Plug	222193-1	312253-2	313745-1
		Bulkhead Jack (BMA Mount Cutout)	222194-1	312253-2	313746-1
		Bulkhead Jack (BMB Mount Cutout)	222196-1	312253-2	313746-1

†Refer to Appendix Pages for code specifications.
*Not included in Hand Tool Kit **Part No. 59981-1**; must be purchased separately.

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

3.5 mm Blind Mate Connectors for Semi-Rigid Cable
(Continued)

Press-Fit Connectors

Plug

Part No. 222645-1

Jack

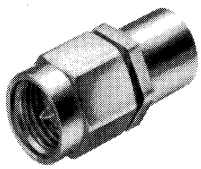
Part No. 222644-1

Adapters

3.5 mm Blind Mate
Plug to SMA Jack

Part No. 222699-1

3.5 mm Blind Mate
Plug to SMA Plug

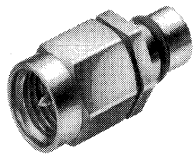


Part No. 222695-1

3.5 mm Blind Mate
Jack to SMA Jack

Part No. 222692-1

3.5 mm Blind Mate
Jack to SMA Plug



Part No. 222689-1

SOURCE: Catalog 82074

Specifications subject to change.
1-800-522-6752
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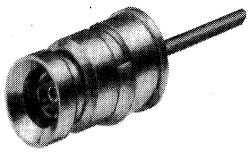
1-800-722-1111
Tooling/Technical Assistance Center

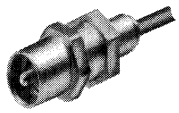
2.8 mm Blind Mate Connectors for Semi-Rigid Cable

Floating Plug



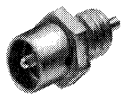
RG-405 Semi-Rigid Cable — Part No. 413012-1
.047 [1.19] **Semi-Rigid Cable — Part No. 413025-1**

Bulkhead Jack



.047 [1.19] **Semi-Rigid Cable — Part No. 413024-1**

Launcher

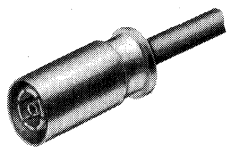


Part No. 413020-1

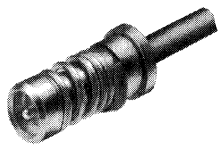
2.8 mm Blind Mate Contacts

(for Blind Mate Subminiature D Connectors with Size 8 Cavities)

Plug



Jack



Application Tool—Part No. 59980-1
(Requires Die Set and Locator, see table for part numbers)

Trimmer Tool—Part No. 312317-1

Cable Dressing Fixture—Part No. 311395-1

Note: All the above tools are included in Hand Tool Kit **Part No. 59981-1** listed in the table.

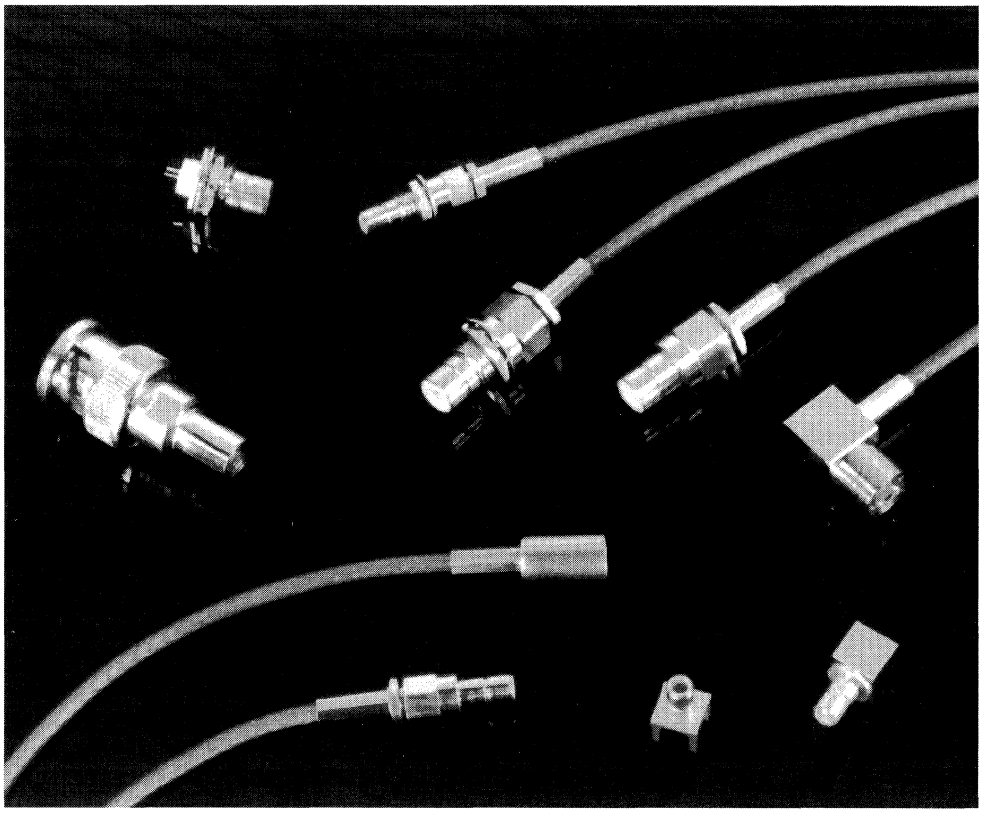
Connector Cable Range Selection Code†	RG/U Cable	Connector Configuration	Part No.	Hand Tool Kit Part No. 59981-1	
				Die Set	Locator*
P	405 Semi-Rigid .086 [2.18]	Plug	413242-1	312253-2	852113-1
		Jack	413249-1	312253-2	852114-1

†Refer to Appendix Pages for code specifications,
*Not included in Hand Tool Kit **Part No. 59981-1**; must be purchased separately.

SMB Connectors

Product Facts

- **SMB offers snap-fit coupling for quick connect/disconnect**
- **Choice of Commercial or MIL-Type Connectors**
- **50 and 75 ohm MIL-Type connectors available**
- **Screw machined components for highest performance**
- **Straight plugs and jacks are completely crimp terminated**
- **Fast, easy cable assembly**
- **Low VSWR**
- **Standard military, commercial or AMP tooling**
- **MIL-Type connectors offer consistent mating and unmating forces**



SMB Connectors are available in commercial and MIL-Type versions. They are ideally suited for circuit miniaturization and are offered in a wide range of configurations including plugs, right-angle plugs, bulkhead jacks and adapters, as well as printed circuit board and solder jacks.

The most desirable feature of the new, MIL-Type 50 ohm SMB connector is its consistent low force mating and unmating. Along with this low consistent mating/unmating force, outer contact resistance values are maintained from connector to connector. The SMB product line has been expanded to include 75 ohm connectors.

Assembly costs will be kept to a minimum using plugs and jacks with a crimp center contact and hex crimp outer braid. Both hand held tooling and pneumatic bench-mounted tooling is available. Easily assembled right-angle plugs have a hex crimp on the outer braid ferrule and bifurcated solder center contacts.

AMP Commercial SMB Connectors feature unique spring mating with snap-fit couplings for quick connect/disconnect. These connectors are designed to be intermateable with MIL-C-39012 connectors. They also feature reliable dual crimp cable terminations.

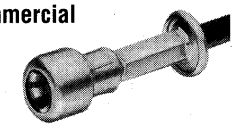
SOURCE: Catalog 82074

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

SMB Connectors, 50 Ohm

Plugs

Commercial



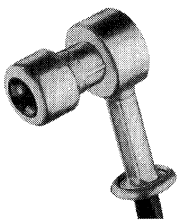
Mil Type and Zinc

Connector Cable Range Selection Code†	RG/U Cable	Center Contact Plating	Outer Contact Plating	Other Metal Parts Plating	Dielectric	Style	Part No.
A	178, 178A, 178B, 196, 196A	Gold	Gold	Nickel	TEFLON	Commercial	228213-2
		Gold	Gold	Gold	TEFLON	Mil Type	413985-5
		Gold	Gold	Nickel	TEFLON	Mil Type	413985-6
B	174, 316, 188, 188A	Gold	Gold	Nickel	TEFLON	Commercial	228213-1
		Gold	Gold	Gold	TEFLON	Mil Type	413985-1
		Gold	Gold	Nickel	TEFLON	Mil Type	413985-3
		Gold	Gold	Nickel	TEFLON	Zinc	414946-1
B1	179, 179A, 179B, 161, 187, 187A, Belden 9221	Gold	Gold	Nickel	TEFLON	Commercial	228213-3
		Gold	Gold	Gold	TEFLON	Mil Type	1-413985-0
		Gold	Gold	Nickel	TEFLON	Mil Type	1-413985-1
B3	RD 316, 188 Double Braid	Gold	Gold	Nickel	TEFLON	Commercial	228213-5
		Gold	Gold	Gold	TEFLON	Mil Type	413985-2
		Gold	Gold	Nickel	TEFLON	Mil Type	413985-4
		Gold	Gold	Nickel	TEFLON	Zinc	414946-3

†Refer to Appendix Pages for code specifications

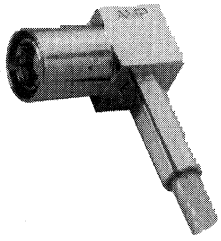
Right-Angle Plugs

Commercial



Mil Type

Zinc Die Cast



Connector Cable Range Selection Code†	RG/U Cable	Center Contact Plating	Outer Contact Plating	Other Metal Parts Plating	Dielectric	Style	Part No.
A	178, 178A, 178B, 196, 196A	Gold	Gold	Nickel	TEFLON	Commercial	228214-2
		Gold	Gold	Gold	TEFLON	Mil Type	414002-7
		Gold	Gold	Nickel	TEFLON	Mil Type	414002-8
		Gold	Gold	Nickel	TEFLON	Zinc	414363-8
		Gold	Nickel	Nickel	TEFLON	Zinc	414363-9
B, B1	174, 316,188, 188A 179, 179A, 179B, 161, 187, 187A, Belden 9221	Gold	Gold	Nickel	TEFLON	Commercial	228214-1
		Gold	Gold	Gold	TEFLON	Mil Type	414002-1
		Gold	Gold	Nickel	TEFLON	Mil Type	414002-3
		Gold	Gold	Nickel	TEFLON	Zinc	414363-3
		Gold	Nickel	Nickel	TEFLON	Zinc	414363-5
B3	RD 316, 188 Double Braid	Gold	Gold	Nickel	TEFLON	Commercial	228214-6
		Gold	Gold	Gold	TEFLON	Mil Type	414002-2
		Gold	Gold	Nickel	TEFLON	Mil Type	414002-4
		Gold	Gold	Nickel	TEFLON	Zinc	414363-4
		Gold	Nickel	Nickel	TEFLON	Zinc	414363-6

†Refer to Appendix Pages for code specifications

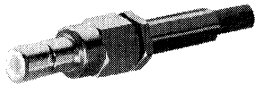
SOURCE: Catalog 82074

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

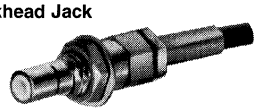
SMB Connectors, 50 Ohm
(Continued)

Jacks and Bulkhead Jacks

Jack



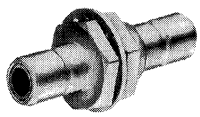
Bulkhead Jack



Connector Cable Range Selection Code†	RG/U Cable	Center Contact Plating	Body Plating	Dielectric	Style	Jack Part No.	Bulkhead Jack Part No.
A	178, 178A, 178B, 196, 196A	Gold	Gold	TEFLON	Mil Type	414091-5	414092-5
		Gold	Nickel	TEFLON	Mil Type	414091-6	414092-6
B	174, 316, 188, 188A	Gold	Gold	TEFLON	Mil Type	414091-1	414092-1
		Gold	Nickel	TEFLON	Mil Type	414091-3	414092-3
B3	RD 316, 188 Double Braid	Gold	Gold	TEFLON	Mil Type	414091-2	414092-2
		Gold	Nickel	TEFLON	Mil Type	414091-4	414092-4

†Refer to Appendix Pages for code specifications.
**Maximum panel thickness .093 [2.36].

Bulkhead Jack Adapter
(Jack-Jack)

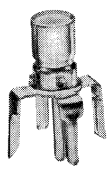


Type	Center Contact Plating	Body Plating	Dielectric	Style	Part No.
Jack-to-Jack	Gold	Nickel	TEFLON	Mil Type	228553-1

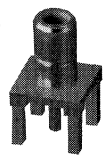
Note: Maximum panel thickness .093 [2.36].

PC Board Jacks and Plug

Vertical Commercial (Jack)



Vertical Mil Type (Jack)



Type	Center Contact Plating	Body Plating	Dielectric	Style	Part No.
Vertical	Gold	Nickel	TEFLON	Commercial	221111-1
	Gold	Gold	TEFLON	Mil Type	413990-1
	Gold	Nickel	TEFLON	Mil Type	413990-2

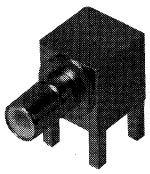
SOURCE: Catalog 82074

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

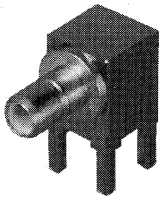
SMB Connectors, 50 Ohm
(Continued)

PC Board Jacks and Plug
(Continued)

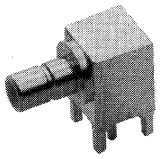
Right-Angle Mil Type Low Profile (Jack)



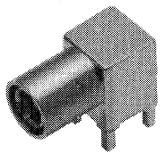
Right-Angle Mil Type with Standoff Pads (Jack)



Right-Angle Zinc Die Cast (Jack)



Right-Angle Zinc Die Cast (Plug)

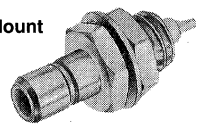


Type	Center Contact Plating	Interface Body Plating	PCB Leg Plating	Dielectric	Style	Part No.
Right-Angle Low Profile (Jack)	Gold	Gold	Gold	TEFLON	Mil Type	413996-2
	Gold	Nickel	Nickel	TEFLON	Mil Type	413996-4
Right-Angle With Standoff Pads (Jack)	Gold	Gold	Gold	TEFLON	Mil Type	414026-2
	Gold	Nickel	Nickel	TEFLON	Mil Type	414026-3
	Gold	Gold	Nickel	TEFLON	Mil Type	414026-4
	Gold	Gold	Tin-Lead	TEFLON	Mil Type	414026-5
	Gold	Nickel	Tin-Lead	TEFLON	Mil Type	414026-6
Jack	Gold	Nickel	Tin-Lead	TEFLON	Zinc	414337-1
Plug	Gold	Gold	Nickel/Tin-Lead	TEFLON	Zinc	414338-1*

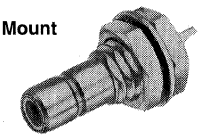
*Body is Nickel Plated, legs are Tin-Lead Plated.

Bulkhead Jack Receptacles, Solder Pot

Front Mount



Rear Mount



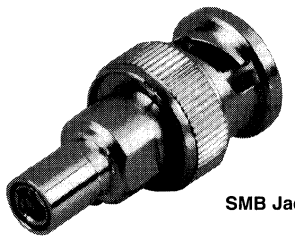
Type	Center Contact Plating	Body Plating	Dielectric	Style	Part No.
Front Mount	Gold	Nickel	TEFLON	Mil Type	228216-1
	Gold	Gold	TEFLON	Mil Type	228216-2
Rear Mount	Gold	Nickel	TEFLON	Mil Type	228215-1
	Gold	Gold	TEFLON	Mil Type	228215-2

Note: Maximum panel thickness .093 [2.36].

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

SMB Connectors, 50 Ohm
(Continued)

Adapters



SMB Jack to BNC Plug (shown as example)

Type	Center Contact Plating	Body Plating	Dielectric	Style	Part No.
SMC Plug to SMB Plug	Gold	Gold	TEFLON	Mil Type	414025-2
SMC Jack to SMB Plug	Gold	Gold	TEFLON	Mil Type	414027-2
SMC Plug to SMB Jack	Gold	Gold	TEFLON	Mil Type	414028-2
SMC Jack to SMB Jack	Gold	Gold	TEFLON	Mil Type	414044-2
SMB Jack to Jack	Gold	Gold	TEFLON	Mil Type	414029-2
SMB Plug to Plug	Gold	Gold	TEFLON	Mil Type	414039-2
SMB Tee Jack-Plug-Jack	Gold	Gold	TEFLON	Mil Type	414040-2
SMB Tee Jack-Jack-Jack	Gold	Gold	TEFLON	Mil Type	414041-2
SMB Plug to BNC Plug	Gold	Gold	TEFLON	Mil Type	414049-2
SMB Jack to BNC Plug	Gold	Gold	TEFLON	Mil Type	414050-2
SMB Jack to BNC Bulkhead Jack	Gold	Gold	TEFLON	Mil Type	414051-2
SMB Plug to BNC Bulkhead Jack	Gold	Gold	TEFLON	Mil Type	414052-2
SMB Jack to N Plug	Gold	Gold	TEFLON	Mil Type	414054-2
SMB Resistive Termination 51 ohm/ .5W Plug	Gold	Gold	TEFLON	Mil Type	414042-2
SMB Resistive Termination 51 ohm/ .5W Jack	Gold	Gold	TEFLON	Mil Type	414043-2

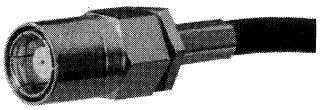
SOURCE: Catalog 82074

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

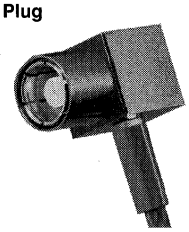
SMB Connectors, 75 Ohm

Straight and Right-Angle Plugs

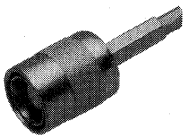
Straight Plug



Right-Angle Plug



Straight Plug Commercial

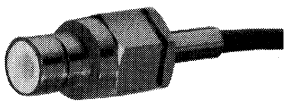


Connector Cable Range Selection Code†	RG/U Cable	Center Contact Plating	Outer Body Plating	Other Metal Parts Plating	Dielectric	Style	Straight Plug Part No.	Right-Angle Plug Part No.
B1	179, 179A, 179B 161, 187, 187A Belden 9221	Gold	Gold	Nickel	TEFLON	Commercial	414618-1	414048-6
		Gold	Nickel	Nickel	TEFLON	Commercial	414618-2	1-414048-3
C1	180, 180A, 180B 195, 195A	Gold	Gold	Nickel	TEFLON	Mil Type	414047-8	414048-8
		Gold	Nickel	Nickel	TEFLON	Mil Type	1-414047-4	1-414048-4

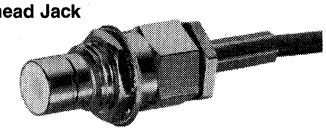
†Refer to Appendix Pages for cable code specifications.

Jacks and Bulkhead Jacks

Jack



Bulkhead Jack



Connector Cable Range Selection Code†	RG/U Cable	Center Contact Plating	Body Plating	Dielectric	Style	Jack Part No.	Bulkhead Jack Part No.
B1	179, 179A, 179B 161, 187, 187A Belden 9221	Gold	Front-Gold Rear-Nickel	TEFLON	Mil Type	414074-2	414075-2
		Gold	Nickel	TEFLON	Mil Type	414074-6	414075-6
C1	180, 180A, 180B 195, 195A	Gold	Front-Gold Rear-Nickel	TEFLON	Mil Type	414074-4	414075-4
		Gold	Nickel	TEFLON	Mil Type	414074-8	414075-8

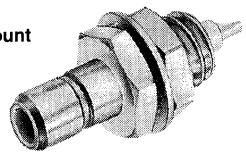
†Refer to Appendix Pages for cable code specifications.
Note: Maximum panel thickness .093 [2.36].

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

SMB Connectors, 75 Ohm
(Continued)

Bulkhead Jack Receptacles, Solder Pot

Front Mount



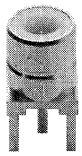
Rear Mount

Type	Center Contact Plating	Body Plating	Dielectric	Style	Part No.
Front Mount	Gold	Nickel	TEFLON	Mil Type	221225-1
Rear Mount	Gold	Nickel	TEFLON	Mil Type	221222-1

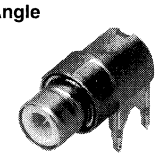
Note: Maximum panel thickness .093 [2.36].

PC Board Jacks

Vertical



Right-Angle



Type	Center Contact Plating	Body Plating	Dielectric	Style	Part No.
Vertical	Gold[1]	Gold	TEFLON	Mil Type	414244-1
	Gold[1]	Nickel	TEFLON	Mil Type	414244-2
	Gold[2]	Gold	TEFLON	Mil Type	414244-3
	Gold[1]	Tin-Lead	TEFLON	Mil Type	414244-4
Right-Angle	Gold[1]	Front-Nickel Rear-Tin-Lead	TEFLON	Commercial	221014-1

Plating:
[1]Gold— .000030 [0.00076] thick
[2]Gold— .000050 [0.00127] thick

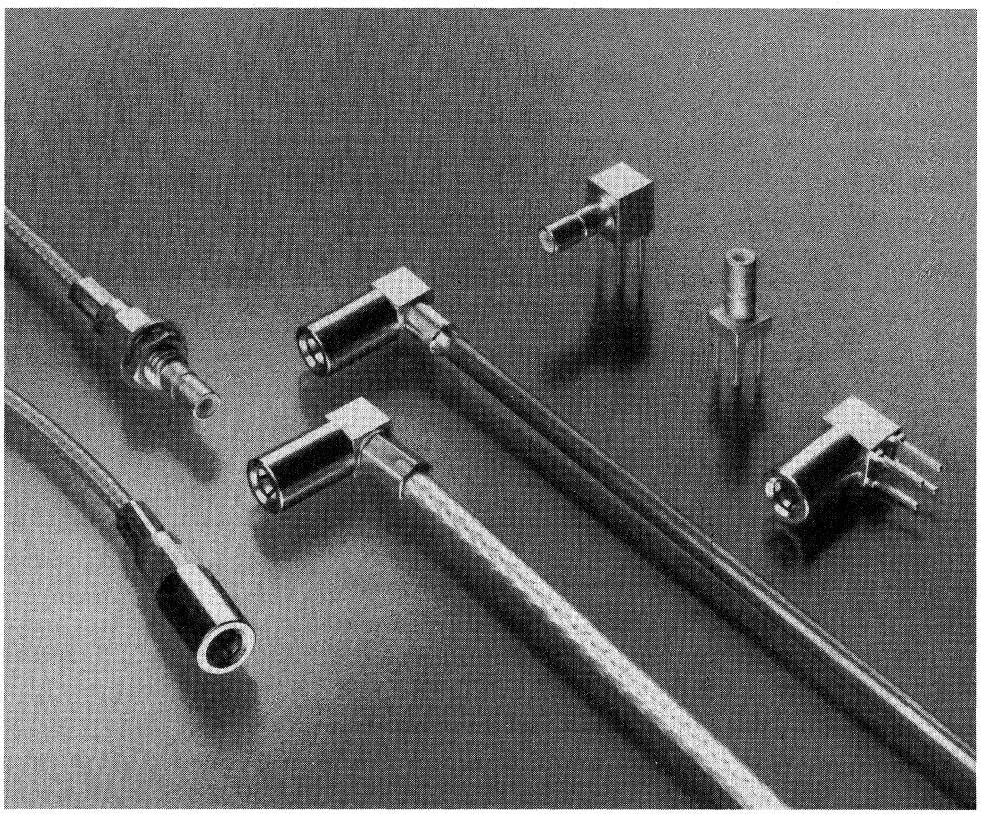
SOURCE: Catalog 82074

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

SSMB Cable and Printed Circuit Board Connectors

Product Facts

- Meets requirements of IEC 169-19 document
- Performance to 12.4 GHz
- Crimp center contacts for straight plugs and jacks
- Uses industry standard crimp tools
- 30 to 40 percent smaller than SMB designs
- Low profile versions have mated height of less than .500 [12.7]
- Gold plated contacts
- Three-piece component assembly



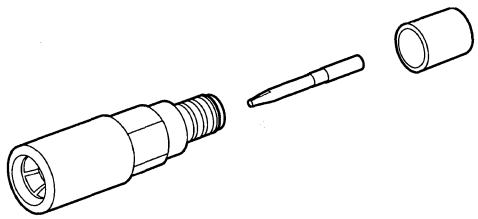
Packaging space is becoming a premium commodity, and a new low cost snap-on connector is needed. SSMB board mounted products have a .100 by .100 [2.54 by 2.54] center footprint, or a .200 by .200 [5.08 by 5.08] footprint for SMB retrofits. Its mated height and packaging volume reduces space requirements by 30 to 40 percent over present conventional packaging. Increased performance to 12.4 GHz accommodates today's higher frequency requirements.

The AMP SSMB connectors conform to international standards such as IEC 169-19. By using industry standard crimp tools, no special manufacturing processes are needed. Crimping of various center contacts increases yields while reducing assembly time. Popular cable sizes such as RG316, RD316, RG178 and RG405 are accommodated. Board mounted products offer options with and without stand-offs to conform to various printed circuit board assembly requirements. Three-piece component assembly reduces product complexity.

SOURCE: Catalog 82074

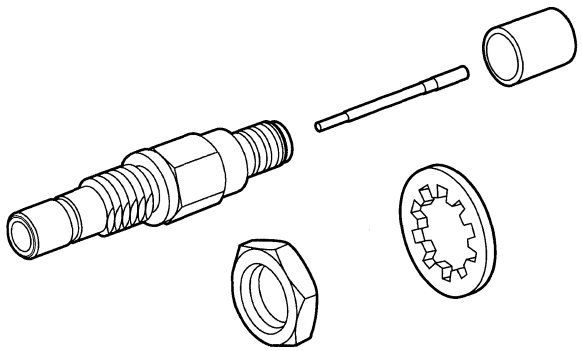
SSMB Cable and Printed Circuit Board Connectors
(Continued)

Straight Plug



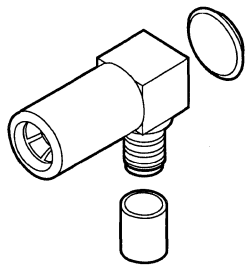
RG/U	Part No.	Center Contact Crimp		Ferrule Crimp	
		Military Tool	Positioner	Military Tool	Die Part No.
178, 178A, 178B, 196, 196A	447970-1	M22520/2-01	K996	M22520/5-01	M22520/5-03
174, 174A, 188, 188A, 316	447970-2	M22520/2-01	K996	M22520/5-01	M22520/5-03
174DB, 316DB	447970-3	M22520/2-01	K996	M22520/5-01	M22520/5-03

Bulkhead Jack

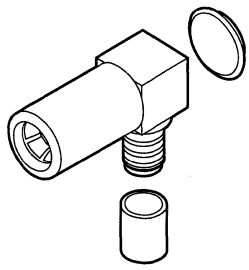


RG/U	Part No.	Center Contact Crimp		Ferrule Crimp	
		Military Tool	Positioner	Military Tool	Die Part No.
178 178A, 178B, 196, 196A	447971-1	M22520/2-01	K996	M22520/5-01	M22520/5-03
174, 174A, 188, 188A, 316	447971-2	M22520/2-01	K996	M22520/5-01	M22520/5-03
174DB, 316DB	447971-3	M22520/2-01	K996	M22520/5-01	M22520/5-03

Right-Angle Plug



Long Version



Short Version

RG/U	Part No.	Ferrule Crimp	
		Military Tool	Die Part No.
178, 178A, 178B, 196, 196A	447392-1*	M22520/5-01	M22520/5-03
405, Belden 9307	447392-2*	N/A	N/A
174, 174A, 188, 188A, 316	447392-3*	M22520/5-01	M22520/5-03
174DB, 316DB	447392-4*	M22520/5-01	M22520/5-03
174, 174A, 188, 188A, 316	447392-5**	M22520/5-01	M22520/5-03

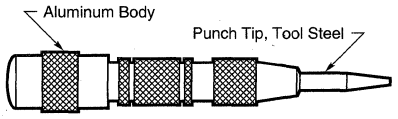
* Long Version
** Short Version to be used with Low Profile Jack, **Part No. 448028-1**

SOURCE: Catalog 82074

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

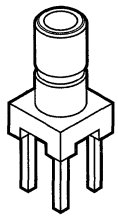
SSMB Cable and Printed Circuit Board Connectors
(Continued)

End Cap Insertion Tool

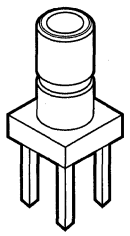


Part No. 448078-1

Vertical PCB Jack

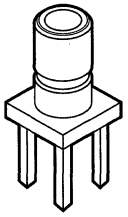


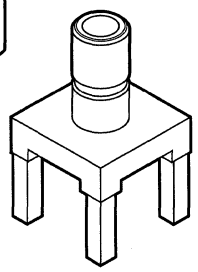
Part No. 447992-1
(With Standoffs)



Part No. 447992-2
(Without Standoffs)

Part No. 448028-1*
(Low Profile)

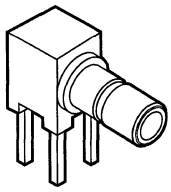




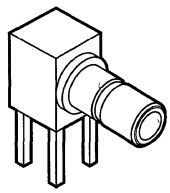
Part No. 447999-1
(.200 [5.08] Centerline with Standoffs)

*Low Profile Jack to be used with Short Right-Angle Plug, **Part No. 447392-5**.

Right-Angle PCB Jack

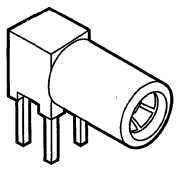


Part No. 447985-1
(With Standoffs)

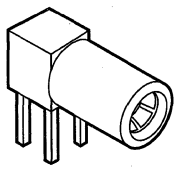


Part No. 447985-2
(Without Standoffs)

Right-Angle PCB Plug



Part No. 447997-1
(With Standoffs)



Part No. 447997-2
(Without Standoffs)

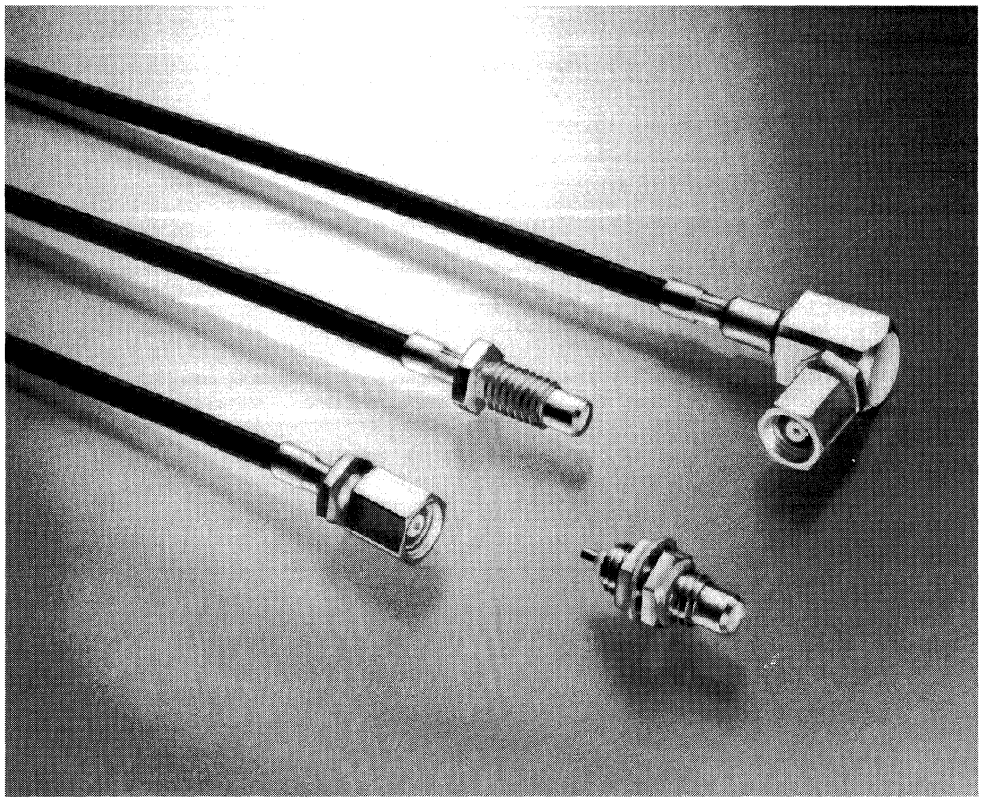
SOURCE: Catalog 82074

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

SMC Connectors

Product Facts

- Three-piece design
- Fast, clean cable assembly
- Center contacts mounted on tape for ease of handling
- Connector bodies preassembled
- Solderless termination—no danger of heat damage
- Center conductor and braid terminated with same tool
- Low noise level
- Miniature screw-on coupling
- TEFLON dielectric



The AMP SMC Connector is miniature and lightweight, especially designed for use in critical applications where limited space and vibration are of major concern.

This connector is designed in accordance with the requirements of Specification MIL-C-39012, Class II, Category B to provide the highest standards of electrical and mechanical performance. It has a constant impedance of 50 ohms, a voltage rating of 350 volts and provides excellent operation at frequencies up to 10 GHz. It also has a threaded coupling and can be used with a wide range of miniature coaxial cable sizes including RG-174, 179, 187, 188 and 316.

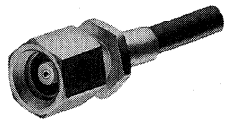
To reduce the difficulties of assembly inherent in this type of connector, the polarized center contacts are tape mounted for easy assembly and termination. This unique feature saves in both labor and time, resulting in low overall applied costs.

SOURCE: Catalog 82074

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

SMC Connectors
(Continued)

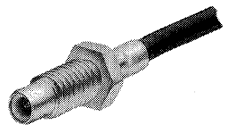
Plugs



Connector Cable Range Selection Code†	RG/U Cable	Part No.	Integral Die Hand Tool	Die Insert for Pneumatic Tool 69365
A	178, 178A, 178B 196, 196A	51749-2	220020-1	220018-1
B	174, 316 188, 188A	51749-1	220020-1	220018-1
	RD188, 316	1-51749-0		
B1	179, 179A, 179B 187, 187A, 161 Belden 9221	51749-5	220020-1	220018-1

†Refer to Appendix Pages for code specifications.

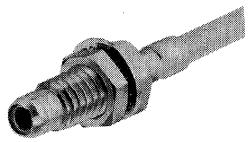
Jacks



Connector Cable Range Selection Code†	RG/U Cable	Part No.	Integral Die Hand Tool	Die Insert for Pneumatic Tool 69365
A	178, 178A, 178B 196, 196A	51750-2	220020-1	220018-1
B	174, 316 188, 188A	51750-1	220020-1	220018-1
B1	179	51750-3	220020-1	220018-1

†Refer to Appendix Pages for code specifications.

Bulkhead Jacks

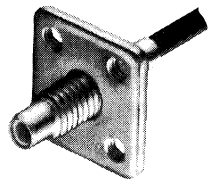


Connector Cable Range Selection Code†	RG/U Cable	Part No.	Integral Die Hand Tool	Die Insert for Pneumatic Tool 69365
A	178, 178A, 178B 196, 196A	51751-2	220020-1	220018-1
B	174, 316 188, 188A	51751-1	220020-1	220018-1
B1	179, 179A, 179B 187, 187A, 161	51751-3	220020-1	220018-1

†Refer to Appendix Pages for code specifications.

SMC Connectors
(Continued)

Panel Jacks

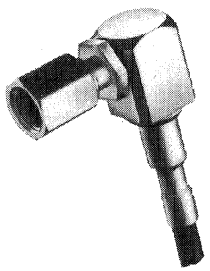


Connector Cable Range Selection Code†	RG/U Cable	Part No.	Integral Die Hand Tool	Die Insert for Pneumatic Tool 69365
A	178, 178A, 178B 196, 196A	51752-2	220020-1	220018-1
B	174, 316 188, 188A	51752-1	220020-1	220018-1

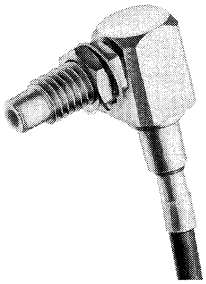
†Refer to Appendix Pages for code specifications.

Right-Angle Plug, Bulkhead Jack and One-Step Solder Plug

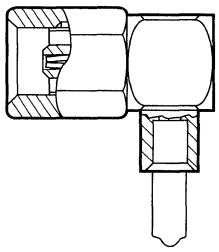
Plug



Bulkhead Jack



One-Step Solder Plug*



Connector Cable Range Selection Code†	RG/U Cable	Part No.			Integral Die Hand Tool	Die Insert for Pneumatic Tool 69365
		Right-Angle Plug	Right-Angle Bulkhead Jack	Right-Angle One-Step Solder Plug		
A	178, 178A, 178B 196, 196A	51753-2	—	—	220020-1	220018-1
B	174, 316 188, 188A	51753-1	51754-1	—	220020-1	220018-1
B1	179, 179A, 179B 187, 187A, 161	51753-4	—	—	220020-1	220018-1
P	405 Semi-Rigid/ .086 [2.18]	—	—	49535-1	—	—
—	RD-316 188 Double Shield	51753-9	—	—	220020-2	220194-1

†Refer to Appendix Pages for code specifications.
***Note:** Maximum frequency for Right-Angle One-Step Solder Plug is 26.5 GHz.

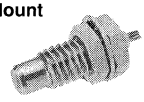
Bulkhead Solder Jacks

Note: Maximum panel thickness .096 [2.44].

Front Mount

Part No. 227633-1

Rear Mount

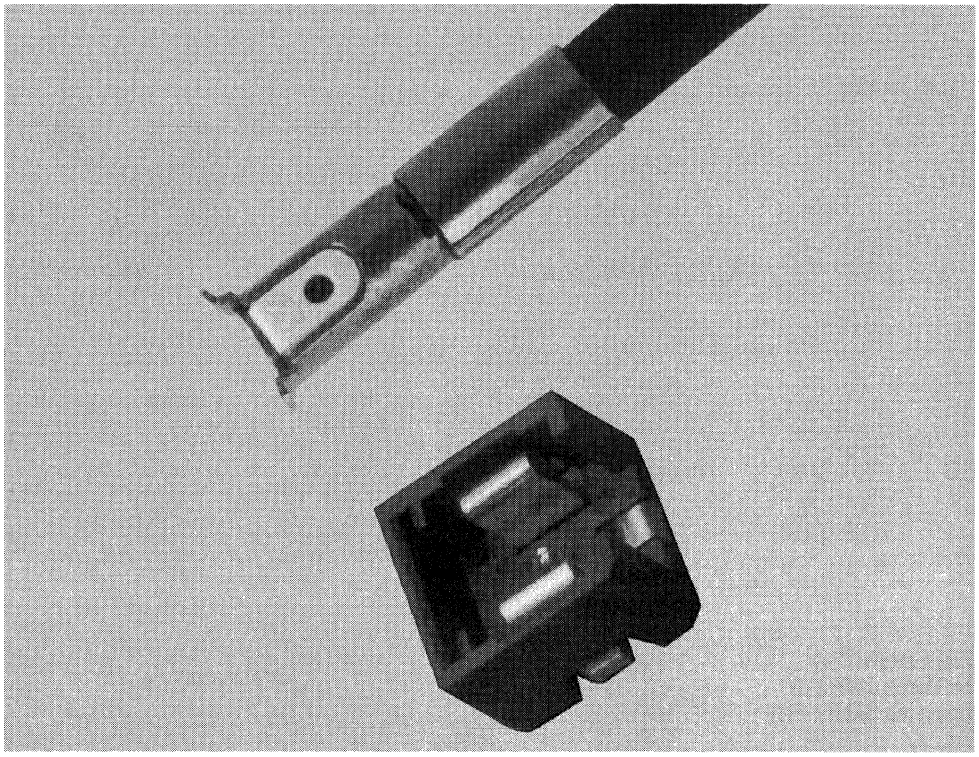


Part No. 227632-1

SOURCE: Catalog 82074

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

Micro-Miniature Connectors

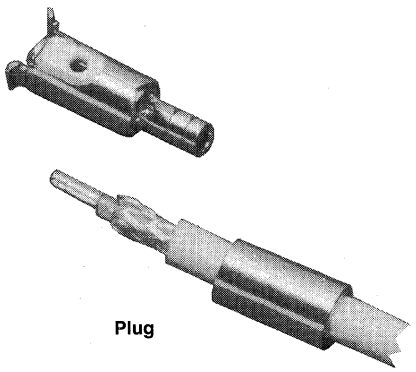


Product Facts

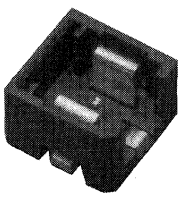
- 50 ohm product
- Lowest mated height coax for standard RG cables
- Low applied costs
- Accommodates RG-196, 178, 188 and 316 size cables
- Surface mount receptacle
- Crimp type connector for cable plug
- Receptacles package for robotic placement

The Micro-Miniature Coax offers high performance, highly reliable connectors with densities never before attainable with coax connectors. The surface mount technology receptacle reduces the amount of real estate required for conventional thru hole connectors and the overall mated height of .145 [3.68] offers new packaging options. The miniature size and connector performance of 0-3 GHz supports the requirements of the telecommunications, test equipment, copy equipment and microwave applications. The type and reel packaging of the receptacle enhances the compatibility with pick-and-place mounting.

Plug and Pc Board Receptacle



Plug



Pc Board Receptacle, Surface Mount

Type	RG/U Cable	Center Contact	Body Plating	Dielectric	Part Number
Plug	178, 178A, 178B 196, 196A	Gold	Tin-Lead	Polymethylpentene	414530-1
Plug	174, 174A, 188, 188A, 316	Gold	Tin-Lead	Polymethylpentene	414530-2
Plug	179	Gold	Tin-Lead	Polymethylpentene	414530-3
Receptacle	—	Gold	Tin-Lead	Liquid Crystal Polymer	414525-1

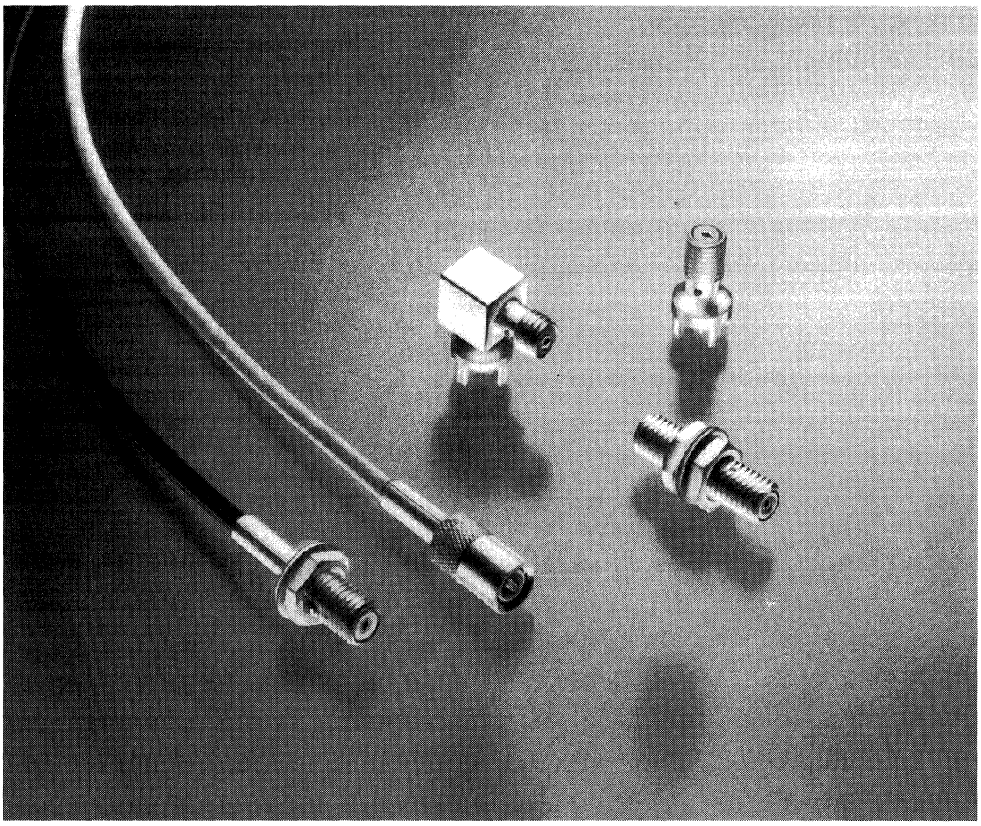
SOURCE: Catalog 82074

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

Miniature Threaded Connectors

Product Facts

- **Reduced noise level because of AMP solderless crimping techniques**
- **Low application cost with time-saving, one-stroke crimping of inner conductor, outer braid and cable support**
- **Conductor and shield insertion facilitated by bell-mouth entry design in insulators and wire barrels**
- **Positive insulation grip with crimped braid ferrule**
- **No danger of heat damage to coaxial cable**
- **Two parts make up a complete plug or jack**
- **Ease of inspection**
- **Stabilized inner contacts**
- **Low VSWR**
- **Improved cable retention and insulation grip**



Miniature threaded connectors are a unique development of AMP which has resulted in the production of minimum size components capable of high levels of performance. Termination of connector to cable is made with the AMP exclusive one-crimp method—simultaneous termination of inner conductor, outer braid and cable support with one stroke of the tool.

These rugged connectors accommodate a wide range of coaxial cables. Configurations available include straight plugs and jacks, plus a feed-thru adapter, pc board adapters and a solder adapter.

SOURCE: Catalog 82074

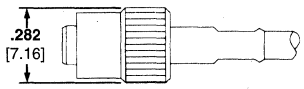
Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

Miniature Threaded Connectors

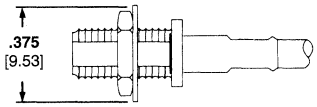
(Continued)

Plug and Jack

Plug



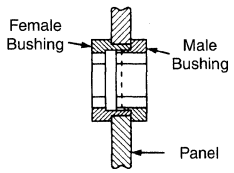
Jack



Connector Cable Range Selection Code†	RG/U Cable	Part Numbers: Plugs: Polypropylene Dielectric	Part Numbers: Plugs: TEFLON Dielectric	Part Numbers: Jacks: TEFLON Dielectric	Integral Die Hand Tool	Die Insert for Tools: Hand Tool 69710 Pneu. Tool 69365-2
A	178, 178A, 178B 196, 196A	—	2-330311-2	2-330312-2	69188-1	69372
B	174, 316 188, 188A	2-329036-1	2-330311-1	2-330312-1	45609	69228-1
B1	179, 179A, 179B 187, 187A, 161 Belden 9221	2-329036-1	2-330311-1	2-330312-1	69142	69228-1
C1	180, 180A, 180B 195, 195A	—	1-330723-0	1-330599-0	69143	69229-1

†Refer to Appendix Pages for code specifications.
Note: Maximum panel thickness .125 [3.18].

Panel Insulating Bushings



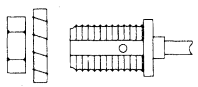
Male Bushing
Part No. 329486

Female Bushing
Part No. 329487

Note: Maximum panel thickness .062 [1.59] to .125 [3.18].

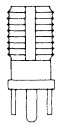
Adapters

Solder Jack Adapter



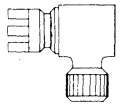
Part No. 329852

Pc Board Jack Adapter



Part No. 414083-1

Right-Angle Pc Board Plug Adapter

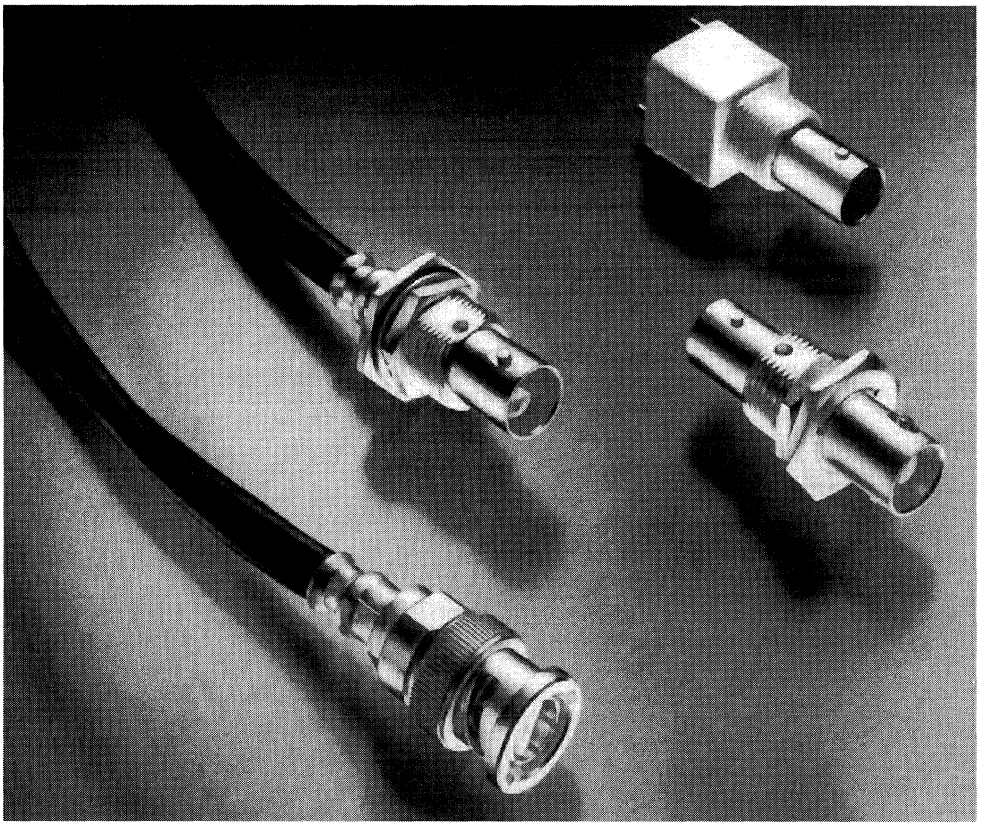


Part No. 330732

Twin BNC Connectors

Product Facts

- **Crimp connectors require only one-stroke crimping of both conductors, plus braid and cable support**
- **Lower installed cost with one-stroke crimp**
- **Reduced noise levels because of AMP solderless crimping techniques**
- **Captive inner contact stability**
- **No danger of heat damage to coaxial cable**
- **Ease of inspection**



The Twin BNC Connector is a quick connect/disconnect, weatherproof connector designed in accordance with MIL-C-39012 to meet the stringent requirements of MIL-STD-1553 Multiplex Data Bus.

These twin coaxial cable connectors are a unique development by AMP which has resulted in the production of high level RF components.

Termination of these connectors to twin conductor cable is made with the AMP exclusive one crimp method which simultaneously terminates inner conductors, outer braid and cable support with one stroke of the matching AMP tool.

These rugged connectors accommodate today's most commonly used twin conductor cable sizes.

SOURCE: Catalog 82074

Specifications subject to change.
1-800-522-6752
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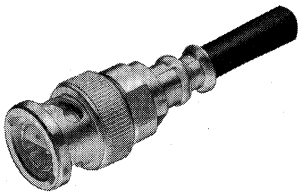
1-800-722-1111
Tooling/Technical Assistance Center

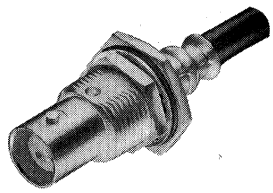
Twin BNC Connectors
(Continued)

Plugs



RG/U Cable	Center Contact Plating	Body Plating	Dielectric	Part No.	Integral Die Hand Tool
108, 108A Belden 9272, 89272	Silver	Silver	TEFLON	332225	69667
	Silver	Nickel	Polypropylene	332225-5	
Trompeter TWC-124-2	Silver	Silver	TEFLON	332225-3	69667
ROLM 49D2401 Raychem 7824D0130	Silver	Nickel	Polypropylene	332225-6	69667

Bulkhead Jack

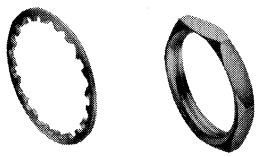


RG/U Cable	Center Contact Plating	Body Plating	Dielectric	Part No.	CERTI-CRIMP Hand Tool with Integral Die	Integral Die Hand Tool	Die Insert for Tools: Hand Tool 69710-1 Pneu. 69365
108, 108A Belden 9272, 89272	Silver	Silver	TEFLON	332342	—	69667	69708
Belden 81533	Silver	Silver	TEFLON	332342-3	58047-2	—	—

Note: Maximum panel thickness .125 [3.18].

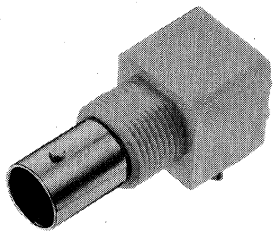
PC Board/ Panel Mount Jacks

Lockwasher and Jam Nut



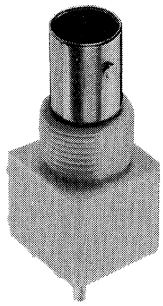
Part No. 1-329632-2 **Part No. 1-329631-2**

Right-Angle



With Mounting Posts Part No. 228686-1

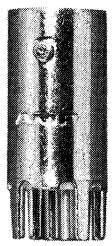
Vertical



With Mounting Posts Part No. 221198-1

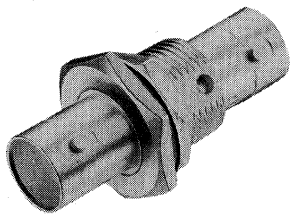
Note: Maximum panel thickness .240 [6.1].

Vertical PC Board Mount Jack



Part No. 414287-1

Bulkhead Jack Adapter



Part No. 332215

Note: Maximum panel thickness .125 [3.18].

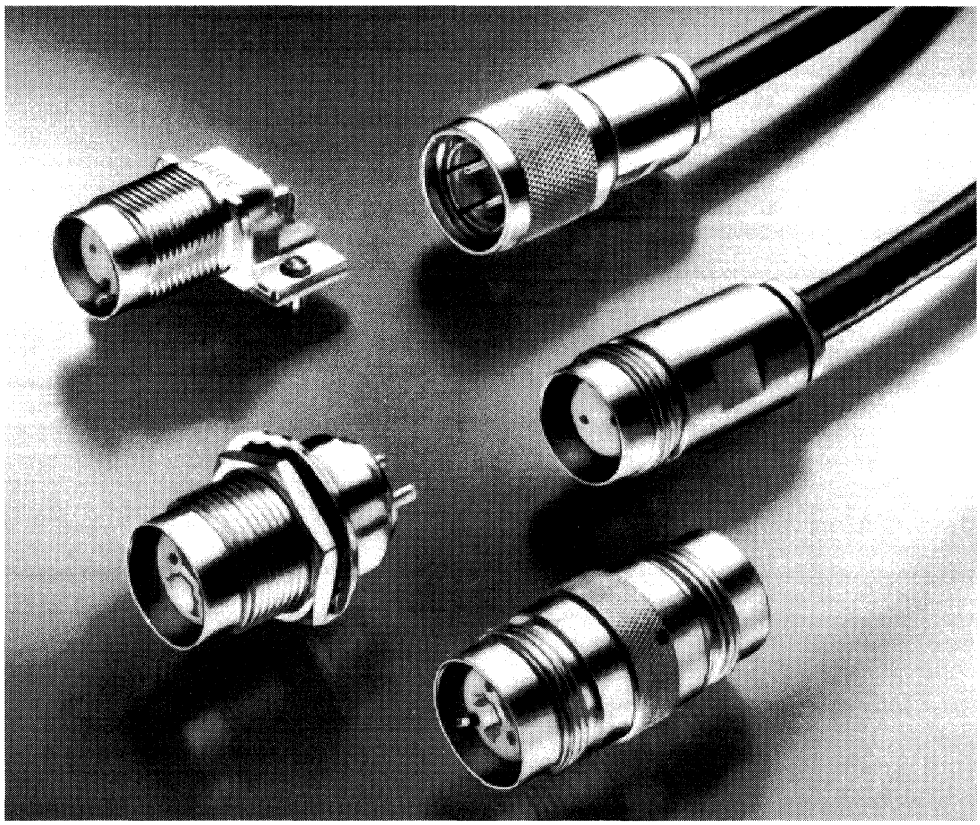
SOURCE: Catalog 82074

Specifications subject to change.
1-800-522-6752 Product Information Center/ AMP FAX Service
1-800-722-1111 Tooling/Technical Assistance Center

Twin-Ax Connectors

Product Facts

- **Meets all interface specifications of MIL-C-3655**
- **Several connector styles available for packaging versatility**
- **Ruggedly constructed for heavy duty use**
- **Field termination**
- **Capable of long runs**
- **Excellent noise immunity**
- **Superior signal propagation characteristics**



To accommodate the electronic industries' need for twin conductor connectors, AMP has developed the Twin-Ax Interconnection System. This family of twin conductor RF connectors meets all the interface specifications of MIL-C-3655 and features ruggedness and field termination capability.

The AMP Twin-Ax Interconnection System is made up of a field termination cable plug, BNC transformer adapter, resistor terminator, bulkhead solder jacks and a pc board jack.

Other connectors in the Twin-Ax Interconnection family include a cable jack and cable splice.

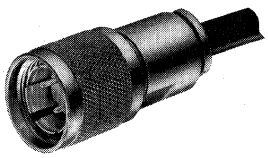
This system will provide long signal runs with excellent noise immunity. It is a very good interconnection method for computer systems, process equipment and other electronic equipment requiring freedom from electromagnetic problems and superior signal propagation characteristics.

SOURCE: Catalog 82074

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

Twin-Ax Connectors
(Continued)

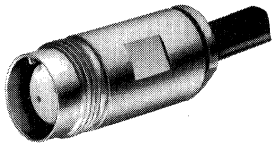
Plugs



Cable	Termination	Part No.
IBM 7362211, Belden 9207 AWM Style 2498	Solder	227241-1
	Solder	227241-4**
	Solder	227241-5****
	Solder	227241-7*
	Crimp	227241-2[1]
	Solder or Crimp	227241-8***
IBM 4716743	Solder	227241-3**

* Bulk packaged
** Captivated contacts
*** Captivated contacts and 1 Au center contact, 1 Ag center contact
**** Special packaging (graphics bag)
[1]Use 4 Indent Tool **Part No. 601966-1** and Positioner **Part No. 2-601966-9**.

Jack



Part No. 227682-1

Cable: IBM 7362211 and Belden 9207 AMW Style 2498 cable.

Bulkhead Solder Jacks

Front Mount

Body Plating—Nickel over Zinc
Part No. 228284-1

Rear Mount

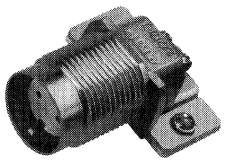
Body Plating—Nickel over Zinc
Part No. 228523-1

Note: Maximum panel thickness .200 [5.08].

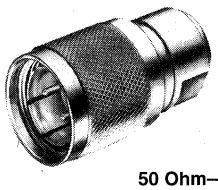
Right-Angle PC Board/Panel Mount Jack

Description	Part No.
Jack	222171-1
Jack with Jam Nut and Lockwasher	222171-2
Jam Nut	228310-1
Lockwasher	226970-2

Note: Maximum panel thickness .200 [5.08].

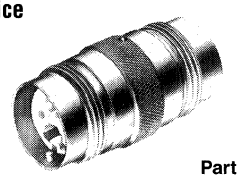


Terminator
(Resistor)



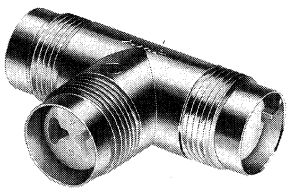
50 Ohm—Part No. 227504-1
75 Ohm—Part No. 227504-2

In-Line Splice
(Jack-Jack)



Part No. 227502-1

Tee Adapter
(Jack-Jack-Jack)



Part No. 221436-2

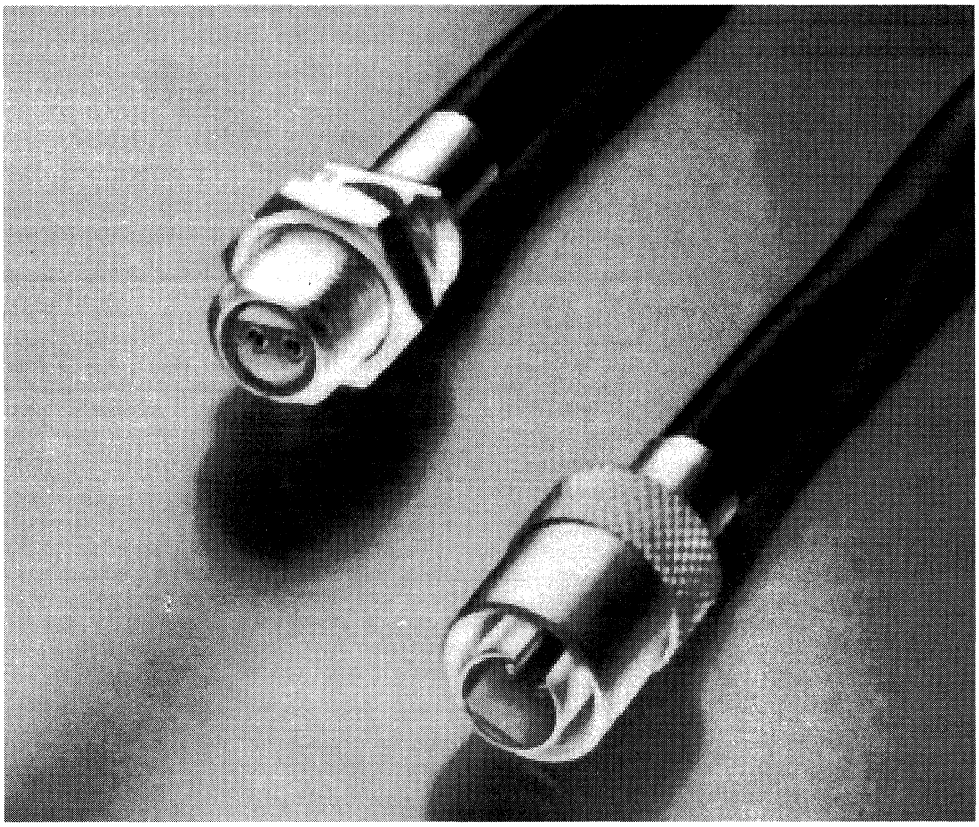
SOURCE: Catalog 82074

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

Twin Threaded Connectors

Product Facts

- **Crimp connectors require only one-stroke crimping of both conductors, plus braid and cable support**
- **Lower installed cost with one-stroke crimp**
- **Reduced noise levels because of AMP solderless crimping techniques**
- **Captive inner contact stability**
- **No danger of heat damage to coaxial cable**
- **Ease of inspection**



RF Twin Threaded Coaxial Cable Connectors are a unique development by AMP which has resulted in the production of high level RF components. Termination of these connectors to twin conductor cable is made with the AMP exclusive one crimp method which simultaneously terminates inner conductors, outer braid and cable support with one stroke of the matching AMP tool.

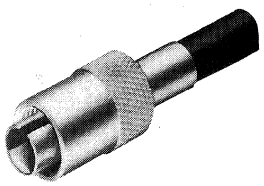
These rugged connectors and plugs accommodate today's most commonly used twin conductor cable sizes.

SOURCE: Catalog 82074

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

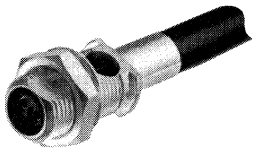
Twin Threaded Connectors
(Continued)

Plugs



RG/U Cable	Termination Type	Center Contact Plating	Body Plating	Dielectric	Part No.	Integral Die Hand Tool	Die Insert for Tools: Hand Tool 69710 Pneu. 69365-2
108, 108A (Ctr. Cond. 7/0126) Belden 8759	Single Crimp	Gold	Silver	Polypropylene	2-329945-1	69311-1	69410-1
	Single Crimp	Gold	Nickel	Polypropylene	225687-2	69311-1	69410-1
2-3932 Microdot 2-3934 Microdot	Single Crimp	Gold	Silver	Polypropylene	2-329943-1	69311-1	69410-1
Belden 8451, 8641, 8761	Single Crimp	Gold	Silver	Polypropylene	2-329944-3	69311-1	69410-1

Bulkhead Jacks



Panel Insulating Bushing
Part No. 331025 (2 required)

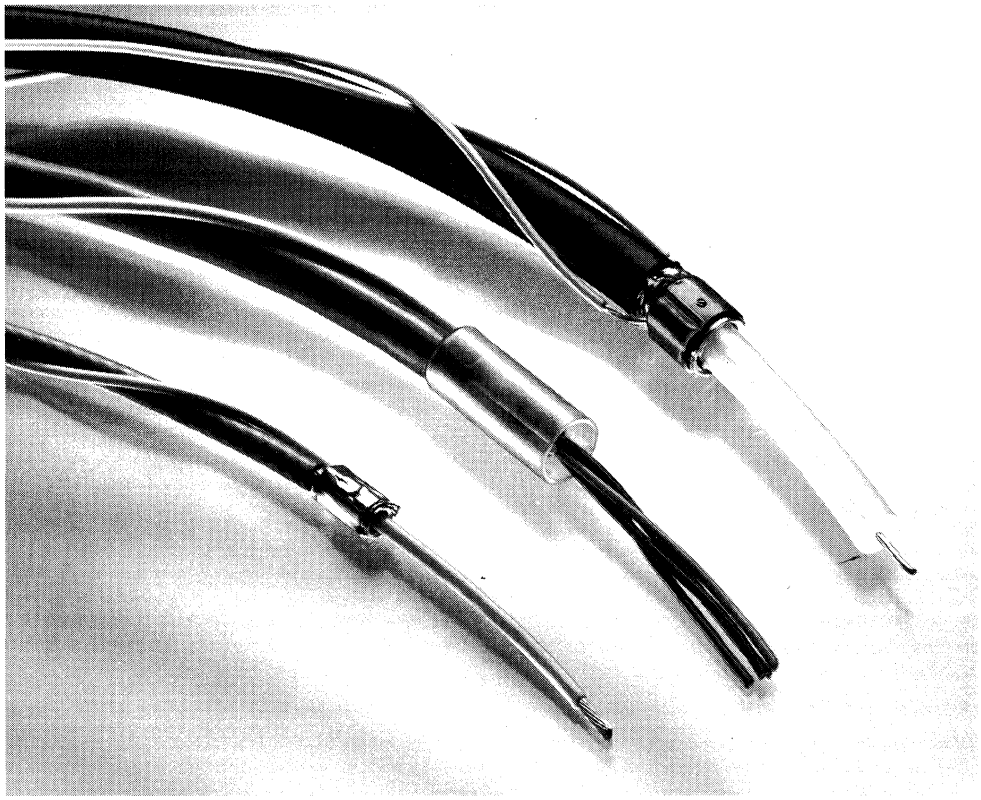
RG/U Cable	Termination Type	Center Contact Plating	Body Plating	Dielectric	Part No.	Integral Die Hand Tool	Die Insert for Tools: Hand Tool 69710 Pneu. 69365-2
108, 108A (Ctr. Cond. 7/0126) Belden 8759	Single Crimp	Gold	Silver	Polypropylene	2-329942-1	69311-1	69410-1
	Single Crimp	Gold	Nickel	Polypropylene	225689-2	69311-1	69410-1
2-3932 Microdot 2-3934 Microdot	Single Crimp	Gold	Silver	Polypropylene	2-329940-1	69311-1	69410-1
Belden 8451, 8641, 8761	Single Crimp	Gold	Silver	Polypropylene	2-329941-3	69311-1	69410-1

PC Board Adapter

Part No. 330873

SOURCE: Catalog 82074

Shielded Wire Ferrules (TERMASHIELD)



Product Facts

- Fast and reliable
- Full crimp termination—requires no heat or solder
- Heat resistant ferrules up to 343°C
- Wire inspection holes
- Slim profile after crimping
- Wide range of cable diameters
- Simple cable preparation
- Color coded
- Manual and power pneumatic tooling

The TERMASHIELD Ferrule offers the fastest, most reliable method on the market for attaching one or more ground taps to shielded wire and/or terminating the braid of shielded wire.

The AMP solderless termination method used to apply the ferrule consists of a matching compression tool of the highest precision. This compression crimping method eliminates heat, fluxes and other agents which may have a harmful effect on conductors and insulation. All attachments made by this method are identical and the resulting ferrule is only slightly larger in outside diameter than the original wire O.D. These terminations give superior performance at a much faster application rate and at a lower total installed cost.

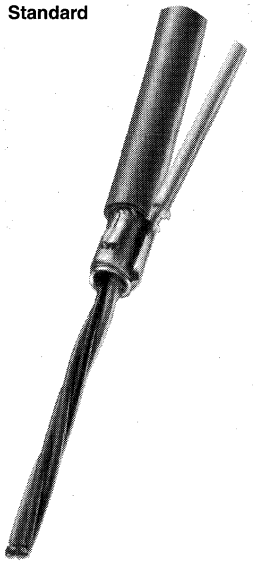
SOURCE: Catalog 82074

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

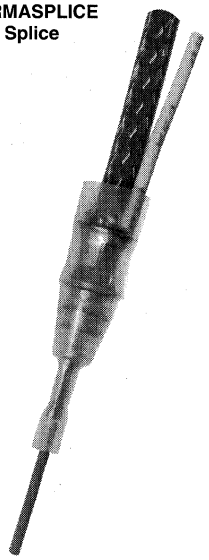
Shielded Wire Ferrules (TERMASHIELD)
(Continued)

Standard Ferrules

Standard



TERMASPLICE Splice



Primary Insulation Diameter Range		Color Code	Part Numbers		Cable Size	Die Insert for Hand Tool 59500	Die Insert for Pneumatic Tool 69270-1	Die Insert for Tools: Hand Tool 69710-1, Pneu. 69365
			Standard Ferrule					
inch	[mm]		Zinc Plated	Tin Plated				
.033-.059	0.84-1.5	Violet	323930	2-323930-2	RG-196A/U	45062-3	45062-3	47810-3
.059-.085	1.50-2.16	Tin	323931	2-323931-2	RG-174/U	45063-3	45063-3	47816-3
.085-.095	2.16-2.41	Brown	323932	2-323932-2	—	45064-3	45064-3	47817-3
.095-.115	2.41-2.92	Orange	323933	2-323933-2	RG-122/U RG-195A/U	45065-3	45065-3	47818-3
.115-.130	2.92-3.30	Green	323934	2-323934-2	RG-58C/U RG-141A/U RG-223/U	45066-3	45066-3	47819-3
.130-.145	3.3-3.68	Violet	327137	2-327137-2	—	45238-2	—	45316-2
.145-.184	3.68-4.67	Tin	327138	2-327138-2	RG-59B/U RG-71B/U	45239-2	—	45317-2

TERMASPLICE Splice

Primary Insulation Diameter Range		Color Code	Part Numbers			Cable Size	Hand Tool	Die Insert for Pneumatic Tool 69270-1	Die Insert for Tools: Hand Tool 69710-1, Pneu. 69365
			Standard Ferrule		Heat Resistant Ferrule				
inch	[mm]		Zinc Plated	Tin Plated	Nickel Plated				
.085-.105	2.16-2.67	Tin	—	328812	—	RG-195/U	69156-1	—	69149-2

Ground Wire Selection and Stripping Length Chart

Ferrule Primary Insulation Diameter Range		No. of Wires*	Recommended Ground Wire					
			Wire Size		Maximum Insulation Diameter		Stripping Length Min.	
inch	[mm]		AWG	[mm²]	inch	[mm]	inch	[mm]
.033-.130	0.84-3.3	1	20	0.5-0.6	.078	1.98	.250	6.36
		1	22	0.3-0.4	.078	1.98		
		2	22	0.3-0.4	.068	1.73		
.130-.245	3.3-6.22	1	18	0.8-0.9	No Limit on Insulation Diameter§		.438	11.13
		1	20	0.5-0.6				
		2	20	0.5-0.6				
		1	22	0.3-0.4				
		2	22	0.3-0.4				

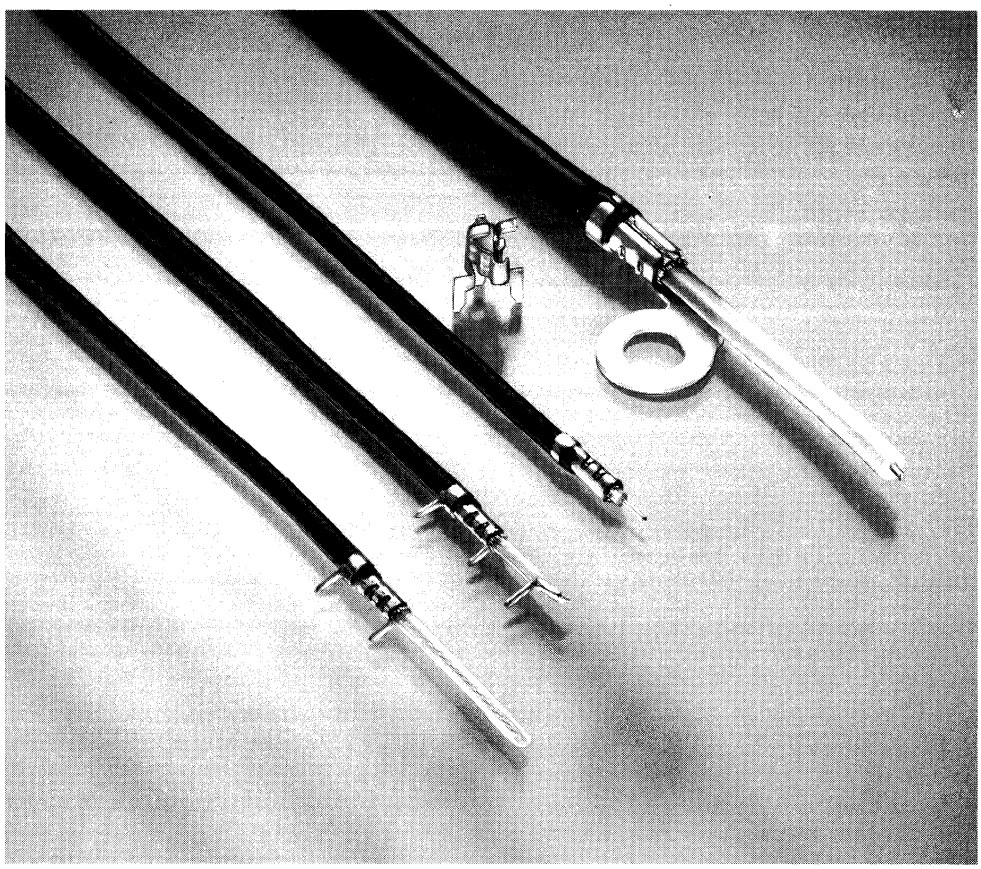
*Only one wire may be used for Military applications.
§Do not slide insulation on ground wire under the skirt of ferrules having a primary insulation diameter range of .130-.270 [3.3-6.68].

SOURCE: Catalog 82074

Braid-Pic Contacts and Terminals

Product Facts

- Three styles to suit your application
- No special cable preparation
- Four point braid contact for excellent electrical continuity
- 360° termination with built-in cable support for mechanical stability
- Precision formed contacts—low component price
- Accepts a variety of coaxial cable sizes
- Minimum inventory required
- Braid-Pic Contacts terminated by automatic machine for high-speed production—low applied cost
- Loose piece terminals available for CERTI-CRIMP hand tool application



The AMP Braid-Pic Contact represents an entirely new approach to braided shield termination. This precision formed contact features four integral lances in the wire barrel. During the crimping operation, these lances penetrate the braid, providing redundant electrical contact.

Mechanical stability is maintained by the weaving of the braid through and around the terminal lances, and the adjacent sidewalls of the wire barrel. The finished crimp captures the braid in a 360° termination for maximum mechanical strength in the braid area. The built-in insulation support provides additional mechanical integrity on the outer jacket of the coaxial cable.

The AMP Braid-Pic Contact is available in tin-plated brass and is supplied in strip form, reel feed for AMP-O-LECTRIC Automatic Machine application, providing the highest possible production rates at the lowest applied cost. For limited production or maintenance and repair, Braid-Pic Contacts are available in loose piece for CERTI-CRIMP hand tool termination.

SOURCE: Catalog 82074

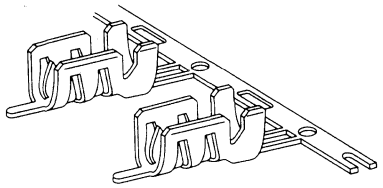
Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

Braid-Pic Contacts and Terminals
(Continued)

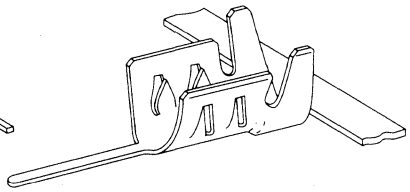
Permanent Mount Contacts

Braid Termination

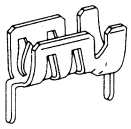
Strip Form

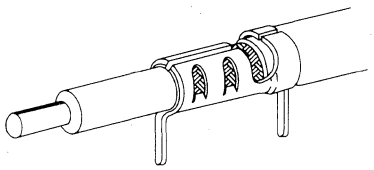


Strip with Solder Tab



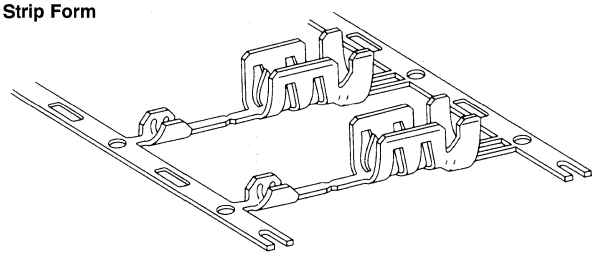
Loose Form with Preformed Tabs

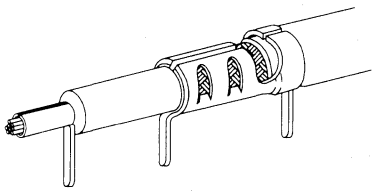




Braid and Center Conductor Termination

Strip Form





Connector Cable Range Selection Code†	RG/U Cable	Part Numbers				
		Braid Termination Only	Braid and Center Conductor Termination	Hand Tool	Standard Applicator for AMP-O-LECTRIC Machine 1-471273-2	Miniature Applicator AMP-O-LECTRIC Machine 565435-5
B, B1	174, 316, 188, 188A, 179, 179A, 179B, 187, 187A	226176-2 (Strip Form)	226177-2	220141-1	566133-1	—
		226176-4* (Loose Form)	—	220141-2	—	—
		226176-3** (Strip Form)	—	220141-1	—	466612-2
D	58, 58A, 58B, 58C	226854-1 (Strip Form with Solder Tab)	—	—	—	466539-1
G	59, 59A, 59B, 62, 62A, 62B	226855-1 (Strip Form)	—	—	—	466540-1

†Refer to Appendix Pages for code specifications.
Note: Pc board thickness .063 [1.6].
*Loose form parts with preformed tabs.
**Legs must be bent manually after crimping.

SOURCE: Catalog 82074

Specifications subject to change.
1-800-522-6752
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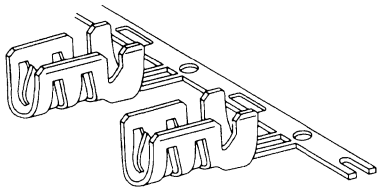
1-800-722-1111
Tooling/Technical Assistance Center

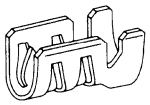
Braid-Pic Contacts and Terminals
(Continued)

Vertical Disconnect

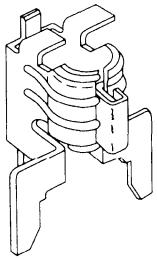
Cable Contact — Strip Form



Cable Contact— Loose Piece



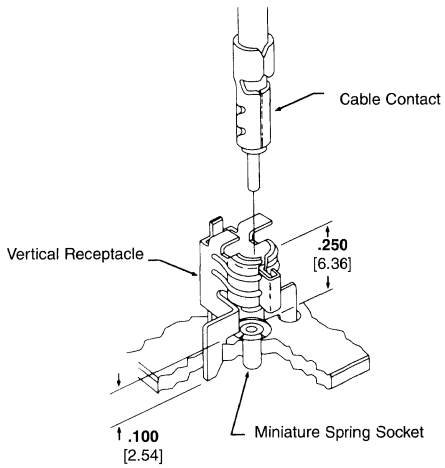
Vertical Receptacle– Strip and Loose Piece



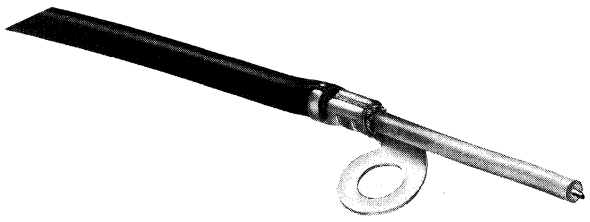
Miniature Spring Socket

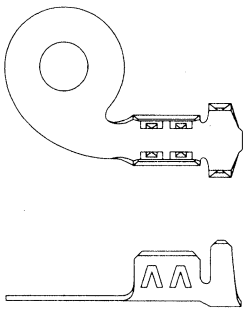
Cable Size	Part Numbers						
	Cable	Cable Contact		Vertical Receptacle Loose Piece	Miniature Spring Socket*	Hand Tool	Miniature Applicator for AMP-O-LECTRIC Machine 565435-5**
		Strip Form	Loose Piece				
50 ohm	228482-1	226286-2	226286-3	226287-2	6-330808-5	220141-1	466172-1
75 ohm	228476-1				5-330808-0	220141-1	466172-1

*Miniature Spring Socket Insertion Machine **Part No. 682127-2**.
**For AMP-O-LECTRIC Model G Machine, contact the Tooling/Technical Assistance Center.



Grounding Terminals





Connector Cable Range Selection Code†	RG/U Cable	Stud Size	Part No.	Miniature Applicator for AMP-O-LECTRIC Machine 565435-5**
D	58, 58A, 58B, 58C	8 [M4]	226619-3	466539-1
		1/4 [M6]	226619-1	466539-1

†Refer to Appendix Pages for code specifications.
**For AMP-O-LECTRIC Model G Machine, contact the Tooling/Technical Assistance Center.

SOURCE: Catalog 82074

Specifications subject to change.
1-800-522-6752
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1-800-722-1111
Tooling/Technical Assistance Center

COAXICON Latching Connector

Finding wide application in the computer, broadcasting, and peripheral equipment industries, the AMP COAXICON Latching Connector provides a fast, versatile and reliable means of packaging signal and power circuit terminations. This high density connector is designed to accept up to three standard multi-contact connector housings, including the 50-position "M" Series housing, the 42-position Mixed "M" Series housing and the 20-position Miniature COAXICON Contact housing...or any combination of the three. Its versatility is further enhanced by its ability to be mated plug-to-plug (free hanging) as well as plug-to-receptacle (bulkhead mounted) with the proper selection of contacts and hardware.

The connector housings for the COAXICON Latching Connector are available in either diallyl phthalate or phenolic material. These housings accept miniature and subminiature COAXICON contacts and power and standard pin and socket contacts. These contacts can be used in a variety of combinations for mixing power and signal circuits. All pins and sockets may be terminated using the AMP automated crimping techniques, simplifying assembly to save both time and money.

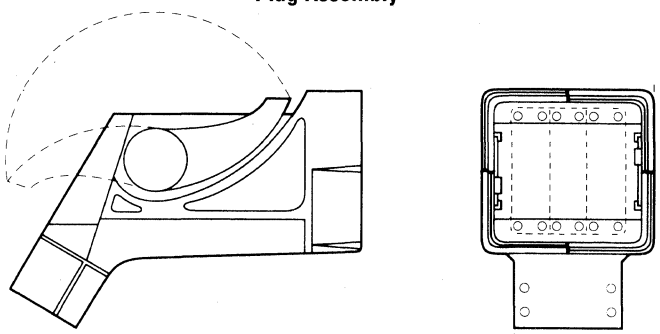
Precision engineered, versatile and highly reliable, the AMP COAXICON Latching Connector is ideally suited to virtually all applications requiring the high density packaging of mixed or matched signal and power circuit connections.

Plug Assembly
Part No. 225004-1
(The Plug Assembly accepts three of the connector housings listed below)

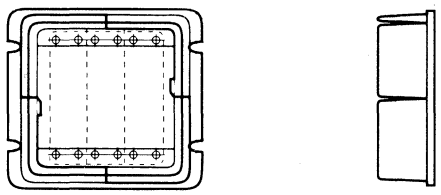
Handle Repair Kit
Part No. 413855-1

Receptacle
Part No. 225005-1
(The Receptacle accepts three of the connector housings listed below)

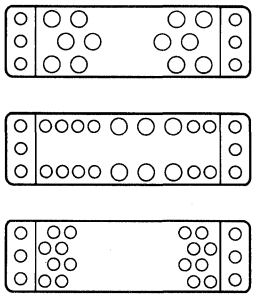
Plug Assembly



Receptacle



Connector Housings



Number of Contacts	Housing Will Accommodate These Variations of Contacts	Housing Type	Housing Part Numbers	
			Phenolic (Black)	Diallyl Phthalate (Blue)
20	Miniature COAXICON Contacts or Type I Size 12 Power Contacts	Pin Housing	200458-3	200458-1
		Socket Housing	200459-3	200459-1
42 Mixed	36-Type II, III or III(+) Size 16 (STD) or 36 Submin. COAXICON Contacts and 6-Miniature COAXICON Contacts or 6-Type I Size 12 Power Contacts	Pin Housing	202515-1	202515-3
		Socket Housing	202516-1	202516-3
50	Type II Size 20, Type II Size 16 (STD) Type III or III(+) Size 18 or 20, or Submin. COAXICON Contacts (Short)	Pin Housing	200276-2	200276-4
		Socket Housing	200277-2	200277-4
	Type II Size 16 (Long), Type III or III(+) Size 16, or Submin. COAXICON Contacts (Multimate)	Either Housing Will Accept Pins and/or Sockets (one of each Housing Required)	200277-2	200277-4
			201358-1	201358-3

Note: For complete housing and contact specifications refer to AMP "M" Series Pin and Socket Connectors Catalog No. 82003.

SOURCE: Catalog 82074

Specifications subject to change.
1-800-522-6752
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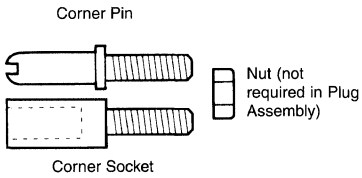
1-800-722-1111
Tooling/Technical Assistance Center

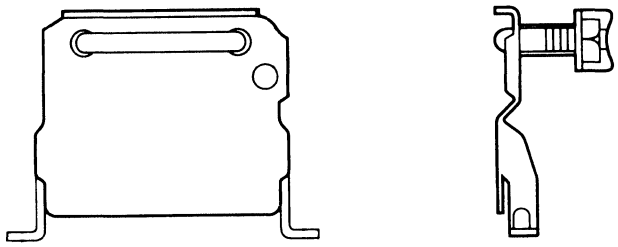
COAXICON Latching Connector
(Continued)

Guide Pins and Sockets



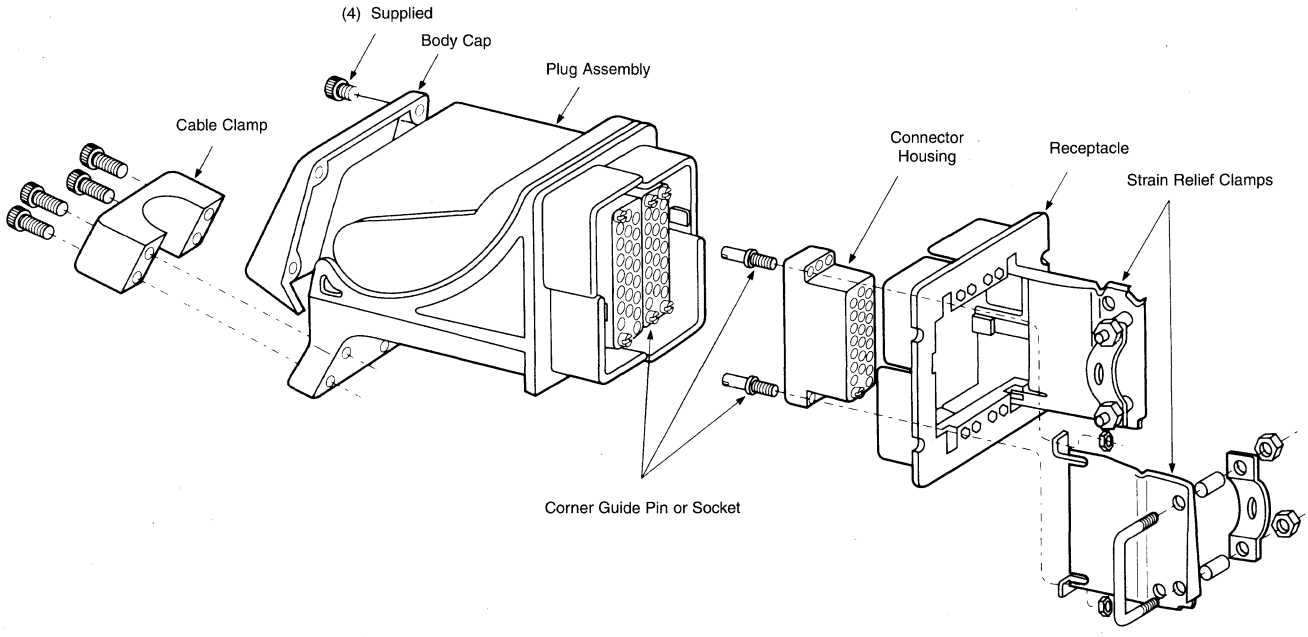
Type	Part No.
Corner Pin	200788-2
Corner Socket	203963-2
Hex Nut	200773-2

Strain Relief Clamps



Type	Maximum Clamp Dimension	Part No.
90° or 180°	$\frac{19/32}{15.09} \times \frac{1\,3/32}{27.79}$	201847-1
90° or 180° with Self-Locking Nuts	$\frac{15/32}{11.91} \times \frac{1\,3/32}{27.79}$	201841-1

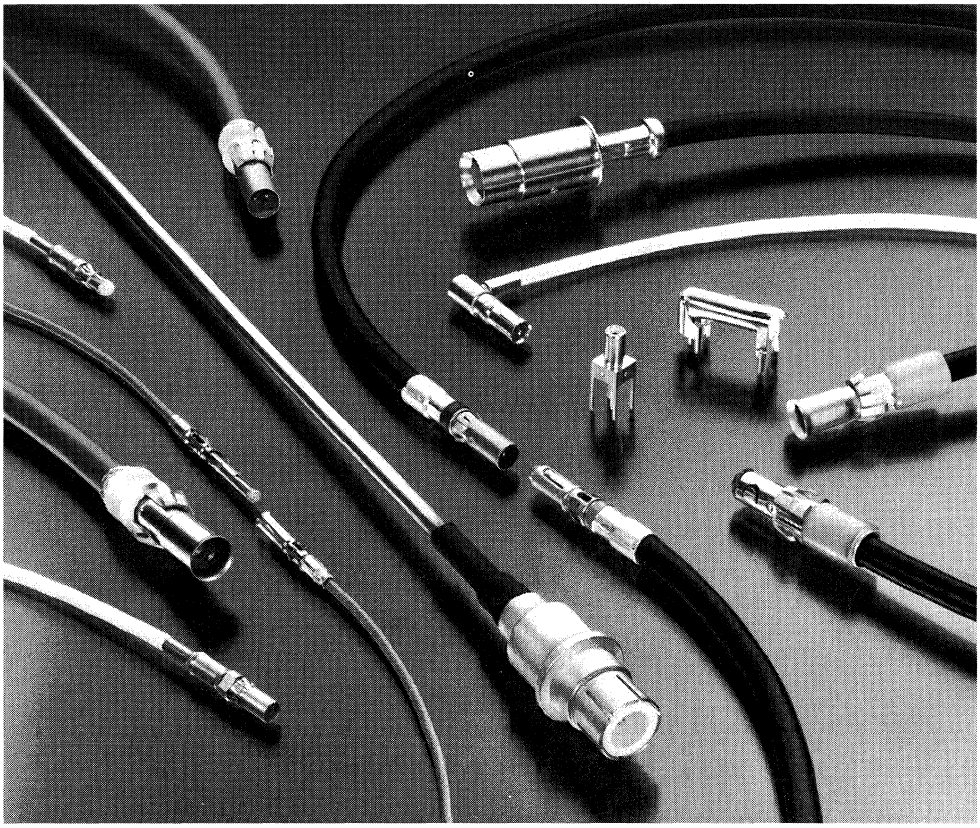
Typical Connector Assembly



SOURCE: Catalog 82074

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

Multiple Coaxial Contacts (COAXICON)



AMP provides a variety of contacts for multiple coaxial connectors. Contacts are available in a range of sizes that may be used with the various types of coaxial cable on the market. COAXICON contacts are of the crimp, snap-in type and are available in the following designs:

Twin Standard Contacts are designed to be used in multiple connector housings. Structurally, the twin contacts include inner conductor contacts separated from each other and from the outer shell by dielectric material. A cantilever spring in the male outer shell provides contact pressure between the shells when mated.

Miniature Contacts are designed for high density multiple circuit connector applications. A wide range of cable sizes is accommodated by using three sizes of outer shell termination ends and three sizes of contacts.

Subminiature Contacts are used in high density applications and are ideal for mixing coaxial and other styles of pin and socket contacts in the same connector housing.

Microminiature Contacts are 50 ohm impedance matched products available for miniature coaxial cable or pc board applications. These contacts snap-fit special cavities in Mini-Box, Standard Box and various AMP pc board connectors.

Size 8 Contacts are compatible with industry standard size 8 connectors such as Subminiature D (AMPLIMITE) and AMP-HDI connector housings. Straight and right-angle styles, as well as pc board versions for AMP-HDI connectors are available.

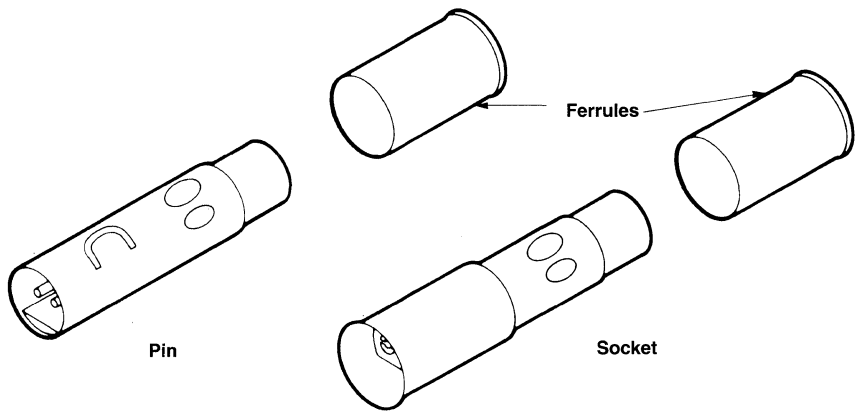
ARINC Contacts are designed for multiple circuit connector applications, utilizing the ARINC RM and RME connectors. Contacts are designed to be crimped using both military and AMP tooling. Construction consists of male and female center contacts separated from outer shells by a dielectric material. Contacts are held in the housings with an internal spring post-molded into the housing. Housings are designed for rear release of contacts using an extraction tool.

SOURCE: Catalog 82074

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

Multiple Coaxial Contacts (COAXICON)
(Continued)

Twin Standard Contacts



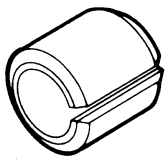
RG/U Cable	Part Numbers		Ferrule No.	Integral Die Hand Tool	Die Insert for Tools: Hand Tool 69710-1 Pneu. 69365-2, 69365-3[1]
	Pin	Socket			
Belden 8737 (Spiral Wrapped Shield) Trompeter TXC 124-2	329009	329010	329041	45707-2	69231-2
108, 108A (Center conductor stranded; 7 str., .0126 [0.32] Dia.) Belden 8761, 8762, 8759, 9154, 8737, 8961	2-329009-1	2-329010-1	329041	45707-2	69231-2
Belden 8451, 8641, 8761 Trompeter TWC 78-1	329009	329010	329056	45707-4	69494-1
Microdot 202-3932 Microdot 202-3934	329054	329055	329056	45707-2	—

[1]Includes bench mount and foot control; requires Manual Tape-Up Attachment **Part No. 69689**.
Note: For complete housing and contact specifications refer to "M" Series Pin and Socket Connectors Catalog 82003.

Retention Spring[2]

Part No. 329042

Alignment Bushings[2,3]



Part No. 329053[4]

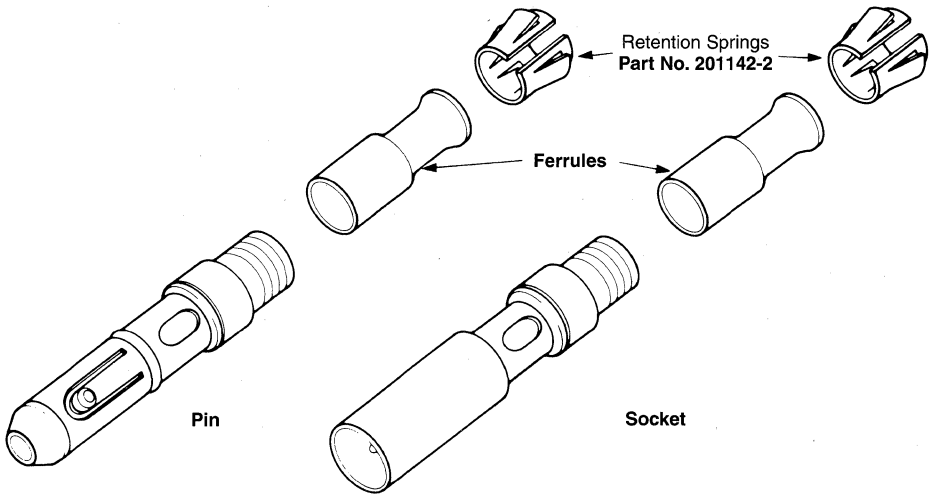
[2]Used only when inserted into housing.
[3]Used only with Retention Spring **Part No. 329042.**
[4]Used with Ferrule **Part No. 329041.**

SOURCE: Catalog 82074

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

Multiple Coaxial Contacts (COAXICON)
(Continued)

Miniature Contacts



Connector Cable Range Selection Code†	RG/U Cable	Part Numbers		Ferrule No.	Integral Die Hand Tool	Die Insert for Tools: Hand Tool 69710-1 Pneu. 69365-2, 69365-3[3]
		Pin	Socket			
A	178, 178A, 178B 196, 196A	201511-1	201512-1	328667	69186-2	69373
B	316, 188, 188A 174	201143-5	201144-5	328666	45638-2	69227-2
B1	179, 179A, 179B 161, 187, 187A Belden 9221	201143-1	201144-1	328666	45638-2	69227-2
B3	188 Double Braid 316 Double Braid	201143-5	201144-5	221848-3	58290-1	69227-2
C	122	201145-1	201146-1	328664	45639-2	69222-2
C1	180, 180A, 180B 195, 195A, 21-597	201145-2	201146-2	328664	45639-2	69222-2
C3	Belden 8218	201145-2	201146-2	328664	45639-2	69222-2
D	58, 58A, 58B, 58C	201145-4	201146-4	328663	45740-2	69220-2
D1, E	141 55, 55A, 55B, 223	201145-4	201146-4	330478	69248-4	69315-4
G	124, 140, 210 62, 62A, 62B 59, 59A, 59B	201097-1*	201098-1*	329006	45634-3	69675-1
Twisted Pair						
—	28-26 AWG [0.08-0.15 mm²] (Solid)[1]	201511-1	201512-1	328667	69186-2	69373
—	24-22 AWG [0.2-0.4 mm²] (Stranded)[2]	201143-5	201144-5	328666	45638-3	69672
—	Shielded Wire 22, NAS-702, Class B	201145-4	201146-4	328663	45740-2	69220-2
—	Brand Rex T5788A 26 AWG [0.12-0.155 mm²][4]	201145-2	201146-2	328664	45639-2	69222-2

†Refer to Appendix Pages for code specifications.

Notes: 1. A ferrule and retention spring **(Part No. 201142-2)** are required for each pin and socket. Extraction Tool **Part No. 305183-8.**

2. For complete housing and contact specifications refer to "M" Series Pin and Socket Connectors Catalog 82003, "G" Series Catalog 82046.

*These contacts are for use in the 4-position G Series connector modules only.

[1]Maximum insulation diameter–.080 [2.03] (two wires combined).

[2]Maximum insulation diameter–.115 [2.92] (two wires combined).

[3]Includes bench mount and foot control; requires Manual Take-Up Attachment **Part No. 69689.**

[4]Dielectric O.D.–.106 [2.69] max.; Cable O.D.–.160 [4.06].

SOURCE: Catalog 82074

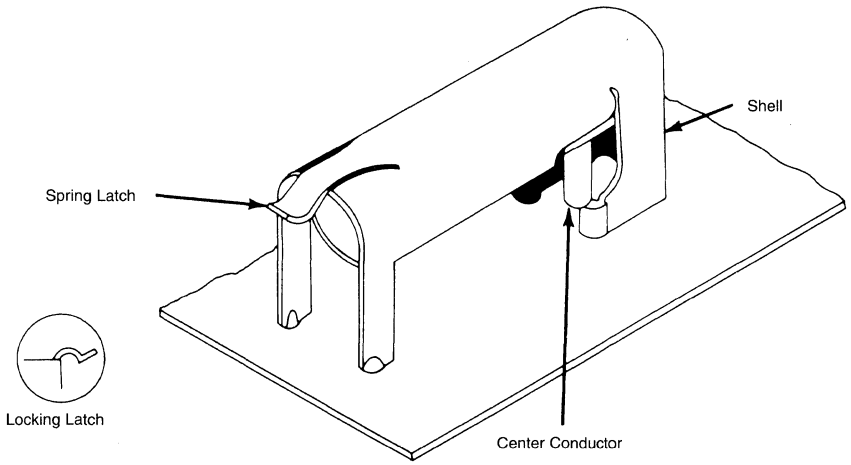
Specifications subject to change.

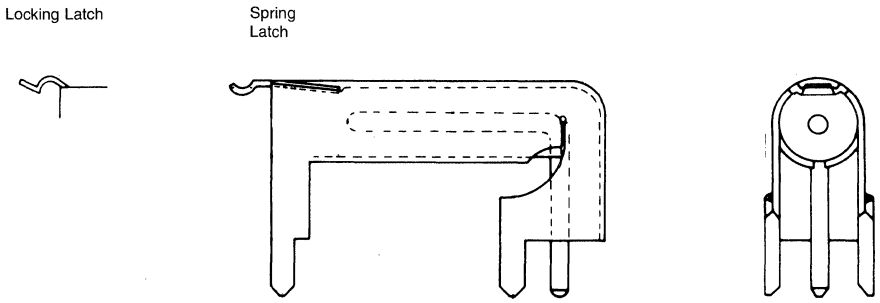
1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

Multiple Coaxial Contacts (COAXICON)
(Continued)

Miniature PC Board Sockets





Type	PC Board Thickness	Retention		Part No.
		lb.	[N]	
Spring Latch	.062 1.57	1.25	5.56	50084-1
Spring Latch	.125 3.18	1.25	5.56	50095-1
Locking Latch	.125 3.18	7	31.1	50105-1
Locking Latch	.062 1.57	7	31.1	50107-1

Note: For mateable Miniature Contacts, see page 4100.

SOURCE: Catalog 82074

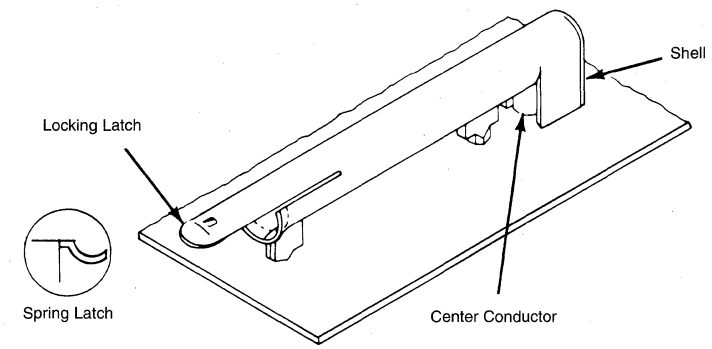
Specifications subject to change.

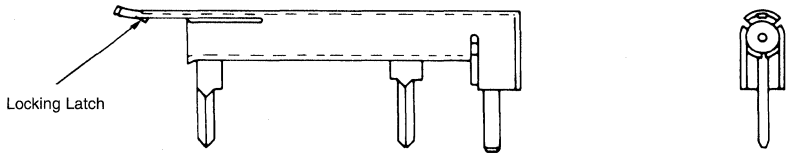
1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

Multiple Coaxial Contacts (COAXICON)
(Continued)

Subminiature PC Board Sockets



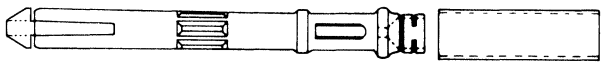


Type	PC Board Thickness	Part No.
Spring Latch	.062 1.57	226023-1
Spring Latch	.125 3.18	226023-2
Locking Latch	.062 1.57	226060-1

Mating Subminiature COAXICON Pins

These short Subminiature COAXICON Pins are recommended for use with any of the sockets listed above.

Note: Alignment springs are not required for this application and are not included with the pin assemblies.

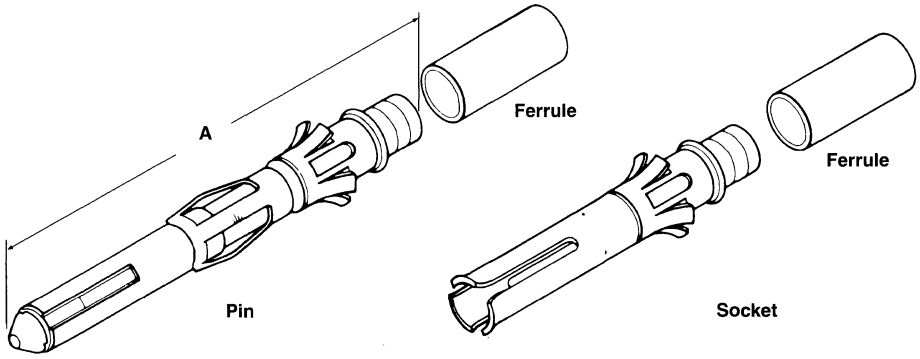


Connector Cable Range Selection Code†	RG/U Cable	Part No.	Ferrule No.	Integral Die Hand Tool	Die Insert for Tools: Hand Tool 69710-1 Pneu. 69365-2, 69365-3
A	178, 178A, 178B 196, 196A	51563-9	1-332057-0	69656-2	69690-2
B	174 316, 188, 188A	51563-8	1-332056-0	69656	69690
B1	179, 179A, 179B 187, 187A	51563-8	1-332056-0	69656-1	69690-1
B1	161	51563-8	1-332056-0	69656-5	—

†Refer to Appendix Pages for code specifications.

Multiple Coaxial Contacts (COAXICON)
(Continued)

Subminiature Contacts



A = Multimate Pin 1.010 [25.65]
Short Pin .892 [22.66]

Selection Chart for Coaxial Cable

Connector Cable Range Selection Code†	RG/U Cable	Contact Part Numbers			Ferrule No.	Integral Die Hand Tool	Die Insert for Tools: Hand Tool 69710-1 Pneu. Tool 69365-2, 69365-3*
		Multimate Pin	Short Pin	Socket			
A	178, 178A, 178B 196, 196A	226537-2	51563-2	51565-2	1-332057-0	69656-2	69690-2
—	196 (Double Braid)	226537-2	51563-2	51565-2	225088-1	69656-9	—
B	174, 316 188, 188A	226537-1	51563-1	51565-1	1-332056-0	69656	69690
B1	179, 179A, 179B 187, 187A Belden 9221	226537-1	51563-1	51565-1	1-332056-0	69656-1	69690-1
B3	RD-316	226537-1	51563-1	51565-1	225088-3	69656-7	—
—	187 (Double Braid)	226537-1	51563-1	51565-1	225088-1	69656-8	—
—	161	226537-1	51563-1	51565-1	1-332056-0	69656-5	—

Selection Chart for Twisted Pairs and Shielded Wire

Wire Size		Contact Part Numbers			Ferrule No.	Integral Die Hand Tool	Die Insert for Tools: Hand Tool 69710-1 Pneu. Tool 69365-2, 69365-3*
AWG	[mm²]	Multimate Pin	Short Pin	Socket			
30 (Twisted Pair, Solid)	0.05	226537-3	51563-3	51565-3	1-332057-0	69656-2	69690-2
28 (Twisted Pair, Solid)	0.08-0.09	226537-3	51563-3	51565-3	1-332057-0	69656	69690
28 (Twisted Pair, Stranded; 7 str., .005 [0.13] Dia.)	0.08-0.09	226537-3	51563-3	51565-3	1-332057-0	69656-1 or 69656-2	69690-1 or 69690-2
26 (Twisted Pair, Solid or Stranded; 7 str., .0063 [0.16] Dia.)	0.12-0.15	226537-3	51563-3	51565-3	1-332057-0	69656	69690
26 (Shielded, 0.75 [1.91] Max. O.D.)	0.12-0.15	226537-1	51563-1	51565-1	1-332057-0	69656-3	69690-3

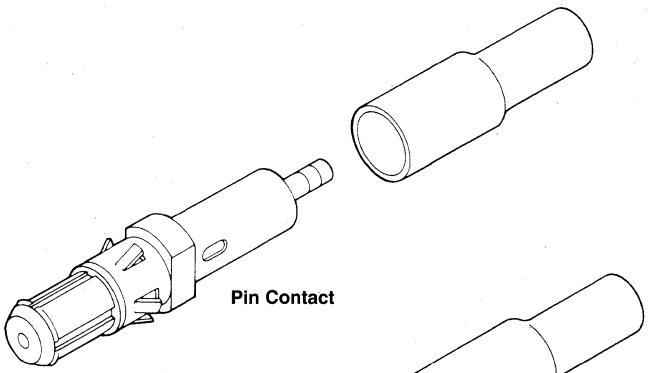
†Refer to Appendix Pages for code specifications.
*Includes bench mount and foot control.
Extraction Tool **Part No. 305183**
Notes: 1. A ferrule is required for each pin and socket.
2. For complete housing and contact specifications refer to CPC Catalog 82021; Metrimate Catalog 82045; "M" Series Pin and Socket Connectors Catalog 82003; and "G" Series Catalog 82046.

SOURCE: Catalog 82074

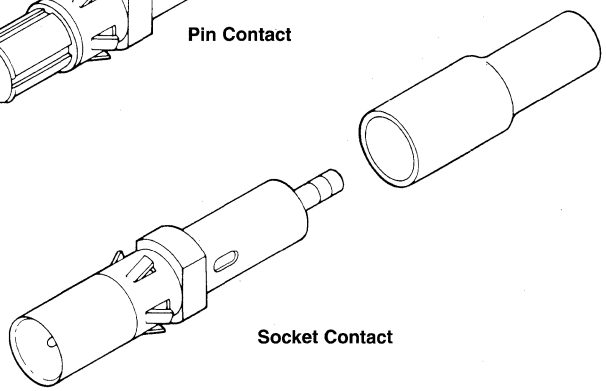
Specifications subject to change.
1-800-522-6752 Product Information Center/ AMP FAX Service
1-800-722-1111 Tooling/Technical Assistance Center

Multiple Coaxial Contacts (COAXICON)
(Continued)

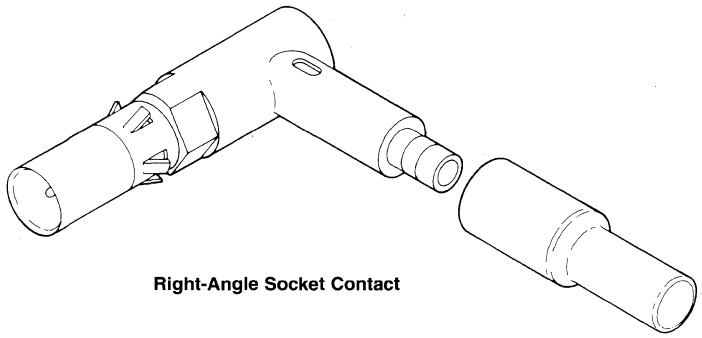
Microminiature Contacts



Pin Contact



Socket Contact



Right-Angle Socket Contact

RG/U Cable	Contact Finish	Contact Part Numbers			Integral Die Hand Tool
		Straight Pin	Straight Socket	Right-Angle Socket	
178 Double Braid, 196, Tensolite 30850/81T-1 Malco 250-3908	Gold[1]	227604-1	227605-1	227606-1	220215-1
	AMP-DURAGOLD[2]	227604-6	227605-6	—	
174, 188, 316, Belden 9221	Gold[1]	227604-3	227605-3	227606-4	220215-2
				228819-1**	
	Gold[3]	—	1-227605-1	227606-8	
	AMP-DURAGOLD[2]	227604-7	227605-7	—	
179, 187 Gore CXN-1644	Gold[1]	227604-4	227605-4	227606-5	220215-2
Gore CXN-1331	Gold[1]	—	227605-5	—	220215-2
	AMP-DURAGOLD[2]	227604-5	—	—	
***Gore CXN-1362 DXISN-1708	AMP-DURAGOLD[2]	227604-9	227605-9	—	220215-2
316 Double Braid	Gold[1]	227604-8	227605-8	227606-6*	220215-2

*.630 [16] Max. for **Part No. 227606-6** only.
.915 [23.24] for **Part No. 228819-1 only.
***Contacts for these cables are designed to meet all performance characteristics. Testing for contact resistance, physical shock and vibration are in process, consult AMP for results.

[1].000030 [0.00076] gold per MIL-G-45204
[2].000030 [0.00076] AMP-DURAGOLD plating (Proprietary AMP process)
[3].000050 [0.00127] gold per MIL-G-45204
Extraction Tool **Part No. 220216-1**

Note: For complete housing and contact specifications refer to "M" Series Pin and Socket Connectors Catalog 82003 (only available housings **Part Nos. 228675-1** and **228676-1**); and Box Contact Catalog 82015.

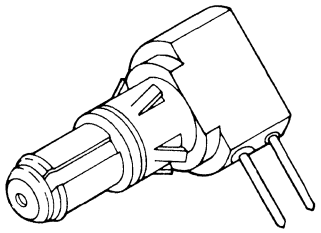
SOURCE: Catalog 82074

Specifications subject to change.
1-800-522-6752 Product Information Center/ AMP FAX Service
1-800-722-1111 Tooling/Technical Assistance Center

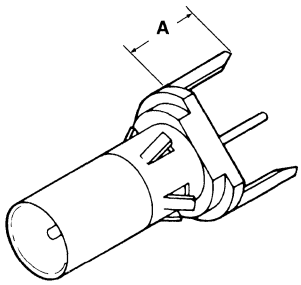
Multiple Coaxial Contacts (COAXICON)
(Continued)

Microminiature Contacts
(Continued)

PC Board Mount Contacts



Right-Angle Pin

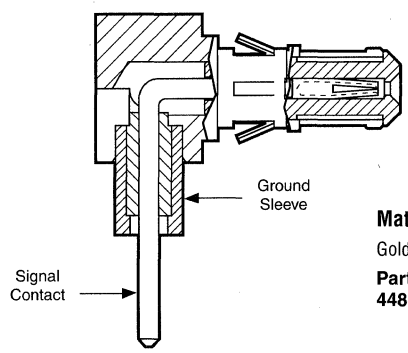


Vertical Socket

Contact Finish	Contact Part Numbers		
	Right-Angle Pin	Vertical Socket	
		A = .153 [3.89]	A = .218 [5.54]
Gold[1]	227602-1	227603-1	—
Gold[2]	227602-2	—	—
Gold[3]	222074-1	227603-3	—
AMP-DURAGOLD[4]	—	227603-4	227603-5
AMP-DURAGOLD[5]	227602-3 222238-1*	—	—

[1].000030 [0.00076] gold per MIL-G-45204
[2].000050 [0.00127] gold per MIL-G-45204, center contact;
.000030 [0.00076] gold per MIL-G-45204, body and ground contact
[3].000050 [0.00127] gold per MIL-G-45204
[4].000030 [0.00076] AMP-DURAGOLD plating (Proprietary AMP process)
[5].000050 [0.00127] AMP-DURAGOLD plating (Proprietary AMP process)
* Consult AMP for slight dimensional difference.

Notes: 1. Maximum Pc Board Thickness: Right-Angle Pin–.125 [3.18];
Vertical Socket–.125 [3.18] for .153 [3.89] legs, .190 [4.83] for .218 [5.54] legs.
2. For complete housing and contact specifications refer to "M" Series Pin and Socket Connectors Catalog 82003 (only available housings **Part Nos. 228675-1** and **228676-1)**, and Box Contact Catalog 82015.



Material
Gold[1]
Part No.
448492-1

SOURCE: Catalog 82074

Specifications subject to change.
1-800-522-6752
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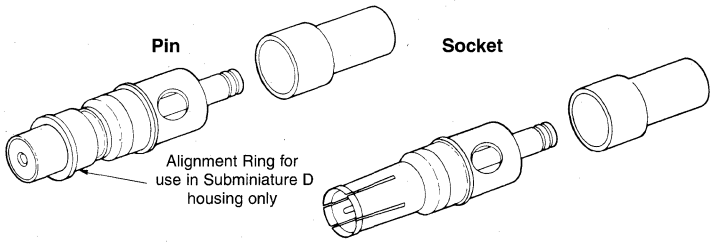
1-800-722-1111
Tooling/Technical Assistance Center

Multiple Coaxial Contacts (COAXICON)
(Continued)

Size 8 Contacts

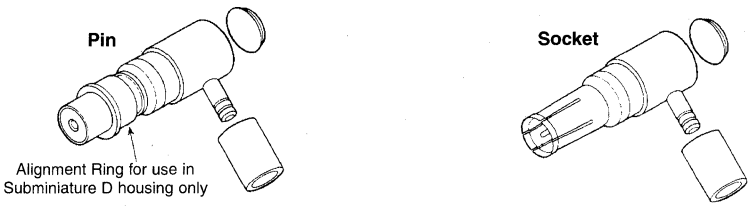
Straight Contacts



Connector Cable Range Selection Code†	RG/U Cable	Contact Part Numbers				Die Insert for Tools: Hand Tool 69710-2 Pneu. Tool 69365-8
		Non-Impedance Matched		50 Ohm		
		Pin	Socket	Pin	Socket	
A	178, 178A, 178B 196, 196A	228618-5	228596-5	—	—	59993-1
B	174, 316 188, 188A	228618-1	228596-1	221980-1	221981-1	59993-1
B1	179, 179A, 179B 187, 187A, 161 Belden 9221	228618-2	228596-2	221980-3	221981-3	59993-1
B3	188-Type (Double-Braid)	228618-3	228596-3	—	—	59993-1
E1	142, 142A, 142B 400, Belden 9246	228618-4	228596-4	221980-2	221981-2	58212-1

†Refer to Appendix Pages for code specifications.
Notes: Non-Impedance Matched and 50 Ohm are not intermateable.
1. Extraction Tool **Part No. 58095-1** for Subminiature D Housings and **Part No. 58095-2** for AMP-HDI Housings.
2. For complete housing and contact specifications refer to Subminiature D Series 109 Catalog 82069; and AMP-HDI Connector Catalog 82618.

Right-Angle Contacts

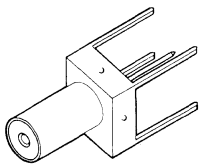


Connector Cable Range Selection Code†	RG/U Cable	Contact Part Numbers Non-Impedance Matched		Die Insert for Tools: Hand Tool 69710-2 Pneu. Tool 69365-8	
		Pin	Socket	Pin	Socket
B, B1	174, 316 188, 188A 179, 179A, 179B 187, 187A, 161 Belden 9221	228611-1	228604-1	58093-1	58094-1
E1	142, 142A, 142B 400 Belden 9246	228611-3	228604-3	58211-1	58211-1

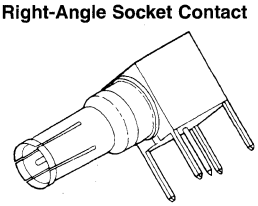
†Refer to Appendix Pages for code specifications.
Notes: 1. Extraction Tool **Part No. 58095-1** for Subminiature D Housings and **Part No. 58095-2** for AMP-HDI Housings.
2. For complete housing and contact specifications refer to Subminiature D Series 109 Catalog 82069; and AMP-HDI Connectors Catalog 82618.

Pc Board Mount Contacts
(for AMP-HDI Connectors only)

Vertical Pin Contact



Right-Angle Socket Contact



Type	Contact Part Numbers	
	Non-Impedance Matched	50 Ohm
Vertical Pin Contact	221158-1	222016-1
Right-Angle Socket Contact	221162-1	222015-1

Notes: 1. Extraction Tool **Part No. 58095-2**
2. For complete housing and contact specifications, refer to AMP-HDI Connectors Catalog 82618.

SOURCE: Catalog 82074

Specifications subject to change.
1-800-522-6752 Product Information Center/ AMP FAX Service
1-800-722-1111 Tooling/Technical Assistance Center

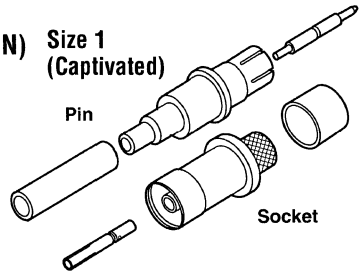
Multiple Coaxial Contacts (COAXICON) (Continued)

ARINC Contacts

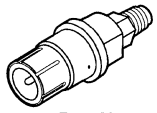
Size 1 Contacts

(For use in ARINC 404 and ARINC 600 Connectors)

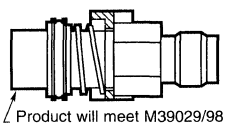
Size 1 (Captivated)



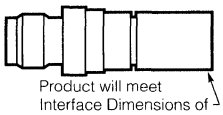
Adapter– Size 1 Pin to SMA Jack



Part No. 221597-1



Adapter Standard Size 1 Socket to TNC Part No. 449908-1



TCAS Size 1 Socket to TNC Adapter Part No. 447346-1

Contact Size	RG/U Cable	Contact Part No.		"O" Crimp Tooling			Military Hex Crimp Tooling				Compression Crimp Tooling		
				Center Contact		Ferrule	Center Contact		Ferrule				
		Pin	Socket	Tool (M22520/)	Positioner/ Die	Crimping Tool	Tool (M22520/)	Die (M22520/)	Tool (M22520/)	Die (M22520/)	Tool (M22520/)	Locator (M22520/)	Dies (M22520/)
	402 Semi-Rigid .141 [3.58]	225837-1	—	601966-1 (2-01)	1-601966-9	220066-1 or -2	—	—	—	—	—	—	—
	402 Semi-Rigid .141 [3.58]	222018-1	—	—	—	—	—	—	—	—	59980-1 (36-01)	220220-2 (36-06)	312253-1 (36-03)
	405 Semi-Rigid .086 [2.18]	222018-2	—	—	—	—	—	—	—	—	59980-1 (36-01)	220220-2 (36-06)	312253-2 (36-02)
	214	—	225831-1 211229-1*	220015-1	—	220015-1	—	—	—	—	—	—	—
	142, 142A, 142B	—	225831-3 446709-1*	220045-2	—	220045-2	—	—	—	—	—	—	—
1	393	—	225831-6	220015-1	—	220015-1	—	—	—	—	—	—	—
	214	447095-1	447087-1	—	—	—	608650-1 (5-01)	(5-25)	608650-1 (5-01)	(5-25)	—	—	—
	213	447095-2	447087-2	—	—	—	608650-1 (5-01)	(5-25)	608650-1 (5-01)	(5-25)	—	—	—
	142, 142A, 142B	447095-3	447087-3	—	—	—	608650-1 (5-01)	(5-11)	608650-1 (5-01)	(5-11)	—	—	—
	393	447095-4	447087-4	—	—	—	608650-1 (5-01)	(5-25)	608650-1 (5-01)	(5-25)	—	—	—
	ECS 311201	—	447087-5 446709-2*	—	—	—	608650-1 (5-01)	(5-29)	608650-1 (5-01)	(5-29)	—	—	—

*Socket with mounting hardware. Mounting hardware for Size 1 Straight Exit Contacts includes: backup plate, spring, retaining ring, O-ring, washers and screws.

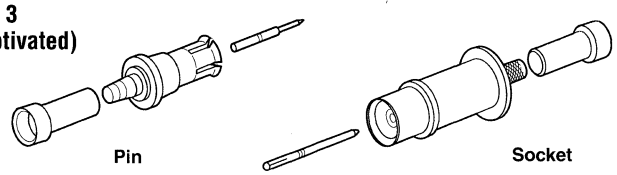
Notes: 1. Hardware kit for Size 1 COAXICON Socket Contacts (used on T1C1 or C2 inserts) include all mounting hardware required (retention plate, washers, O-ring, spring, screws and retention clip), Kit **Part No. 447118-1**

2. For complete housing and contact specifications refer to ARINC 404 Catalog 82010; and ARINC 600 Catalog 82106.

Size 3 Contacts

(For use in ARINC 404 Connectors)

Size 3 (Captivated)



Contact Size	RG/U Cable	Contact Part No.		"O" Crimp Tooling		
				Center Contact		Ferrule
		Pin	Socket	Tool (M22520/)	Positioner/ Die	Crimping Tool
3	58C	226053-1	225792-3	601966-1 (2-01)	2-601966-4[1] 1-601966-8[2]	220066-1 or -2
	225	—	225792-5	220015-1	—	220015-1
	214	—	225792-1	220015-1	—	220015-1
3 (Right-Angle)	142, 142A, 142B	228011-1	—	601966-1 (2-01)	1-601966-8	220066-1

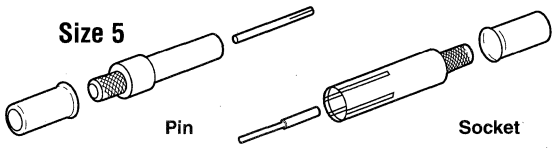
[1]Use with pin contact
[2]Use with socket contact

Note: For complete housing and contact specifications refer to ARINC 404 Catalog 82010.

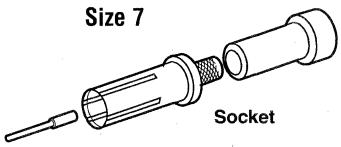
Size 5, 7, 8, 9 and 15 Contacts

(Sizes 5, 7, 9 and 15 are for use in ARINC 404 connectors; sizes 5 and 8 Triax are for use in ARINC 600 connectors)

Size 5



Size 7



SOURCE: Catalog 82074

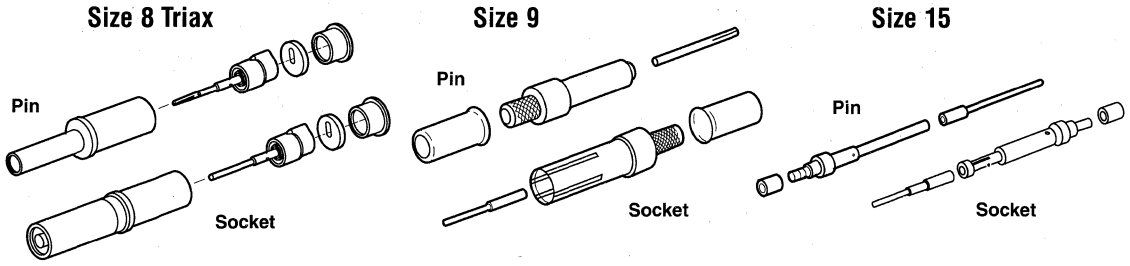
Specifications subject to change.

1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

Multiple Coaxial Contacts (COAXICON) (Continued)

ARINC Contacts (Continued)



Contact Size	RG/U Cable	Contact Part No.		"O" Crimp Tooling			Military Hex Crimp Tooling			
				Center Contact			Center Contact		Ferrule	
		Pin	Socket	Tool (M22520/)	Positioner/ Die	Ferrule Crimping Tool	Tool (M22520/)	Die (M22520/)	Tool (M22520/)	Die (M22520/)
5	58C	225790-1	225791-1	601966-1 (2-01)	1-601966-6 K345	220066-1	—	—	—	—
	400, 142, 142A, 142B	225790-2	225791-2	220066-2	—	220066-1 or -2	—	—	—	—
	141A	225790-1	225791-1	220066-2	—	220066-1 or -2	—	—	—	—
	402 Semi-Rigid .141 [3.58]	225790-3	225791-6	220066-2	—	220066-1 or -2	—	—	—	—
	174, 188, 316	225790-5	225791-3	601966-1 (2-01)	1-601966-6 K345	220066-1 or -2 or 220009-1	—	—	—	—
	180, 195	225790-4	225791-8	601966-1 (2-01)	1-601966-6 K345	220066-1 or -2	—	—	—	—
	179, 187	225790-6	225791-4	601966-1 (2-01)	1-601966-6 K345	220066-1 or -2 or 220009-1	—	—	—	—
	178, 196	225790-7	225791-5	601966-1 (2-01)	1-601966-6 K345	220020-1	—	—	—	—
	223	225790-2	225791-2	601966-1 (2-01)	1-601966-6 K345	220066-1 or -2	—	—	—	—
	316 Double Shield 188 Double Shield	225790-8	1-225791-0	—	—	—	601966-1 (2-01)	1-601966-6 K345	608650-1 (5-01)	(Y159)
7	223	—	225796-2	601966-1 (2-01)	1-601966-7	220066-1 or -2	—	—	—	—
	142A, 142B	—	225796-2	220066-2	—	220066-1 or -2	—	—	—	—
8 Triax	M17/176-00002	222190-1	222191-1	608650-1 (5-01)	58316-1 (5-104)	—	—	—	—	—
9	58C 141A	225935-1	225936-2	601966-1 (2-01)	1-601966-6 K345	220066-1 or -2	—	—	—	—
	174, 188 316	225935-4	225936-3	601966-1 (2-01)	1-601966-6 K345	220066-1 or -2	—	—	—	—
	142A, 142B	225935-5	225936-5	601966-1 (2-01)	1-601966-6 K345	220066-1 or -2	—	—	—	—
	316 Double Shield 188 Double Shield	225935-6	225936-9	—	—	—	601966-1 (2-01)	1-601966-6 K345	608650-1 (5-01)	(Y159)
	179, 187	225935-7	225936-7	601966-1 (2-01)	1-601966-6 K345	220066-1 or -2	—	—	—	—
	402 Semi-Rigid .141 [3.58]	447852-3	447853-3	—	—	—	601966-1 (2-01)	1-601966-6 K345	608650-1 (5-01)	(5-45A)
15	188, 316	226782-1	226781-1	601966-1 (2-01)	2-601966-8	601963-2 (4-01)	—	—	—	—
	179, 187	226782-2	226781-2	601966-1 (2-01)	2-601966-8	601963-2 (4-01)	—	—	—	—
	178, 196	226782-3	226781-3	601966-1 (2-01)	2-601966-6	601963-2 (4-01)	—	—	—	—

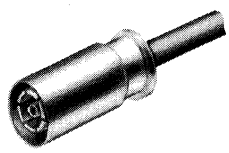
Note: For complete housing and contact specifications refer to ARINC 404 Catalog 82010; and ARINC 600 Catalog 82106.

SOURCE: Catalog 82074

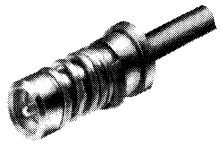
Multiple Coaxial Contacts (COAXICON)
(Continued)

2.8 Blind Mate Contacts (for Size 8 Cavities)

Plug



Jack



Connector Cable Range Selection Code†	RG/U Cable	Connector Configuration	Part No.	Hand Tool Kit Part No. 59981-1	
				Die Set	Locator*
P	405 Semi-Rigid .086 [2.18]	Plug	413242-1	312253-2	852113-1
		Jack	413249-1	312253-2	852114-1

†Refer to Appendix Pages for code specifications.
Note: For complete housing and contact specifications refer to Subminiature D Series 109 Catalog 82069.
*Not included in Hand Tool Kit **Part No. 59981-1**; must be purchased separately.

Stripping Tools

The hand-operated AMP Coaxial Cable Stripper features interchangeable, color-coded blade cassettes and V-blocks to accommodate 2- or 3-step stripping for cable diameters ranging from .10 [2.54] through .30 [7.62]. You strip cable by simply clamping and rotating the tool around the cable. See Instruction Sheet 408-2766 for further information.

For Use With Connector Type	Tool Part No.
BNC Single Crimp	603995-1
BNC Commercial and UHF Miniature	603995-2
UHF Standard	603995-3
BNC Mil Type Dual Crimp	603995-5
BNC Commercial Dual Crimp	603995-6

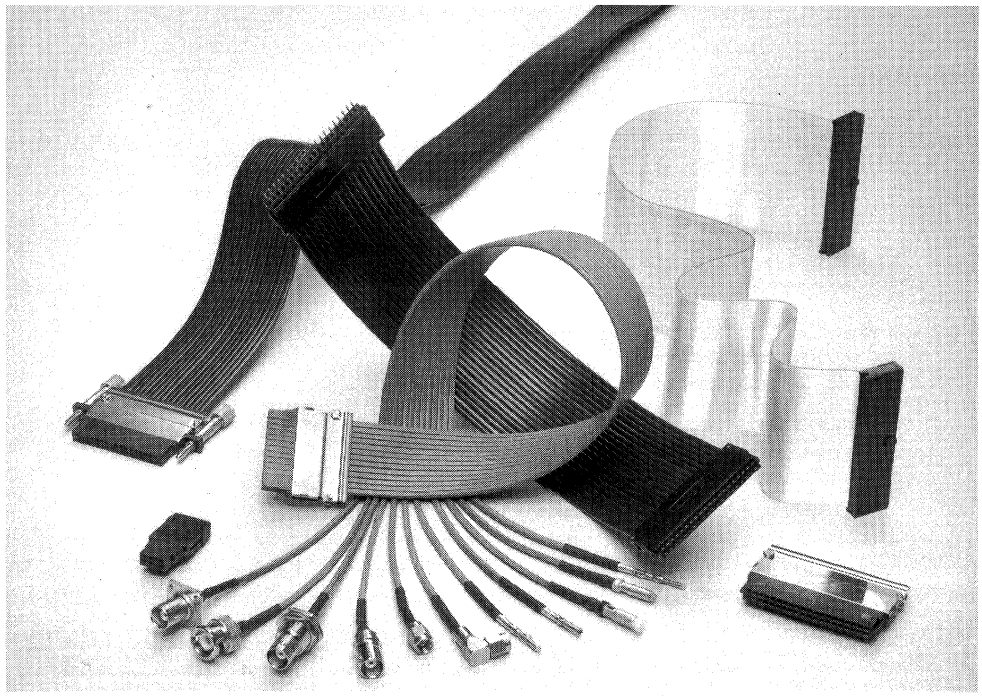
SOURCE: Catalog 82074

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

Multiple Transmission Cable Assemblies, Cable and Connectors

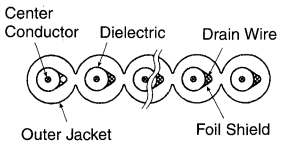
AMP Coaxial Ribbon Cable Systems can be supplied as individual components (connector kits and application tooling) or as preassembled custom cable assemblies. AMP Pro-G Cable Assemblies are supplied as prefabricated custom assemblies only.

■ **Recognized under the Component Program of Underwriters Laboratories Inc., Electrical File E28476 (Coaxial Ribbon Connectors), E53799 (Coaxial Ribbon Cable Assemblies) and UL Style 2741 (Coaxial Ribbon Cable)**



Coaxial Ribbon Cables

AMP Coaxial Ribbon Cable consists of individual coaxial cables encased in a PVC jacket making up a standard flat ribbon cable configuration. Each coaxial lead has a solid center conductor and a foil shield with a drain wire. This unique construction allows the cable to be cut in any length, maintaining the exact positioning of the center conductor and drain wire.



Through the use of stripping and terminating equipment, all conductors are stripped simultaneously and mass terminated. On the receptacle connector, the signal conductors are terminated on one side of the connector and the drain wires are attached to the opposite side. These operations generally reduce assembly time, damage and overall applied cost. Coaxial ribbon cable assemblies are available in 50-, 75- and 93-ohm designs, in widths from 4 to 25 positions.

Coaxial Receptacle Connectors

The multiposition AMP Coaxial Ribbon Cable Receptacle Connectors are available in standard, detent latching, positive locking and mounting flanged designs with 4 through 25 position configurations. Present designs accept 50-, 75- and 93-ohm coaxial ribbon cable on .100 [2.54] centerlines. Various styles of pin headers are available to mate with all receptacle connectors. These connectors can be purchased in kit form or as part of custom-built cable assemblies. A low-profile version can be ordered as part of a custom cable assembly.

Discrete Contacts and Connectors

AMP COAXICON RF Connectors and Contacts allow the flexibility of discrete coaxial terminations combined with mass cable terminations, wherever desirable.

Custom Ribbon Cable Assemblies

Complete Coaxial Ribbon Cable Assemblies terminated to receptacles and/or discrete connectors and contacts are custom fabricated using 50-, 75- and 93-ohm coaxial ribbon cables and are provided in a choice of lengths from 4 in. [101.6 mm] to 300 ft. [91.44 m]. All conductors are on .100 [2.54] centerlines for maximum space savings.

Application Tooling for Coaxial Ribbon Cables

Mass termination tooling is available to terminate the receptacles. Hand tools are available for discrete connector terminations.

AMP Pro-G Transmission Cable Assemblies

AMP Pro-G Transmission Cable Assemblies with programmed grounds include features to provide economy and reliability for made-to-order applications.

Cables are assembled with AMP Pro-G Receptacles in 10, 20, 26, 34, 40 and 50 positions to mate with a double row of posts on .100 x .100 [2.54 x 2.54] grid or with ejection style pin headers.

These custom made cable assemblies allow users the convenience of specifying the precise length and type of cable, number of lines, location of desired grounds, orientation of receptacle ends in relation to each other, ability to daisy chain and polarization if needed.

Special features of receptacles used on these cable assemblies include a common ground bus; gold over nickel plating on signal contacts and tin plated ground bus for reliability; flame retardant, glass-filled thermoplastic housing with a 94V-0 rating and two gold plated spring members at each position for redundant contact.

Each cable assembly provided by AMP is checked for continuity, shorts and inspected for conformity to customer specifications. These custom cable assemblies provide the convenience and economy of preassembly and use high quality components. AMP Pro-G Transmission Cable Assemblies are a logical choice for applications requiring 50-, 75-, 90- or 95-ohm transmission cable interconnection.

SOURCE: Catalog 82158

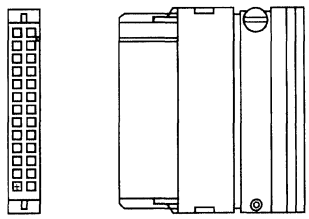
Coaxial Ribbon Cable Receptacle Connector Kits and Custom Cable Assemblies

AMP Receptacle Connector Kits are available individually or may be purchased as part of a custom-made cable assembly.

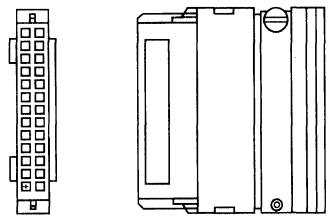
Receptacle connectors are available to accept 50-, 75- and 93-ohm coaxial ribbon cables. These connectors may be used in conjunction with the discrete coaxial connectors and contacts shown on the next page to form made-to-order cable assemblies.

When ordering cable assemblies using receptacle connectors, be sure to specify preferred orientation of signals and grounds. Standard termination consists of connectors oriented with signal side up on one end and ground side up on the opposite end. If specified, signal side can be oriented up on both ends (i.e. crossover termination).

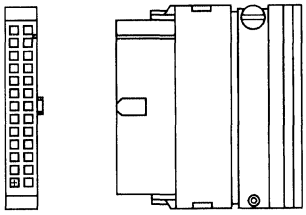
Note: For Custom Cable Assemblies Proposal and Ordering Form, see Catalog 82158.



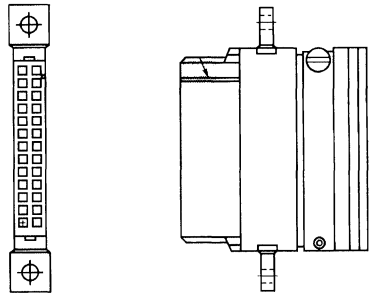
Standard



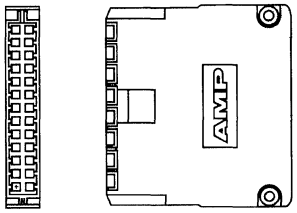
Detent Latching



Positive Locking



Mounting Flanges



Low Profile

Receptacle Connector Kits

Note: Standard and Positive Locking Receptacles **mate with**—AMP-LATCH Universal Ejection Headers. Mounting Flanges and Detent Latching Receptacles **mate with**— AMPMODU Shrouded Double Row Headers.

No. of Coaxial Pos.	Connector Kit Part Numbers[1]				Strain Relief Clamps		Crimper Assembly[2] for Tool Part No. 220144-1[4]
	Standard	Detent Latching	Positive Locking	Mounting Flanges[3]	Plastic	Metal	
4	—	226733-1	—	—	X	—	220155-4
5	226633-1	226733-2	221327-2[4]	226651-5	X	—	220155-5
10	226476-1	226733-7	221327-4	1-226651-0	—	X	1-220155-0
13	226477-1	1-226733-0	221327-5	—	—	X	1-220155-3
17	226478-1	1-226733-4	221327-6	1-226651-7	—	X	1-220155-7
20	226305-1	1-226733-7	221327-7	2-226651-0	—	X	2-220155-0
25	226479-1	2-226733-2	221327-8	2-226651-5	—	X	2-220155-5

[1]Connector Kit includes: receptacle loaded with contacts, 2 cable strain relief clamps with foam insulators (screws are included with metal clamps).
[2]Crimper assembly includes dies and comb.
[3]See mounting hardware below.
[4]Minimum quantity order may be required.
Note: Keying plug (for all receptacles) is available, order **Part Number 86286-1**.

Accessory Hardware (Jackscrews)

These jackscrews are recommended for mounting AMP Coaxial Ribbon Cable Receptacles and mating headers with mounting flanges.

Type	Overall Length		Part Number
	inch	mm	
Fixed Male	**.812**	20.62	226790-1
Fixed Female	**.840**	21.34	200875-1
Turnable Male	**1.56**	39.70	226654-2
Turnable Female	**1.56**	39.70	226655-1

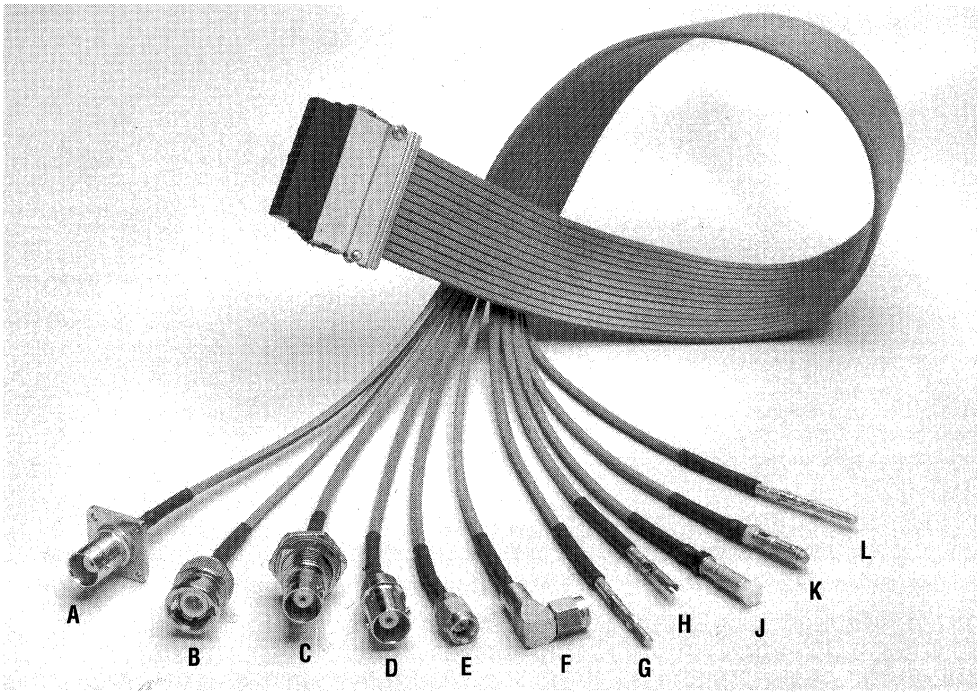
SOURCE: Catalog 82158

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

Discrete COAXICON RF Connectors and Contacts for use with Custom Cable Assemblies

The photograph at right illustrates the versatility of the AMP coaxial ribbon cable system. The ability to terminate discrete coaxial connectors permits the system to mate with existing interfaces, while allowing mass termination and high package density wherever desirable.

Custom cable assemblies using combinations of these products in conjunction with AMP receptacle connectors can be fabricated to customer specifications. Discrete RF connectors other than those shown here may be utilized with the AMP coaxial ribbon cable system. Contact AMP for additional information.



Notes: 1. For more information pertaining to Discrete COAXICON RF Connectors and Contacts, refer to Catalog 82074.
2. For Custom Cable Assemblies Proposal and Ordering Form, see Catalog 82158.

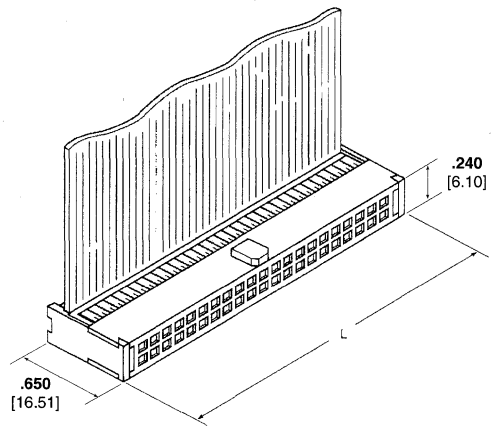
A-BNC Panel Jack
B-BNC Plug
C-BNC Bulkhead Jack
D-BNC Jack
E-SMB Plug
F-SMB Right-Angle Plug
G-Subminiature Pin
H-Subminiature Socket
J-Miniature Socket
K-Miniature Pin
L-Multimate Pin

Pro-G Receptacle Cable Assemblies

Product Facts

- **Custom fabricated to customer specifications**
- **All grounds commoned to common bus**
- **Signal contacts plated with gold over nickel**
- **Flame retardant housing meets UL 94V-O rating**
- **Connector provides cable strain relief to 35 lbs. [155.7 N] min.**
- **Assemblies available in desired lengths with 50-, 75-, 90- and 95-ohm ribbon transmission cables with signal conductors on .050 [1.27] centers**
- **Connectors mate with .025 x .025 [0.64 x 0.64] square or .028 [0.71] round posts on .100 x .100 [2.54 x 2.54] grid or comparable headers**
- **All assemblies are inspected and continuity checked**
- **Polarization, pull cords and keying plugs are available**
- **Ability to daisy chain**

SOURCE: Catalog 82158



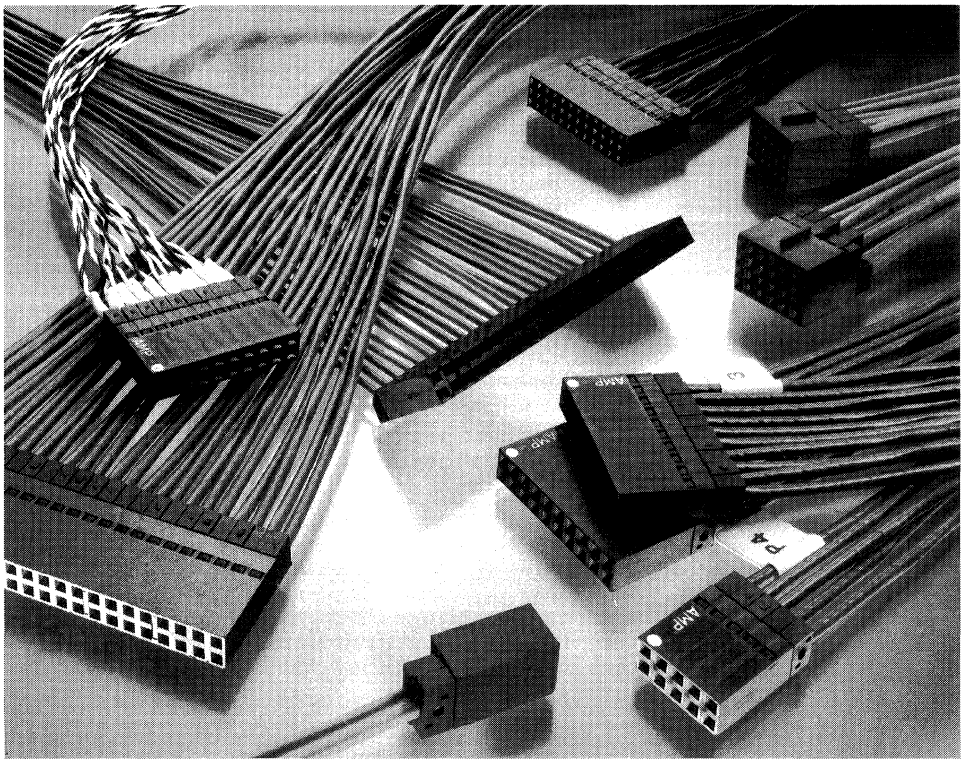
Completed Assembly

Note: For Custom Cable Assemblies Proposal and Ordering Form, See Catalog 82158.

Number of Positions	Connector Length L
10	**.680** 17.27
20	**1.180** 29.97
26	**1.480** 37.59
34	**1.880** 47.75
40	**2.180** 55.37
50	**2.680** 68.07

Note: Mating pin length range is .180-.250 [4.57-6.35]. **Mate with**—Eject style headers with .576 [14.63] latch height.

Point-to-Point Cable Assemblies



Product Facts

- **High-speed cable interconnect for .100 [2.54] centerline termination**
- **Crosstalk of less than 2% at 1 nanosecond risetimes**
- **Propagation delay of less than 1.19 ns/ft available**
- **Accepts .025 [.64] square or round posts**
- **Resistance welded terminations to a variety of controlled impedance cables (coaxial, shielded parallel pair and shielded twisted pair)**
- **Choice of signal/ground pattern**
- **Choice of visual or mechanical polarization**
- **Straight cable exit, or 45° exit available for close clearances**
- **Stackable end-to-end and side-to-side for grouping together on .100 [2.54] centerline pin fields**
- **Thermoplastic overmold for environmental and over-stress protection**
- **Optional capability to latch to Universal Eject Headers**
- **Utilizes standard pressure or high pressure box contacts**
- **Produced under a Quality Management System certified to ISO 9001**

A copy of the certificate is available upon request.

ISO 9001 Certified

Mates with—Two-Piece High Density Printed Circuit Board Connectors; Eurocard Connectors per DIN 41612 and IEC 603-2; Two-Piece Printed Circuit Board Connectors (AMPMODU); AMPMODU Stacking Connectors; .025 Square Interconnection System (AMPMODU); and BNC Plugs

AMP Point-to-Point Cable Assemblies are designed to provide interconnections where high performance is required and best value is desired. The proven AMPMODU Mod IV and Mod V contacts are combined with AMP resistance welded wire termination to provide highly reliable assemblies. Contacts incorporate gold over nickel to maintain high quality signals even in harsh environments. Post stubbing is virtually eliminated through the use of closed entry thermoplastic housings.

Cables are designed to optimize performance at two different electrical signal speeds. An economical cable maximizes performance with a propagation delay between 1.32 and 1.36 ns/ft [4.33-4.46 ns/m], and a premium high-speed cable provides delays between 1.17 and 1.21 ns/ft [3.84-3.97 ns/m]. Outer jackets are made of PVC and are color coded to aid impedance identification.

Standard coaxial assemblies are available in 50, 75, and 90 ohm versions with 2 or 3 position terminations. Custom coaxial assemblies are available in various impedances of 60, 65, and 100 ohms.

Standard differential assemblies are available in 100 ohm parallel pair cable configurations with 3 position terminations. Custom differential assemblies are available in various impedances with cable configurations of either twisted or parallel pairs.

Additionally, given the bulk cable manufacturing capabilities of AMP, custom coax or differential cables can be built to a customer's particular requirements.

Both the coaxial and differential assemblies can be provided in a multi-position housing ranging from 2x1 to 2x32, and 3x1 to 3x20. These housings are available in the standard side-to-side and end-to-end stackable configuration as well as the center polarizer configuration. Point-to-Point cable assemblies can also be terminated to BNC bulkhead jacks (with or without isolation), BNC plugs, SMAs, SMBs, and SSMBs. AMP also has the capability to terminate Point-to-Point cable assemblies to any customer specified application.

SOURCE: Catalog 82671

Specifications subject to change.

1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

Coaxial Cable Assemblies

Note: The -1 part numbers are for 12" [305] long assemblies. For dash numbers of other lengths contact the AMP Product Information Center 1-800-522-6752.

2 Position to 2 Position

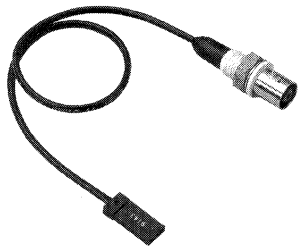
Note: 2 Pos. Housing/Overmold Dim. (Typ.)—.730 [18.54] L x .200 [5.08] W x .100 [2.54] H

Coax Cable Impedance	Propagation Delay ns/ft [ns/m]	Cable Exit Style	Part Number
50 ohms	**1.17-1.21** [3.84-3.97]	Straight	620365-1
		45°	620381-1
	1.32-1.36 [4.33-4.46]	Straight	620368-1
		45°	620384-1
75 ohms	**1.17-1.21** [3.84-3.97]	Straight	620366-1
		45°	620382-1
	1.32-1.36 [4.33-4.46]	Straight	620369-1
		45°	620385-1
90 ohms	**1.17-1.21** [3.84-3.97]	Straight	620367-1
		45°	620383-1
	1.32-1.36 [4.33-4.46]	Straight	620370-1
		45°	620386-1

3 Position to 3 Position

Note: 3 Pos. Housing/Overmold Dim. (Typ.)—.730 [18.54] L x .300 [7.62] W x .100 [2.54] H

Coax Cable Impedance	Propagation Delay ns/ft [ns/m]	Cable Exit Style	Part Number
50 ohms	**1.17-1.21** [3.84-3.97]	Straight	620371-1
		45°	620407-1
	1.32-1.36 [4.33-4.46]	Straight	620374-1
		45°	620410-1
75 ohms	**1.17-1.21** [3.84-3.97]	Straight	620372-1
		45°	620408-1
	1.32-1.36 [4.33-4.46]	Straight	620375-1
		45°	620411-1
90 ohms	**1.17-1.21** [3.84-3.97]	Straight	620373-1
		45°	620409-1
	1.32-1.36 [4.33-4.46]	Straight	620376-1
		45°	620412-1



2 Position to BNC Front Panel Mount Jack, w/Isolated Ground

Coax Cable Impedance	Propagation Delay ns/ft [ns/m]	Part Number
50 ohms	**1.17-1.21** [3.84-3.97]	620377-1
	1.32-1.36 [4.33-4.46]	620379-1
75 ohms	**1.17-1.21** [3.84-3.97]	620378-1
	1.32-1.36 [4.33-4.46]	620380-1

2 Position to BNC Bulkhead Jack, Rear Mounted, Grounded

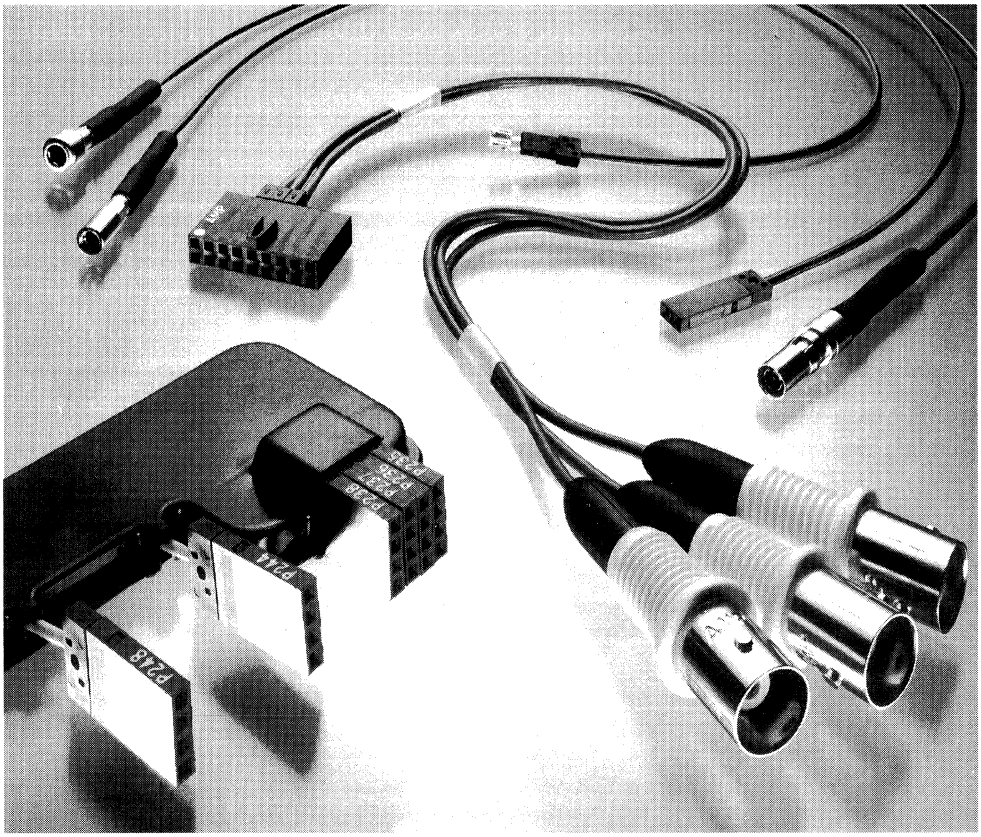
Coax Cable Impedance	Propagation Delay ns/ft [ns/m]	Part Number
50 ohms	**1.49-1.53** [4.89-5.02]	620405-1
75 ohms	**1.33-1.37** [4.36-4.49]	620406-1

Differential Pair Cable Assemblies

3 Position to 3 Position

Differential Pair Cable Impedance	Propagation Delay ns/ft [ns/m]	Cable Exit Style	Part Number
100 ohms	**1.17-1.21** [3.84-3.97]	Straight	620387-1
		45°	620389-1
	1.32-1.36 [4.33-4.46]	Straight	620388-1
		45°	620390-1

Hybrid Cable Assemblies

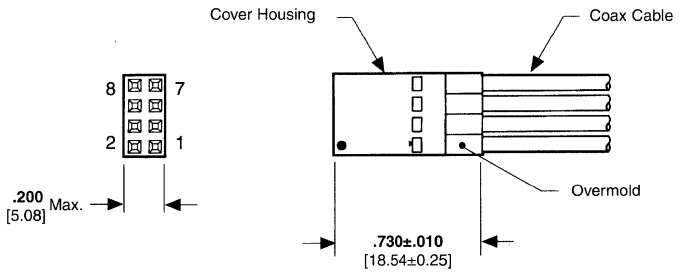


Multi-Position Housings

Housings are available from
2 x 2 (4 position) to
2 x 32 (64 position) and
3 x 2 (6 position) to
3 x 20 (60 position)

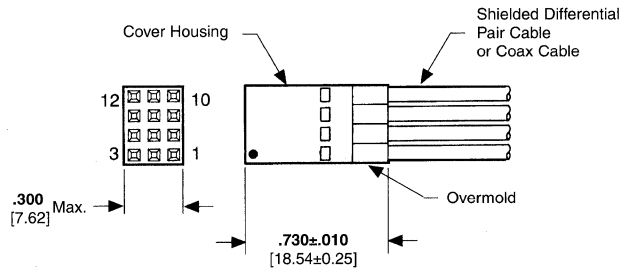
For drawings, samples or part numbers of Point-to-Point Cable Assemblies using one or more of these multi-position housings contact the AMP Product Information Center 1-800-522-6752.

2 Row Multi-Position Housing



2 Row Multi-Position Housing (Coax Cable Only)

3 Row Multi-Position Housing



3 Row Multi-Position Housing (Differential Cable or Coax Cable)

SOURCE: Catalog 82671

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

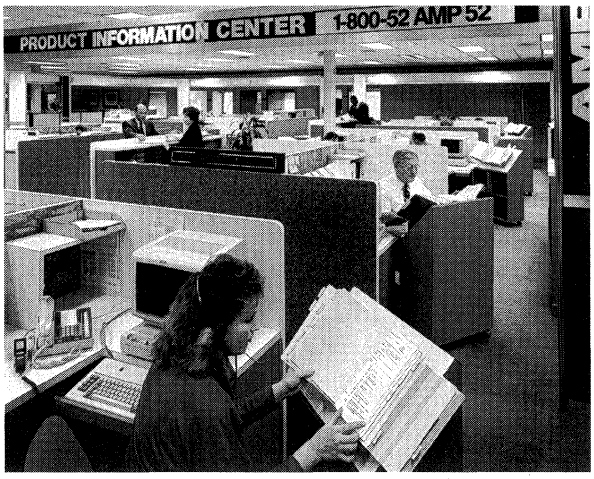
Need Information?
Call the AMP

PRODUCT INFORMATION CENTER

1-800-522-6752

The Product Information Center is staffed with specialists well versed in all AMP products. The Center can provide you with:

- Catalogs
- Technical Support
- Product Samples



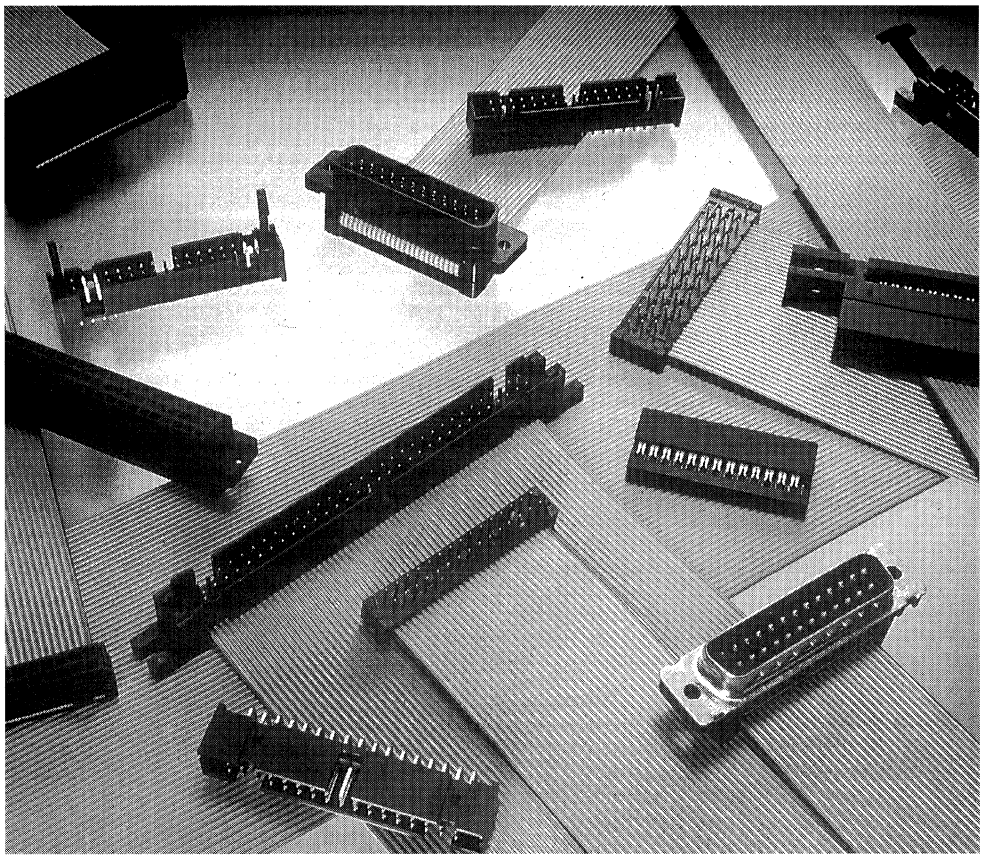
AMP FAX SERVICE

Instant information by FAX 24-hours a day.

- Drawings
- Instruction Sheets (IS#)
- Product Specifications
- Application Specifications
- Latest Revision of Catalog Pages
- AMP Authorized Distributors Locations
- Instructions for AMP FAX Service

See Inside Front Cover for Instructions on "How to Access" AMP FAX SERVICE

Ribbon Cable Connector System (AMP-LATCH)



Product Facts

- **No cable stripping, simultaneous termination of all conductors**
- **One-step termination with AMP application tooling**
- **Terminates varying ribbon cable with conductors on .050 [1.27], .039 [1.00] and .025 [0.64] centers**
- **Self-registration of wires—compatible product and tooling designs eliminate registration problems**
- **Wide selection of sizes in all configurations**
- **Positive, uniform latching of contacts and housing with cover eliminates cover warpage**
- **Easy, visual inspection of terminations during assembly, electrical probing capability after assembly**
- **All polymeric parts manufactured from a UL recognized 94V-0 rated material**
- **Receptacles with recessed covers provide positive locking feature for ejection style pin headers with latches**
- **Connectors Recognized under Component Program of Underwriters Laboratories Inc., File No. E28476**
- **Cable Recognized under Component Program of Underwriters Laboratories Inc., File No. E53793**
- **Connectors Certified by Canadian Standards Association, File No. LR7189**

The mass-termination capabilities of the AMP-LATCH family of connectors have helped make ribbon cable and particularly .050 [1.27] centerline cable popular within the Electronics Industry. The ability to terminate up to 64 conductors simultaneously, without stripping or otherwise preparing the cable, presents obvious labor savings.

AMP-LATCH connectors are wire-to-board devices used to make the transition between cable and pc board circuitry. They find heavy use within equipment to connect one board to another or one subsystem to another. The connectors are also used in input/output applications, connecting different pieces of equipment.

The line of AMP-LATCH connectors consists of eight main types:

- Receptacle Connectors (Uni-Beam and Novo)
- Card Edge Connectors
- EUROLATCH Connectors per DIN 41612 and IEC 603-2
- DIP Plugs
- Pin Connectors
- Pin Headers.
- System 50
- 2.0 mm System

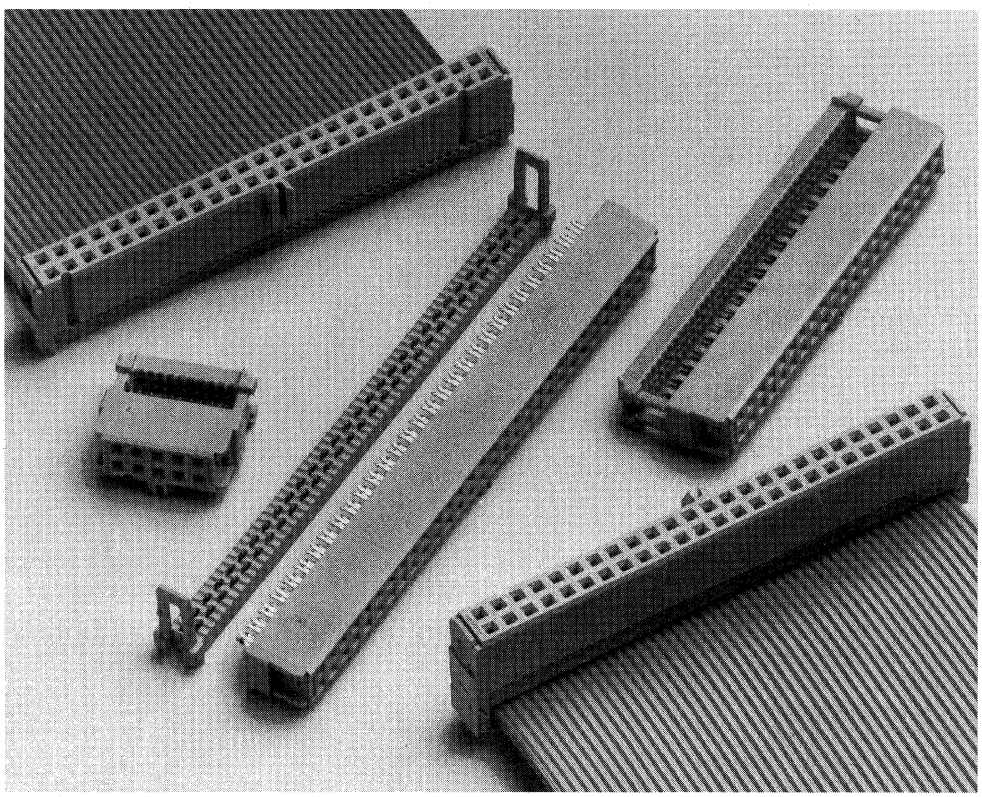
SOURCE: Catalog 82012

Specifications subject to change.

1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

AMP-LATCH Uni-Beam Connectors



Product Facts

- .100 x .100 [2.54 x 2.54] mating grid for .050 [1.27] pitch ribbon cable
- Pre-loaded single mating beam design, provides a high normal force without high mating/unmating forces
- Mates with .025 [0.64] square or round pin, .125 [3.18] to .323 [8.20] max. post length
- Duplex gold plated contacts
- Insulation displacement contacts (IDC) for fast, economical mass termination
- Contact design provides uniform latching of contacts and housing with connector cover
- Recessed cover with cable alignment feature
- Housing, cover, and strain relief made of UL 94V-0 rated thermoplastic material
- Connectors available in a choice of military or center and military polarization
- 10, 14, 16, 20, 24, 26, 30, 34, 40, 44, 50, 60 and 64 position connector configurations available
- Accepts wire size range 28-26 AWG [0.08-0.15 mm²], solid or stranded
- Snap-on strain relief and choice of pull tabs available
- One step termination with AMP-LATCH Novo receptacle tooling
- Recognized under the Component Program of Underwriters Laboratories Inc., File No. E28476
- Certified by the Canadian Standards Association, File No. LR 7189

AMP-LATCH Uni-Beam receptacles feature insulation displacement contacts (IDC) for fast, labor saving mass termination of .050 [1.27] centerline ribbon cable. The mating interface consists of a pre-loaded single mating beam that provides high normal force without high mating forces. The mating beam contains a top/bottom contact orientation. Contacts are made of phosphor bronze and are available in a choice of duplex plate .000015 [0.00038] or .000030 [0.00076] gold in the mating area, .000100 [0.00254] tin-lead in the termination area, with the entire contact .000050 [0.00127] nickel underplated. Contact mating area extends .100 [2.54] from the mating face of the housing. Contacts accept wire size range 28-26 AWG [0.08-0.15 mm²], solid or stranded.

The AMP-LATCH Uni-Beam receptacle will mate with:

- AMP-LATCH universal and low-profile pin headers.
- All industry standard pin headers with a .150 [3.81] end dimension, .025 [0.64] square or round mating post, and .125 [3.18] to .323 [8.20] maximum post length.

AMP-LATCH Uni-Beam receptacles feature a housing and cover made of 94V-0 rated polyester. The dual recessed cover contains an integral cable alignment feature that provides additional ribbon cable alignment during termination. The housing is available in military and center and military polarized configurations in various sizes from 10 up to 64 positions.

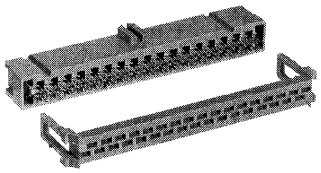
Optional accessories include a snap-on strain relief and a choice of pull tabs.

Assemblies are packaged in tubes for ease of handling, protection, and termination.

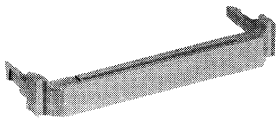
AMP-LATCH Uni-Beam receptacles can be applied to ribbon cable with any existing AMP-LATCH Novo receptacle, one-step application tooling.

AMP-LATCH Uni-Beam Connectors
(Continued)

Receptacles, Center and Military Polarized



Receptacle and Cover



Strain Relief

Plating Code:

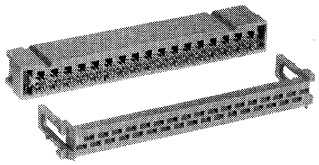
A—Duplex plated .000015 [0.00038] gold on the mating end, .000100 [0.00254] tin-lead on the termination end, with entire contact .000050 [0.00127] nickel underplated

B—Duplex plated .000030 [0.00076] gold on the mating end, .000100 [0.00254] tin-lead on the termination end, with entire contact .000050 [0.00127] nickel underplated

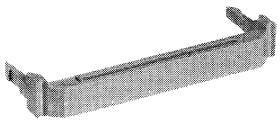
No. of Pos.	Part Numbers: Receptacle and Cover, Plating Code A	Part Numbers: Receptacle and Cover, Plating Code B	Part Numbers: Strain Relief	Kit Part Numbers*: Plating Code A	Kit Part Numbers*: Plating Code B
10	111810-1	111633-1	111564-5	111868-1	111869-1
14	111810-2	111633-2	111564-9	111868-2	111869-2
16	111810-3	111633-3	111564-8	111868-3	111869-3
20	111810-4	111633-4	111564-2	111868-4	111869-4
24	111810-5	111633-5	1-111564-0	111868-5	111869-5
26	111810-6	111633-6	111564-3	111868-6	111869-6
30	111810-7	111633-7	1-111564-2	111868-7	111869-7
34	111810-8	111633-8	111564-6	111868-8	111869-8
40	111810-9	111633-9	111564-1	111868-9	111869-9
44	1-111810-3	1-111633-3	1-111564-1	1-111868-3	1-111869-3
50	1-111810-0	1-111633-0	111564-4	1-111868-0	1-111869-0
60	1-111810-1	1-111633-1	111564-7	1-111868-1	1-111869-1
64	1-111810-2	1-111633-2	1-111564-3	1-111868-2	1-111869-2

*Kit contains connector and strain relief, bulk packaged.
Note: Pull Tabs also available, see page 5017.

Receptacles, Military Polarized



Receptacle and Cover



Strain Relief

Plating Code:

A—Duplex plated .000015 [0.00038] gold on the mating end, .000100 [0.00254] tin-lead on the termination end, with entire contact .000050 [0.00127] nickel underplated

B—Duplex plated .000030 [0.00076] gold on the mating end, .000100 [0.00254] tin-lead on the termination end, with entire contact .000050 [0.00127] nickel underplated

No. of Pos.	Part Numbers: Receptacle and Cover, Plating Code A	Part Numbers: Receptacle and Cover, Plating Code B	Part Numbers: Strain Relief	Kit Part Numbers*: Plating Code A	Kit Part Numbers*: Plating Code B
10	111811-1	111634-1	111564-5	111870-1	111871-1
14	111811-2	111634-2	111564-9	111870-2	111871-2
16	111811-3	111634-3	111564-8	111870-3	111871-3
20	111811-4	111634-4	111564-2	111870-4	111871-4
24	111811-5	111634-5	1-111564-0	111870-5	111871-5
26	111811-6	111634-6	111564-3	111870-6	111871-6
30	111811-7	111634-7	1-111564-2	111870-7	111871-7
34	111811-8	111634-8	111564-6	111870-8	111871-8
40	111811-9	111634-9	111564-1	111870-9	111871-9
44	1-111811-3	1-111634-3	1-111564-1	1-111870-3	1-111871-3
50	1-111811-0	1-111634-0	111564-4	1-111870-0	1-111871-0
60	1-111811-1	1-111634-1	111564-7	1-111870-1	1-111871-1
64	1-111811-2	1-111634-2	1-111564-3	1-111870-2	1-111871-2

*Kit contains connector and strain relief, bulk packaged.
Note: Pull Tabs also available, see page 5017.

SOURCE: Catalog 65908

Specifications subject to change.

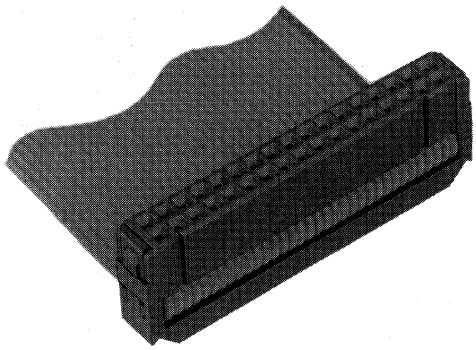
1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

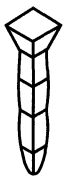
Novo Receptacles, Military Polarized*

.100 x .100 [2.54 x 2.54] Centers

Housing Assembly with Recessed Cover (Preassembled) and Strain Relief (Optional)

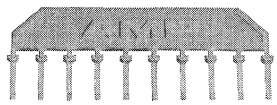


Keying Plug Part No. 499712-1



(Plugs into Contact)

Keying Plug Part No. 104072-1



Ten plugs are supplied per strip. Order quantity reflects the number of strips required.

Mates with—Pin Connectors, Pages 5008 and 5009; Universal Pin Headers, Pages 5010-5013; High Temperature Pin Headers, Page 5012; Low-Profile Pin Headers, Pages 5014-5016; Pinless Headers, Page 5011.

*These receptacles can be used in applications requiring non-polarization, as well as military polarization.

Note: 30 Pos. Housing Dim. (Typ.)—1.680 [42.67] L x .240 [6.10] W x .629 [15.98] H

No. of Pos.	Contact Plating	Strain Relief Part No.	Receptacle (Preassembled)
10	Duplex[1]	499252-5	499997-1
	Duplex[2]	499252-5	746290-1
	Tin[3]	499252-5	746291-1
14	Duplex[1]	499252-9	499997-2
	Duplex[2]	499252-9	746290-2
	Tin[3]	499252-9	746291-2
16	Duplex[1]	499252-8	499997-3
	Duplex[2]	499252-8	746290-3
	Tin[3]	499252-8	746291-3
20	Duplex[1]	499252-2	499997-4
	Duplex[2]	499252-2	746290-4
	Tin[3]	499252-2	746291-4
24	Duplex[1]	1-499252-0	499997-5
	Duplex[2]	1-499252-0	746290-5
	Tin[3]	1-499252-0	746291-5
26	Duplex[1]	499252-3	499997-6
	Duplex[2]	499252-3	746290-6
	Tin[3]	499252-3	746291-6
30	Duplex[1]	1-499252-2	499997-7
	Duplex[2]	1-499252-2	746290-7
	Tin[3]	1-499252-2	746291-7
34†	Duplex[1]	499252-6	499997-8
	Duplex[2]	499252-6	746290-8
	Tin[3]	499252-6	746291-8
40†	Duplex[1]	499252-1	499997-9
	Duplex[2]	499252-1	746290-9
	Tin[3]	499252-1	746291-9
50†	Duplex[1]	499252-4	1-499997-0
	Duplex[2]	499252-4	1-746290-0
	Tin[3]	499252-4	1-746291-0
60	Duplex[1]	499252-7	1-499997-1
	Duplex[2]	499252-7	1-746290-1
	Tin[3]	499252-7	1-746291-1
64	Duplex[1]	1-499252-3	1-499997-2
	Duplex[2]	1-499252-3	1-746290-2
	Tin[3]	1-499252-3	1-746291-2

[1] .000015 [0.00038] gold on post/pin mating end, .000100-.000200 [0.00254-0.00508] bright tin-lead on termination end, with entire contact underplated .000050 [0.00127] nickel.
[2] .000030 [0.00076] gold on post/pin mating end, .000100-.000200 [0.00254-0.00508] bright tin-lead on termination end, with entire contact underplated .000050 [0.00127] nickel.
[3] .000100-.000200 [0.00254-0.00508] bright tin-lead over .000050 [0.00127] nickel on entire contact.

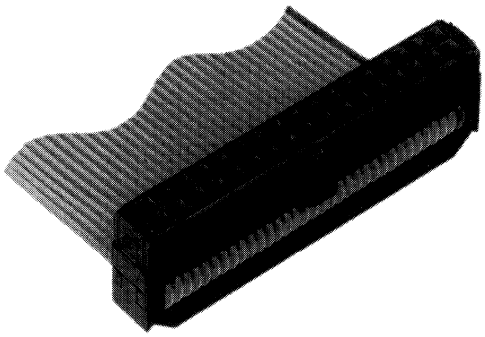
Notes: 1. These receptacles include a housing assembly and recessed cover (preassembled). Strain reliefs may be purchased separately using the component part nos. listed above.
2. Contacts mate with .025 [0.64] square or round pins with .245 [6.22] max. and .175 [4.45] min. lengths.

†Economy versions available with gold flash plating: 34 position, **Part No. 111557-8**; 40 position, **Part No. 111557-9**; and 50 position, **Part No. 1-111557-0**. Packaged on tape, 2,000 per box.

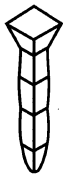
Novo Receptacles, Center and Military Polarized*

.100 x .100 [2.54 x 2.54] Centers

Housing Assembly with Recessed Cover (Preassembled) and Strain Relief (Optional)

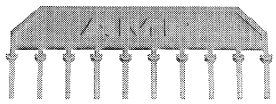


Keying Plug Part No. 499712-1



(Plugs into Contact)

Keying Plug Part No. 104072-1



Ten plugs are supplied per strip. Order quantity reflects the number of strips required.

Mates with—Pin Connectors, Pages 5008 and 5009; Universal Pin Headers, Pages 5010-5013; High Temperature Pin Headers, Page 5012; Low-Profile Pin Headers, Pages 5014-5016; Pinless Headers, Page 5011.

* These receptacles can be used in applications requiring center polarization.

Note: 30 Pos. Housing Dim. (Typ.)—1.680 [42.67] L x .240 [6.10] W x .629 [15.98] H

No. of Pos.	Contact Plating	Strain Relief Part No.	Receptacle (Preassembled)
10	Duplex[1]	499252-5	746285-1
	Duplex[2]	499252-5	746288-1
	Tin[3]	499252-5	746286-1
14	Duplex[1]	499252-9	746285-2
	Duplex[2]	499252-9	746288-2
	Tin[3]	499252-9	746286-2
16	Duplex[1]	499252-8	746285-3
	Duplex[2]	499252-8	746288-3
	Tin[3]	499252-8	746286-3
20	Duplex[1]	499252-2	746285-4
	Duplex[2]	499252-2	746288-4
	Tin[3]	499252-2	746286-4
24	Duplex[1]	1-499252-0	746285-5
	Duplex[2]	1-499252-0	746288-5
	Tin[3]	1-499252-0	746286-5
26	Duplex[1]	499252-3	746285-6
	Duplex[2]	499252-3	746288-6
	Tin[3]	499252-3	746286-6
30	Duplex[1]	1-499252-2	746285-7
	Duplex[2]	1-499252-2	746288-7
	Tin[3]	1-499252-2	746286-7
34†	Duplex[1]	499252-6	746285-8
	Duplex[2]	499252-6	746288-8
	Tin[3]	499252-6	746286-8
40†	Duplex[1]	499252-1	746285-9
	Duplex[2]	499252-1	746288-9
	Tin[3]	499252-1	746286-9
50†	Duplex[1]	499252-4	1-746285-0
	Duplex[2]	499252-4	1-746288-0
	Tin[3]	499252-4	1-746286-0
60	Duplex[1]	499252-7	1-746285-1
	Duplex[2]	499252-7	1-746288-1
	Tin[3]	499252-7	1-746286-1
64	Duplex[1]	1-499252-3	1-746285-2
	Duplex[2]	1-499252-3	1-746288-2
	Tin[3]	1-499252-3	1-746286-2

[1] .000015 [0.00038] gold on post/pin mating end, .000100-.000200 [0.00254-0.00508] bright tin-lead on termination end, with entire contact underplated .000050 [0.00127] nickel.
[2] .000030 [0.00076] gold on post/pin mating end, .000100-.000200 [0.00254-0.00508] bright tin-lead on termination end, with entire contact underplated .000050 [0.00127] nickel.
[3] .000100-.000200 [0.00254-0.00508] bright tin-lead over .000050 [0.00127] nickel on entire contact.

Notes: 1. These receptacles include a housing assembly and recessed cover (preassembled). Strain reliefs may be purchased separately using the component part nos. listed above.
2. Contacts mate with .025 [0.64] square or round pins with .245 [6.22] max. and .175 [4.45] min. lengths.

†Economy versions available with gold flash plating: 34 position, **Part No. 111556-8**; 40 position, **Part No. 111556-9**; and 50 position, **Part No. 1-111556-0**. Packaged on tape, 2,000 per box.

SOURCE: Catalog 82012

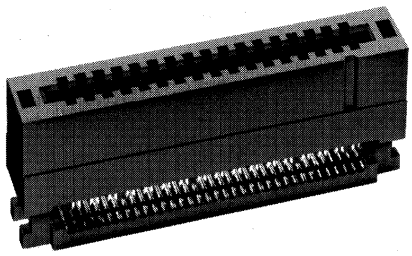
Specifications subject to change.

1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

Card Edge Connectors Without Mounting Ears, With Split Single Beam Contacts

Housing Assembly with Cover (Preassembled)



Note: 30 Pos. Housing Dim. (Typ.)—1.960 [49.78] L x .404 [10.26] W x .878 [22.30] H

No. of Pos.	Contact Plating	Connectors (Preassembled)	
		Without Mounting Ears	Without Ears With Molded Key[3]
10	Duplex[1]	111110-8	111112-8
	Duplex[2]	111109-8	111111-8
14	Duplex[1]	111110-9	111112-9
	Duplex[2]	111109-9	111111-9
16	Duplex[1]	1-111110-0	1-111112-0
	Duplex[2]	1-111109-0	1-111111-0
20	Duplex[1]	111110-6	111112-6
	Duplex[2]	111109-6	111111-6
26	Duplex[1]	111110-5	111112-5
	Duplex[2]	111109-5	111111-5
30	Duplex[1]	111110-4	111112-4
	Duplex[2]	111109-4	111111-4
34†	Duplex[1]	111110-3	111112-3
	Duplex[2]	111109-3	111111-3
40	Duplex[1]	111110-2	111112-2
	Duplex[2]	111109-2	111111-2
44	Duplex[1]	1-111110-2	1-111112-2
	Duplex[2]	1-111109-2	1-111111-2
50	Duplex[1]	111110-1	111112-1
	Duplex[2]	111109-1	111111-1
60	Duplex[1]	111110-7	111112-7
	Duplex[2]	111109-7	111111-7
64	Duplex[1]	1-111110-1	1-111112-1
	Duplex[2]	1-111109-1	1-111111-1

[1] .000015 [0.00038] gold on pc board mating end, .000100-.000200 [0.00254-0.00508] bright tin-lead on termination end, with entire contact underplated .000050 [0.00127] nickel.
[2] .000030 [0.00076] gold on pc board mating end, .000100-.000200 [0.00254-0.00508] bright tin-lead on termination end, with entire contact underplated .000050 [0.00127] nickel.
[3] Intercontact keying plug is molded between positions 3, 4, 5, and 6.
Notes: 1. These connectors include a housing assembly and cover (preassembled).
2. Keying plugs can be molded in other positions, consult AMP.
†Economy version available with gold-flash plating, **Part No. 111559-3**. Packaged on tape, 1,500 per box.

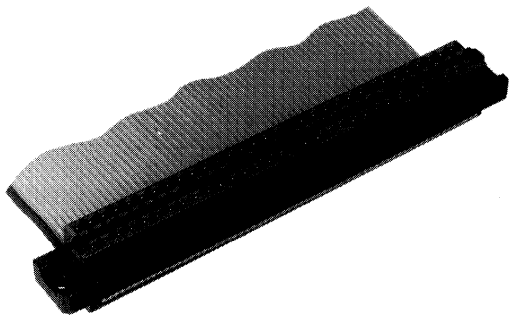
Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

METRIC

EUROLATCH Receptacles 64 Position (Three-Row Housings, Two Rows Loaded)

Housing Assembly with Cover (Preassembled)

Mates with—Eurocard Type C and Type R Pin Connectors in Section 3



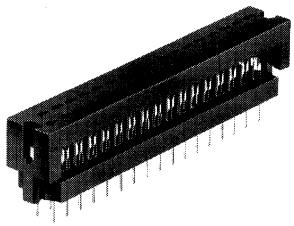
Note: 64 Pos. Housing Dim. (Typ.)—94.74 [3.730] L x 10.49 [.413] W x 18.57 [.731] H

Contact Rows Loaded	Receptacle Kit No. (Preassembled)
A and C	746603-1
A and B	746603-2
B and C	746603-3

DIP Plugs

.100 x .100 [2.54 x 2.54] Centers*

Housing Assembly with Cover (Preassembled)



Note: 30 Pos. Housing Dim. (Typ.)—1.680 [42.67] L x .278 [7.06] W x .253 [6.43] H

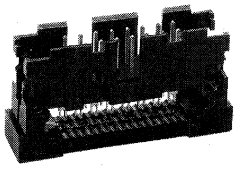
No. of Pos.	DIP Plugs (Preassembled) with Straight Legs	DIP Plugs (Preassembled) with Retention Legs
10	746610-1	111382-1
14	746610-2	111382-2
16	746610-3	111382-3
20	746610-4	111382-4
24	746610-5	111382-5
26	746610-6	111382-6
30	746610-7	111382-7
34	746610-8	111382-8
40	746610-9	111382-9
44	1-746610-3	1-111382-3
50	1-746610-0	1-111382-0
60	1-746610-1	1-111382-1
64	1-746610-2	1-111382-2

Note: All plug kits include a housing assembly and cover (preassembled).
*Select sizes are also available on .100 x .300 [2.54 x 7.62] and .100 x .600 [2.54 x 15.24] centers. Consult AMP.

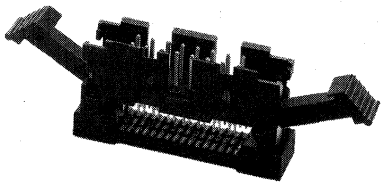
SOURCE: Catalog 82012

Specifications subject to change.
1-800-522-6752 Product Information Center/ AMP FAX Service
1-800-722-1111 Tooling/Technical Assistance Center

Universal I/O Pin Connectors without Mounting Ears



Without Latches



With Latches

Note: 30 Pos. Housing Dim. (Typ.)—2.072 [52.63] L x .330 [8.38] W x .754 [19.15] H

Mates with—Novo Receptacles, Pages 5004 and 5005.

Contact Plating Code—

A—Duplex plated .000015 [0.00038] gold

B—Duplex plated .000030 [0.00076] gold

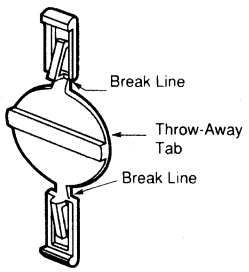
Base Part Numbers

Part No. without Latches	Contact Plating Code	Pin Connector Kit Nos. (with Latches Preassembled)			
		Latch Part Number 111451-1 Standard Cover	Latch Part Number 111451-2 Special Cover	Latch Part Number 111451-3 Strain Relief	Latch Part Number 111451-4 Shielded Connector
111445	A	111491	111497	111503	111508
111446	B	111492	111498	111504	111509

Notes: 1. The connector kits include a housing, recessed cover and latches (preassembled). See tables below for ordering latches and strain reliefs separately.
2. No slot on end with position No.1 indicator for 10 and 14 position connectors.
3. No slot for snap-in polarizer on end with position No.1 indicator for 10 and 14 position connectors.

Polarizer, Snap-In

Part Nos.:
499991-2 (bulk packed, 50 to pack)
499991-3 (bulk packed, 1000 to box)
The snap-in polarizer provides military polarization.



Prefixes and Suffixes

No. of Pos.	Prefix	Suffix
10		-1
14		-2
16		-3
20		-4
24		-5
26		-6
30		-7
34		-8
40		-9
44	1-	-0
50	1-	-1
60	1-	-2
64	1-	-3

Strain Relief

No. of Pos.	Part Number
10	111547-1
14	111547-2
16	111547-3
20	111547-4
24	111547-5
26	111547-6
30	111547-7
34	111547-8
40	111547-9
44	1-111547-0
50	1-111547-1
60	1-111547-2
64	1-111547-3

Latches

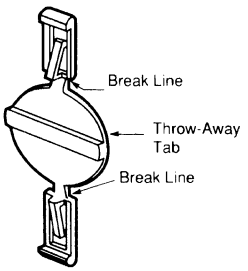
Part Number
111451-1 (For Standard Cover)
111451-2 (For Special Cover)
111451-3 (For Strain Relief Cover)
111451-4 (For Shielded Cover)

Universal I/O Pin Connectors with Slotted Mounting Ears

Note: 30 Pos. Housing Dim. (Typ.)—2.476 [62.89] L x .330 [8.38] W x .749 [19.02] H

Polarizer, Snap-In

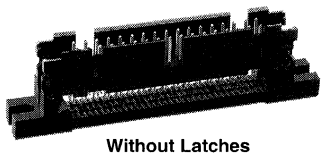
Part Nos.:
499991-2 (bulk packed, 50 to pack)
499991-3 (bulk packed, 1000 to box)
The snap-in polarizer provides military polarization.



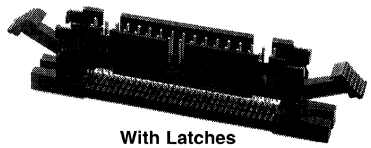
Mates with—Novo Receptacles, Pages 5004 and 5005.

Contact Plating Code—

A—Duplex plated .000015 [0.00038] gold
B—Duplex plated .000030 [0.00076] gold



Without Latches



With Latches

Base Part Numbers

Part No. without Latches	Contact Plating Code	Pin Connector Kit Nos. (with Latches Preassembled) Latch Part Number 111451-1 Standard Cover	Latch Part Number 111451-2 Special Cover	Latch Part Number 111451-3 Strain Relief	Latch Part Number 111451-4 Shielded Connector
111447	A	111493	111499	111505	111510
111448	B	111494	111500	111506	111511

Notes: 1. The connector kits include a housing, recessed cover and latches (preassembled). See table below to order latches separately.
2. No slot on end with position No.1 indicator for 10 and 14 position connectors.
3. No slot for snap-in polarizer on end with position No.1 indicator for 10 and 14 position connectors.

Prefixes and Suffixes

No. of Pos.	Prefix	Suffix
10		-1
14		-2
16		-3
20		-4
24		-5
26		-6
30		-7
34		-8
40		-9
44	1-	-0
50	1-	-1
60	1-	-2
64	1-	-3

Latches

Part Number
111451-1 (For Standard Cover)
111451-2 (For Special Cover)
111451-3 (For Strain Relief Cover)
111451-4 (For Shielded Cover)

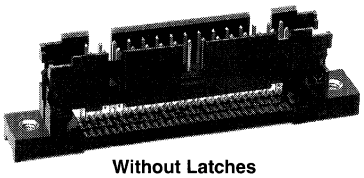
Universal I/O Pin Connectors, Mounting Ears with Threaded Inserts

Note: 30 Pos. Housing Dim. (Typ.)—2.476 [62.89] L x .330 [8.38] W x .749 [19.02] H

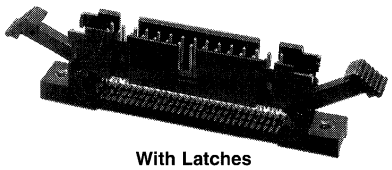
Mates with—Novo Receptacles, Pages 5004 and 5005.

Contact Plating Code—

A—Duplex plated .000015 [0.00038] gold
B—Duplex plated .000030 [0.00076] gold



Without Latches



With Latches

Base Part Numbers

Part No. without Latches	Contact Plating Code	Pin Connector Kit Nos. (with Latches Preassembled) Latch Part Number 111451-1 Standard Cover	Latch Part Number 111451-2 Special Cover	Latch Part Number 111451-3 Strain Relief	Latch Part Number 111451-4 Shielded Connector
111449	A	111495	111501	111507	111512
111450	B	111496	111502	111468	111513

Notes: 1. The connector kits include a housing, recessed cover and latches (preassembled). See table below to order latches separately.
2. No slot on end with position No.1 indicator for 10 and 14 position connectors.
3. No slot for snap-in polarizer on end with position No.1 indicator for 10 and 14 position connectors.

Prefixes and Suffixes

No. of Pos.	Prefix	Suffix
10		-1
14		-2
16		-3
20		-4
24		-5
26		-6
30		-7
34		-8
40		-9
44	1-	-0
50	1-	-1
60	1-	-2
64	1-	-3

Latches

Part Number
111451-1 (For Standard Cover)
111451-2 (For Special Cover)
111451-3 (For Strain Relief Cover)
111451-4 (For Shielded Cover)

SOURCE: Catalog 82012

Specifications subject to change.

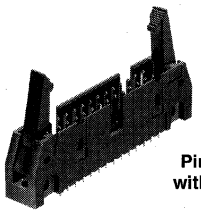
1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

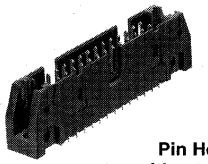
Universal Ejection Style Pin Headers, Military, Center and Dual Polarized

.100 x .100 [2.54 x 2.54] Centers

Straight-Thru, 4-Sided .025 [0.64] Sq. Posts



Pin Header with Latches



Pin Header without Latches

Note: 30 Pos. Housing Dim. (Typ.)—2.260 [57.40] L x .336 [8.53] W x .549 [13.94] H

Post Length	Contact Plating	Pin Header Part No. (without Latches)	Pin Header Kit No. (with Latches) Short Latch 102312-1	Pin Header Kit No. (with Latches) Str. Relief Latch 102320-1
.110 2.79	Duplex[1]	102153	499910	499922
	Duplex[2]	102154	499160	499206
	Bright Tin[3]	499703	746214	—
.155 3.94	Duplex[1]	102155	499911[4]	499923
	Duplex[2]	102156	499374[5]	102321

[1] .000015 [0.00038] gold on mating end, .000100-.000200 [0.00254-0.00508] bright tin-lead on termination end, with entire contact underplated .000050 [0.00127] nickel.
[2] .000030 [0.00076] gold on mating end, .000100-.000200 [0.00254-0.00508] bright tin-lead on termination end, with entire contact underplated .000050 [0.00127] nickel.
[3] .000100-000200 [0.00254-0.00508] bright tin-lead over .000050 [0.00127] nickel on entire contact.
[4] Not available in 30 positions.
[5] Not available in 30 and 60 positions.

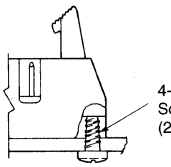
Notes: 1. For information regarding latch/pin header applications and for ordering latches separately, refer to page 5013.
2. Pin headers in 10- and 14-position sizes have only one slot for snap-in polarizer (military polarization).
3. Pin headers in 10-position size have only slot for dual polarization.

Mates with—Novo Receptacles, Pages 5004 and 5005.

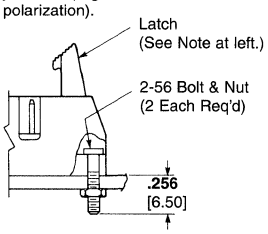
No. of Pos.	Add to Part No. Prefix	Suffix
10		-1
14		-2
16		-3
20		-4
24		-5
26		-6

No. of Pos.	Add to Part No. Prefix	Suffix
30		-7
34		-8
40		-9
50	1-	-0
60	1-	-1
64	1-	-2

Note: 2-56 bolts and nuts may be used to mount pin headers with and without latches. If latches are to be used, the bolts must be positioned in the pin headers before the latches are installed.



Pin Header Mounting using 4-24 Self-Tapping Screws: Part Nos. 19156-1 (for .062 [1.57] Thick Pc Board) 19156-2 (for .093 [2.36] Thick Pc Board) 19156-3 (for .125 [3.18] Thick Pc Board)

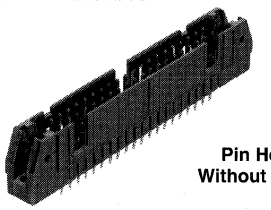


Pin Header Mounting with 2-56 Bolts and Nuts: Part No. 746383-1 (Bolt Only) Kit No. 102198-1 (Bolt and Nut, 2 Each per Kit)

Universal Ejection Style Pin Headers with ACTION PIN Contacts, Military, Center and Dual Polarized

.100 x .100 [2.54 x 2.54] Centers

Straight-Thru, 4-Sided .025 [0.64] Sq. Posts



Pin Header Without Latches

Note: 30 Pos. Housing Dim. (Typ.)—2.260 [57.40] L x .336 [8.53] W x .549 [13.9] H

Post Length	Contact Plating	Part Numbers For .093-.125 [2.36-3.18] Thick Pc Board Pin Header
.174 4.42	Duplex[1]	499984[3]
	Duplex[2]	499582

[1] .000015 [0.00038] gold on mating end, .000100-.000200 [0.00254-0.00508] bright tin-lead on termination end, with entire contact underplated .000050 [0.00127] nickel.
[2] .000030 [0.00076] gold on mating end, .000100-.000200 [0.00254-0.00508] bright tin-lead on termination end, with entire contact underplated .000050 [0.00127] nickel.
[3] Not available in 24 positions.

Notes: 1. For information regarding latch/pin header applications and for ordering latches separately, refer to page 5013.
2. Pin headers in 10- and 14-position sizes have only one slot for snap-in polarizer (military polarization).
3. Pin headers in 10-position size have only slot for dual polarization.

Mates with—Novo Receptacles, Pages 5004 and 5005.

No. of Pos.	Add to Part No. Prefix	Suffix
10		-1
14		-2
16		-3
20		-4
24		-5
26		-6

No. of Pos.	Add to Part No. Prefix	Suffix
30		-7
34		-8
40		-9
50	1-	-0
60	1-	-1
64	1-	-2

Insertion/Extraction Tool **Part No. 91241-1** (includes Insertion/Extraction Tip **Part No. 126961-1** and Extraction Tip **Part No. 126961-2**)

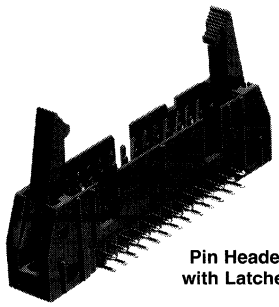
SOURCE: Catalog 82012

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

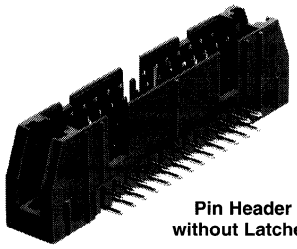
Universal Ejection Style Pin Headers, Military, Center and Dual Polarized

.100 x .100 [2.54 x 2.54] Centers

Right-Angle, 4-Sided .025 [0.64] Sq. Posts



Pin Header with Latches



Pin Header without Latches

Note: 30 Pos. Housing Dim. (Typ.)—2.260 [57.40] L x .336 [8.53] W x .549 [13.94] H

Mates with—Novo Receptacles, Pages 5004 and 5005.

Post Length	Contact Plating	Pin Header Part No. (without Latches)	Pin Header Kit No. (with Latches) Short Latch 102312-1	Pin Header Kit No. (with Latches) Str. Relief Latch 102320-1
.110 2.79	Duplex[1]	102159	499913	499786
	Duplex[2]	102160	499345[3]	499141
.155 3.94	Duplex[1]	102161	—	—
	Duplex[2]	102162	—	102322[4]

[1].000015 [0.00038] gold on mating end, .000100-.000200 [0.00254-0.00508] bright tin-lead on termination end, with entire contact underplated .000050 [0.00127] nickel.
[2].000030 [0.00076] gold on mating end, .000100-.000200 [0.00254-0.00508] bright tin-lead on termination end, with entire contact underplated .000050 [0.00127] nickel.
[3] Not available in 24 and 64 positions.
[4] Not available in 24 and 30 positons.

Notes: 1. For information regarding latch/pin header applications and for ordering latches separately, refer to page 5013.
2. Pin headers in 10- and 14-position sizes have only one slot for snap-in polarizer (military polarization).
3. Pin headers in 10-positon size have only slot for dual polarization.

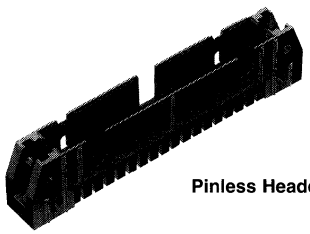
No. of Pos.	Add to Part No. Prefix	Add to Part No. Suffix
10		-1
14		-2
16		-3
20		-4
24		-5
26		-6

No. of Pos.	Add to Part No. Prefix	Add to Part No. Suffix
30		-7
34		-8
40		-9
50	1-	-0
60	1-	-1
64	1-	-2

Universal Ejection Style Pinless Headers, Military, Center and Dual Polarized

.100 x .100 [2.54 x 2.54] Centers

Straight-Thru, 4-Sided .025 [0.64] Sq. Posts (without latches)



Pinless Header

Note: 30 Pos. Housing Dim. (Typ.)—2.260 [57.40] L x .315 [8.00] W x .549 [13.9] H

Mates with—Novo Receptacles, Pages 5004 and 5005.

No. of Pos.	Pinless Header Part Nos. Press-Fit Without Standoffs	Pinless Header Part Nos. Clearance-Fit Without Standoffs
10	499726-1	102142-6
14	499726-2	102142-8
16	499726-3	102142-9
20	499726-4	102142-1
24	499726-5	1-102142-0
26	499726-6	102142-2
30	499726-7	1-102142-1
34	499726-8	102142-3
40	499726-9	102142-4
50	1-499726-0	102142-5
60	1-499726-1	102142-7
64	1-499726-2	1-102142-3

Notes: 1. 10- and 14-position pinless headers have only one slot for snap-in polarizer (military polarization).
2. 10-position pinless headers have only one slot for dual polarization.
3. For information regarding latch/pin header applications and for ordering latches separately, refer to page 5013.

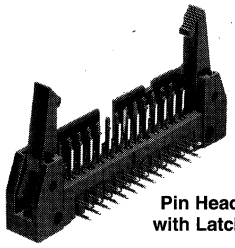
SOURCE: Catalog 82012

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

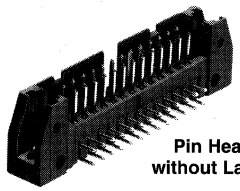
Universal Ejection Style Pin Headers, Center and Military Polarized

.100 x .100 [2.54 x 2.54] Centers

Right-Angle, 3-Sided .025 [0.64] Sq. Posts



Pin Header with Latches



Pin Header without Latches

Note: 30 Pos. Housing Dim. (Typ.)—2.260 [57.40] L x .292 [7.42] W x .549 [13.49] H

Mates with—Novo Receptacles, Pages 5004 and 5005.

Post Length	Contact Plating	Pin Header Part No. (without Latches)	Pin Header Kit No. (with Latches) Str. Relief Latch 102320-1
.110	Duplex[1]	746101	—
2.79	Duplex[2]	746143	746179

[1] .000015 [0.00038] gold on mating end, .000100-.000200 [0.00254-0.00508] bright tin-lead on termination end, with entire contact underplated .000050 [0.00127] nickel.
[2] .000030 [0.00076] gold on mating end, .000100-.000200 [0.00254-0.00508] bright tin-lead on termination end, with entire contact underplated .000050 [0.00127] nickel.

Notes: 1. Pin headers in 10- and 14-position sizes have only one slot for snap-in polarizer (military polarization).
2. For information regarding latch/pin header applications and for ordering latches separately, refer to page 5013.

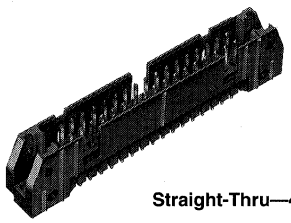
No. of Pos.	Add to Part No. Prefix	Suffix
10		-1
14		-2
16		-3
20		-4
24		-5
26		-6

No. of Pos.	Add to Part No. Prefix	Suffix
34		-8
40		-9
50	1-	-0
60	1-	-1
64	1-	-2

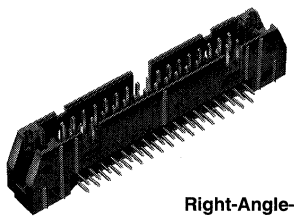
High Temperature, Thru-Hole (SMT Compatible) Universal Ejection Style Pin Headers

.100 x .100 [2.54 x 2.54] Centers

Straight-Thru and Right-Angle, 4-Sided .025 [0.64] Sq. Posts



Straight-Thru—4-Sided



Right-Angle—4-Sided

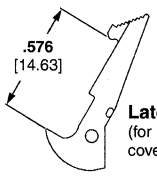
Note: 30 Pos. Housing Dim. (Typ.)—2.260 [57.40] L x .340 [8.64] W x .549 [13.94] H

Mates with—Novo Receptacles, Pages 5004 and 5005.

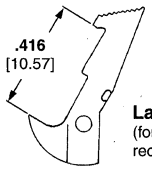
No. of Pos.	Part Numbers Straight-Thru	Right-Angle
10	111008-1	111105-1
14	111008-2	111105-2
16	111008-3	111105-3
20	111008-4	111105-4
24	111008-5	111105-5
26	111008-6	111105-6
34	111008-8	111105-8
40	111008-9	111105-9
50	1-111008-0	1-111105-0
60	1-111008-1	1-111105-1
64	1-111008-2	1-111105-2

Notes: 1. 10- and 14-position pin headers have only one slot for snap-in polarizer (military polarization).
2. 10-position pin headers have only one slot for dual polarization.

Latches



Latch Part No. 111338-1
(for use with receptacles with recessed cover and strain relief.)



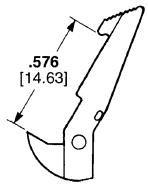
Latch Part No. 111293-1
(for use with receptacles with recessed cover.)

SOURCE: Catalog 82012

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

Latches for Ejection Style Pin Headers and Pinless Headers

Latches



Latch Part No. 102320-1
(without Push Tabs, see Fig. 1)

Latch/Pin Header Applications

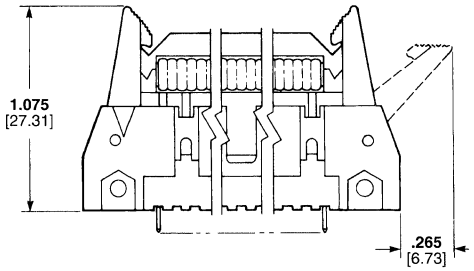
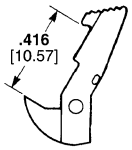


Fig. 1—Use Latch Part No. 102320-1 for AMP Receptacles with Recessed Cover and Strain Relief.



Latch Part No. 102312-1
(without Push Tabs, see Fig. 2)

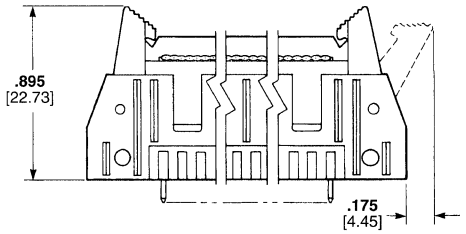


Fig. 2—Use Latch Part No. 102312-1 for AMP Receptacles with Recessed Cover.

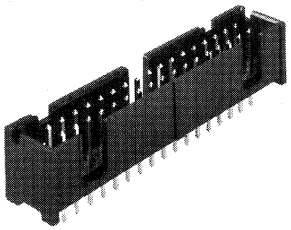
SOURCE: Catalog 82012

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

Low Profile Headers—Shrouded with .150 [3.81] End Dimension

Double Row, .100 x .100 [2.54 x 2.54] Centers

.025 [0.64] Square Straight Post



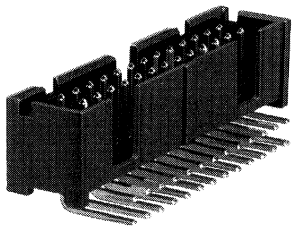
Mates with—Novo Receptacles, Pages 5004 and 5005; Flat Flexible Film Connectors, AMPMODU Wire-Applied Receptacles, AMPMODU MT Connectors with Ejection Covers.

Note: 34 Pos. Housing Dim. (Typ.)—2.000 [50.80] L x .360 [9.14] W x .385 [9.78] H

No. of Pos.	Post Plating/Part No.	
	Duplex[1]	Duplex[2]
10	103308-1	103309-1
14	103308-2	103309-2
16	103308-3	103309-3
20	103308-5	103309-5
26	103308-6	103309-6
34	103308-7	103309-7
40	103308-8	103309-8
44	103308-9	103309-9
50	1-103308-0	1-103309-0
60	1-103308-2	1-103309-2

[1].000015 [0.00038] gold on contact area, .000100-.000200 [0.00254-0.00508] tin-lead on solder area, with entire post underplated .000050 [0.00127] nickel.
[2].000030 [0.00076] gold on contact area, .000100-.000200 [0.00254-0.00508] tin-lead on solder area with entire post underplated .000050 [0.00127] nickel.

.025 [0.64] Square Right-Angle Post



Mates with—Novo Receptacles Pages 5004 and 5005; Flat Flexible Film Connectors, AMPMODU Wire-Applied Receptacles, AMPMODU MT Connectors with Ejection Covers.

Note: 34 Pos. Housing Dim. (Typ.)—2.000 [50.80] L x .360 [9.14] W x .385 [9.78] H

No. of Pos.	Contact Plating	Part No.
10	Duplex[1]	103310-1
	Duplex[2]	103311-1
14	Duplex[1]	103310-2
	Duplex[2]	103311-2
16	Duplex[1]	103310-3
	Duplex[2]	103311-3
20	Duplex[1]	103310-5
	Duplex[2]	103311-5
26	Duplex[1]	103310-6
	Duplex[2]	103311-6
34	Duplex[1]	103310-7
	Duplex[2]	103311-7
40	Duplex[1]	103310-8
	Duplex[2]	103311-8
44	Duplex[1]	103310-9
	Duplex[2]	103311-9
50	Duplex[1]	1-103310-0
	Duplex[2]	1-103311-0
60	Duplex[1]	1-103310-2
	Duplex[2]	1-103311-2

[1].000015 [0.00038] gold on contact area, .000100-.000200 [0.00254-0.00508] tin-lead on solder area, with entire post underplated .000050 [0.00127] nickel.
[2].000030 [0.00076] gold on contact area, .000100-.000200 [0.00254-0.00508] tin-lead on solder area with entire post underplated .000050 [0.00127] nickel.

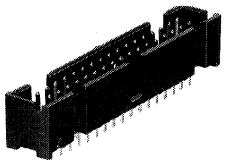
SOURCE: Catalog 82012

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

Low Profile Headers—Shrouded High Temperature Housings, with .150 [3.81] End Dimension

Double Row, .100 x .100 [2.54 x 2.54] Centers

.025 [.0.64] Square Straight Post (with Board Retention Feature)



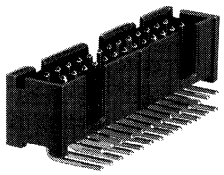
Mates with—Novo Receptacles, Pages 5004 and 5005; Flat Flexible Film Connectors, AMPMODU Wire-Applied Receptacles, and AMPMODU MT Connectors with Ejection Covers.

Note: 26 Pos. Housing Dim. (Typ.)—1.600 [40.64] L x .370 [9.40] W x .385 [9.78] H

No. of Pos.	Contact Plating	Part No.
10	Duplex[1]	104338-1
	Duplex[2]	104339-1
14	Duplex[1]	104338-2
	Duplex[2]	104339-2
16	Duplex[1]	104338-3
	Duplex[2]	104339-3
20	Duplex[1]	104338-4
	Duplex[2]	104339-4
24	Duplex[1]	104338-5
	Duplex[2]	104339-5
26	Duplex[1]	104338-6
	Duplex[2]	104339-6
34	Duplex[1]	104338-7
	Duplex[2]	104339-7
40	Duplex[1]	104338-8
	Duplex[2]	104339-8
50	Duplex[1]	104338-9
	Duplex[2]	104339-9
60	Duplex[1]	1-104338-0
	Duplex[2]	1-104339-0

[1].000015 [0.00038] gold on contact area, .000100-.000200 [0.00254-0.00508] tin-lead on solder area, with entire post underplated .000050 [0.00127] nickel.
[2].000030 [0.00076] gold on contact area, .000100-.000200 [0.00254-0.00508] tin-lead on solder area, with entire post underplated .000050 [0.00127] nickel.

.025 [0.64] Square Right-Angle Post (with Board Retention Feature)



Mates with—Novo Receptacles, Pages 5004 and 5005; Flat Flexible Film Connectors, AMPMODU Wire-Applied Receptacles, and AMPMODU MT Connectors with Ejection Covers.

Note: 26 Pos. Housing Dim. (Typ.)—1.600 [40.64] L x .370 [9.40] W x .385 [9.78] H

No. of Pos.	Contact Plating	Part No.
10	Duplex[1]	104340-1
	Duplex[2]	104341-1
14	Duplex[1]	104340-2
	Duplex[2]	104341-2
16	Duplex[1]	104340-3
	Duplex[2]	104341-3
20	Duplex[1]	104340-4
	Duplex[2]	104341-4
24	Duplex[1]	104340-5
	Duplex[2]	104341-5
26	Duplex[1]	104340-6
	Duplex[2]	104341-6
34	Duplex[1]	104340-7
	Duplex[2]	104341-7
40	Duplex[1]	104340-8
	Duplex[2]	104341-8
50	Duplex[1]	104340-9
	Duplex[2]	104341-9
60	Duplex[1]	1-104340-0
	Duplex[2]	1-104341-0

[1].000015 [0.00038] gold on contact area, .000100-.000200 [0.00254-0.00508] tin-lead on solder area, with entire post underplated .000050 [0.00127] nickel.
[2].000030 [0.00076] gold on contact area, .000100-.000200 [0.00254-0.00508] tin-lead on solder area, with entire post underplated .000050 [0.00127] nickel.

SOURCE: Catalog 82012

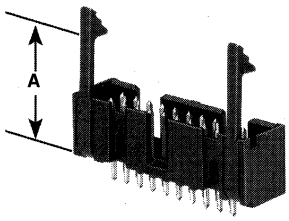
Specifications subject to change.
1-800-522-6752 Product Information Center/ AMP FAX Service
1-800-722-1111 Tooling/Technical Assistance Center

Low Profile Headers—Shrouded with Ejection Latches and .150 [3.81] End Dimension

Double Row, .100 x .100 [2.54 x 2.54] Centers

.025 [0.64] Square Straight Post

Mates with—Novo Receptacles, Pages 5004 and 5005; Flat Flexible Film Connectors, AMPMODU Wire-Applied Receptacles, and AMPMODU MT Connectors with Ejection Covers.



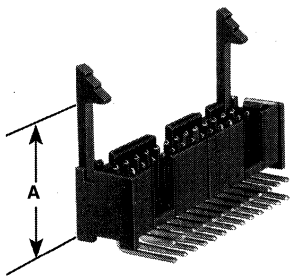
Note: 34 Pos. Housing Dim. (Typ.)—2.000 [50.80] L x .360 [9.14] W x .385 [9.78] H

No. of Pos.	Latching Height A	Part No. Duplex[1]
10	**.585** [14.9]	104128-1
	.435 [11.0]	104313-1
14	**.585** [14.9]	104128-2
	.435 [11.0]	104313-2
16	**.585** [14.9]	104128-3
	.435 [11.0]	104313-3
20	**.585** [14.9]	104128-4
	.435 [11.0]	104313-4
26	**.585** [14.9]	104128-5
	.435 [11.0]	104313-5
34	**.585** [14.9]	104128-6
	.435 [11.0]	104313-6
40	**.585** [14.9]	104128-7
	.435 [11.0]	104313-7
44	**.585** [14.9]	104128-8
	.435 [11.0]	104313-8
50	**.585** [14.9]	104128-9
	.435 [11.0]	104313-9
60	**.585** [14.9]	1-104128-0
	.435 [11.0]	1-104313-0

[1].000030 [0.00076] gold on contact area.

.025 [0.64] Square Right-Angle Post

Mates with—Novo Receptacles, Pages 5004 and 5005; Flat Flexible Film Connectors, AMPMODU Wire-Applied Receptacles, and AMPMODU MT Connectors with Ejection Covers.



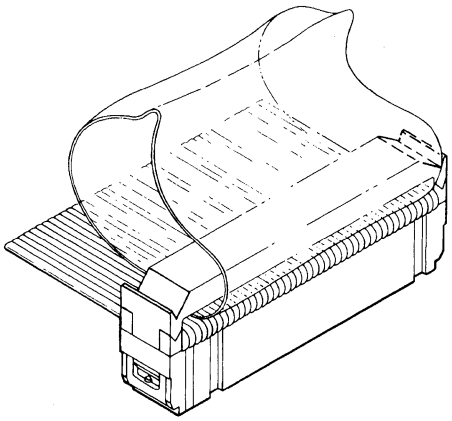
Note: 34 Pos. Housing Dim. (Typ.)—2.000 [50.80] L x .360 [9.14] W x .385 [9.78] H

No. of Pos.	Latching Height A	Part No. Duplex[1]
10	**.585** [14.9]	104130-1
	.435 [11.0]	104315-1
14	**.585** [14.9]	104130-2
	.435 [11.0]	104315-2
16	**.585** [14.9]	104130-3
	.435 [11.0]	104315-3
20	**.585** [14.9]	104130-4
	.435 [11.0]	104315-4
26	**.585** [14.9]	104130-5
	.435 [11.0]	104315-5
34	**.585** [14.9]	104130-6
	.435 [11.0]	104315-6
40	**.585** [14.9]	104130-7
	.435 [11.0]	104315-7
44	**.585** [14.9]	104130-8
	.435 [11.0]	104315-8
50	**.585** [14.9]	104130-9
	.435 [11.0]	104315-9
60	**.585** [14.9]	1-104130-0
	.435 [11.0]	1-104315-0

[1].000030 [0.00076] gold on contact area.

Accessories

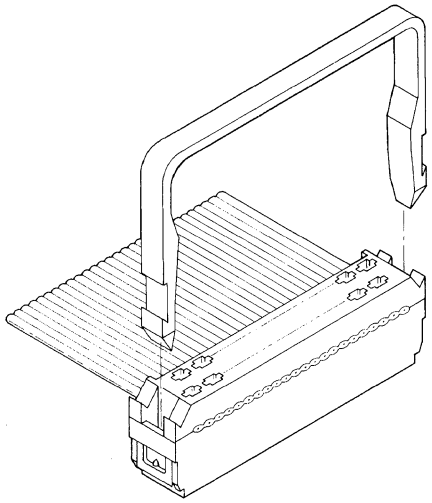
Pull Tabs, Permanent (for Receptacles and Pin Connectors)



No. of Pos.	Pull Tab Part No.
—	88450-1*
10	88450-2
14	88450-3
16	88450-4
20	88450-5
24	88450-6
26	88450-7
30	1-88450-2
34	88450-8
40	88450-9
50	1-88450-0
60	1-88450-1

***120 [3048] L; cut to desired length.**
Notes: 1. This pull tab is installed manually between the cover and strain relief.
2. Use with Novo Receptacles, Pages 5004 and 5005; and Universal I/O Pin Connectors, Pages 5008 and 5009.

Pull Tabs, Snap-In (for Receptacles without Strain Relief)

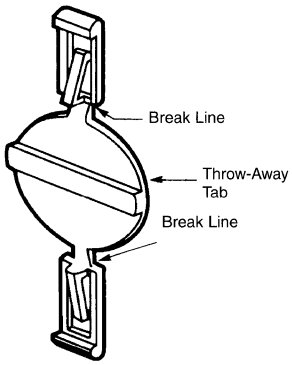


No. of Pos.	Pull Tab Part No.
10	746601-1
14	746601-2
16	746601-3
20	746601-4
24	746601-5
26	746601-6
30	746601-7
34	746601-8
40	746601-9
44	1-746601-0
50	1-746601-1
60	1-746601-2
64	1-746601-3

Note: Use with Novo Receptacles, Pages 5004 and 5005.

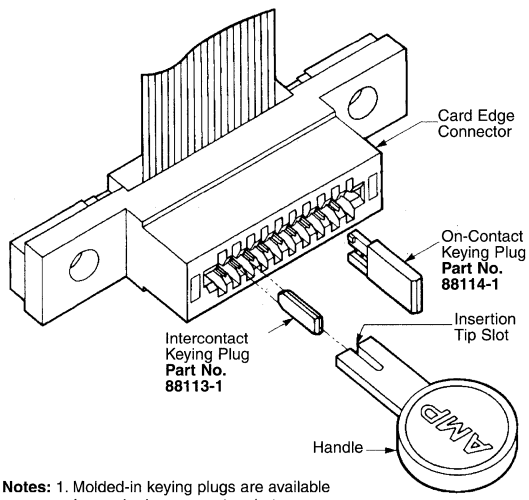
Polarizer, Snap-In (for Pin Connectors, Universal Pin and Pinless Headers and Low Profile Pin Headers)

Part Nos.:
499991-2 (packaged 50 per bag)
499991-3 (packaged 1,000 per box)



The snap-in polarizer provides military polarization for Pin Connectors (without detent windows), Pages 5008 and 5009; Universal Pin and Pinless Headers, Pages 5010-5013; and Low Profile Pin Headers, Pages 5014-5016.

Keying Plug (for Card Edge Connectors)



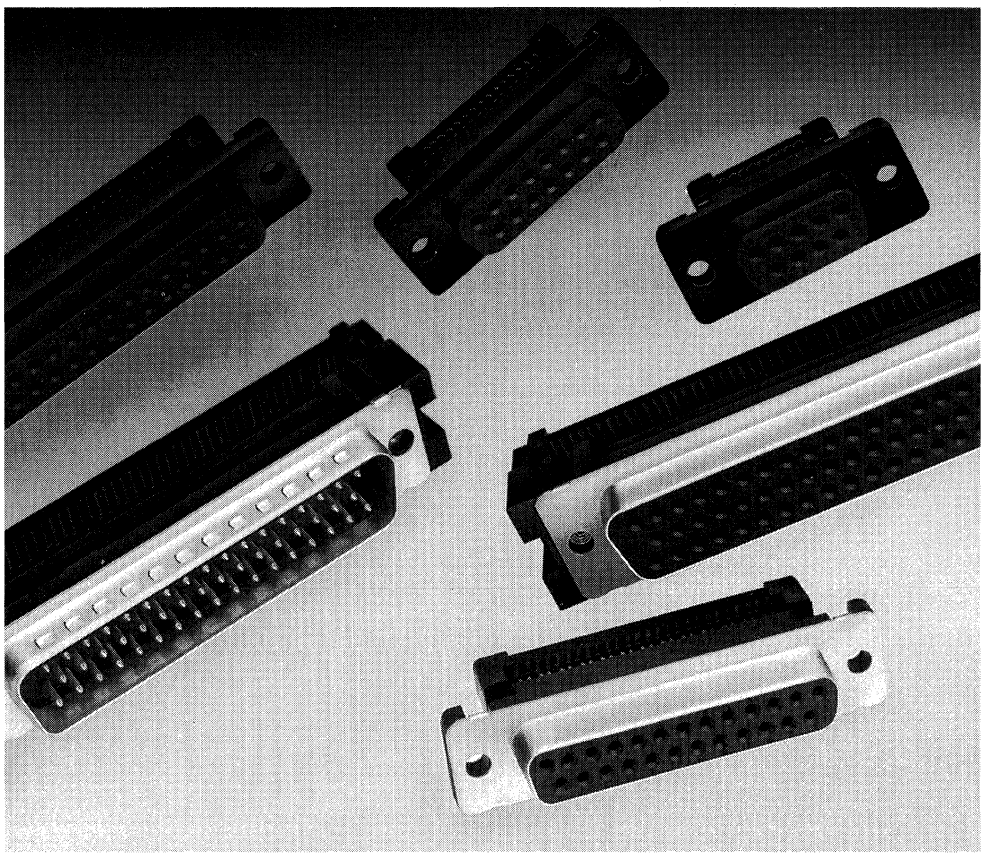
Notes: 1. Molded-in keying plugs are available for card edge connectors between position 3, 4, and 5, 6. Consult AMP.
2. Use with Card Edge Connectors, Pages 5006.

Insertion Tool Part No. 91233-1

SOURCE: Catalog 82012

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

Subminiature D HDF-20 IDC Mass Termination Connectors (for Round Conduction Flat Ribbon Cable, .050 [1.27] Conductor Centers)

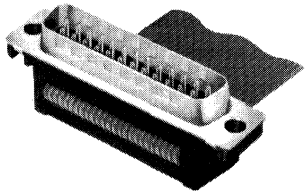


Product Facts

- Available in all 5 standard shell sizes
- Selection of through holes, 4-40 threaded inserts or 4-40 threaded self-locking inserts
- Option of 90° or 180° cable exit
- Low terminated height from the mounting flange to the back of the connector
- Visual inspection of termination possible
- Fluted cover provides positive alignment of cable prior to termination
- Wide range of application tooling—from portable hand tool to bench mounted pneumatic semiautomatic equipment
- Patented insulation displacement contact latches into the connector cover
- Contact design provides a "gastight" termination
- Contacts accept 28 AWG [0.08 mm²] solid and stranded, and 26 AWG [0.15 mm²] solid and stranded round conductor flat ribbon cable on .050 [1.27] centers
- Qualified to Battelle Level III environments
- Contacts are duplex plated with gold on the mating end and tin-lead on the termination end
- Recognized under the Component Program of Underwriters Laboratories Inc., File No. E28476
- Listed under Underwriters Laboratories Inc., Standard 1863, Communication Circuit Accessories, File No. E81956
- Certified by Canadian Standards Association, File No. LR 7189

SOURCE: Catalog 82068

Subminature D HDF-20 Low Profile Metal-Shell Connectors (for Round Conductor Flat Ribbon Cable, .050 [1.27] Conductor Centers)



Note: 15 Pos. Housing Dim. (Typ.)—1.541 [39.14] L x .496 [12.6] W x .559 [14.20] H

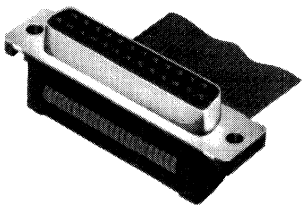
Plug Assemblies (with Grounding Indents)

Mates with—HDF-20 Metal-Shell Receptacles; Connector Savers, Plug/Receptacle Adapters, and Ribbon Cable.

No. of Contact Pos. (Shell Size)	Optional Cable Stabilizer Part No.	Plug Assembly Part No.	
		With Standard Mounting Holes	With Threaded Inserts (Std.)
9 (1)	747275-4	747306-4	747043-4
15 (2)	747275-3	747306-3	747043-3
25 (3)	747275-2	747306-2	747043-2
37 (4)	747275-1	747306-1	747043-1

Notes: 1. All plug assemblies are supplied with housing and cover preassembled; optional cable stabilizer is purchased separately.
2. RFI Gaskets are available for use with HDF-20 Metal-Shell Connectors.

Receptacle Assemblies



Mates with—HDF-20 Metal-Shell Plugs; Connector Savers, Plug/Receptacle Adapters, and Ribbon Cable.

Note: 19 Pos. Housing Dim. (Typ.)—1.764 [44.81] L x .496 [12.6] W x .553 [14.04] H

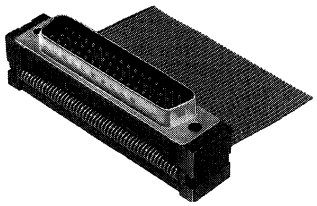
No. of Contact Pos. (Shell Size)	Optional Cable Stabilizer Part No.	Receptacle Assembly Part No.	
		With Standard Mounting Holes	With Threaded Inserts (Std.)
9 (1)	747275-4	747303-4	747052-4
15 (2)	747275-3	747303-3	747052-3
19*	747275-5	747303-5	747052-5
25 (3)	747275-2	747303-2	747052-2
37 (4)	747275-1	747303-1	747052-1

*19 position receptacle assemblies are special connectors.
Notes: 1. All receptacle assemblies are supplied with housing and cover preassembled; optional cable stabilizer is purchased separately.
2. RFI Gaskets are available for use with HDF-20 Metal-Shell Connectors.

50-Position Plug Assembly

Mates with—HDF-20 Metal-Shell Receptacles; Ribbon Cable.

Note: RFI gaskets available.



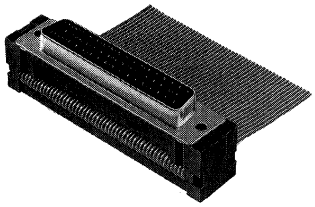
Housing and Covers are Preassembled; Cable Stabilizer is Separate.
Part No. 746790-1
Optional Cable Stabilizer
Part No. 746785-1

Note: 50 Pos. Housing Dim. (Typ.)—2.920 [74.17] L x .606 [15.39] W x .737 [18.72] H

50-Position Receptacle Assembly

Mates with—HDF-20 Metal-Shell Plugs; and Ribbon Cable.

Note: RFI gaskets available.



Housing and Covers are Preassembled; Cable Stabilizer is Separate.
Part No. 746789-1
Optional Cable Stabilizer
Part No. 746785-1

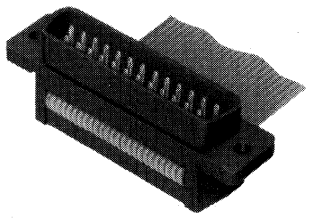
Note: 50 Pos. Housing Dim. (Typ.)—2.920 [74.17] L x .606 [15.39] W x .744 [18.90] H

SOURCE: Catalog 82012

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

Subminiature D HDF-20 Low Profile All-Plastic Connectors (for Round Conductor Flat Ribbon Cable)

Plug Assemblies



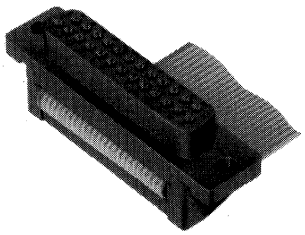
Mates with—HDF-20 Low Profile All-Plastic Receptacle; Connector Saver, Plug /Receptacle Adapter; and Ribbon Cable.

Note: 25 Pos. Housing Dim. (Typ.)—2.090 [53.09] L x .496 [12.6] W x .563 [14.30] H

No. of Contact Pos. (Shell Size)	Optional Cable Stabilizer Part No.	Plug Assembly Part No.	
		With Standard Mounting Holes	With Threaded Inserts (Std.)
9 (1)	747275-4	747321-4	747053-4
15 (2)	747275-3	747321-3	747053-3
25 (3)	747275-2	747321-2	747053-2
37 (4)	747275-1	747321-1	747053-1

Note: 1. All plug assemblies are supplied with housing and cover preassembled; optional cable stabilizer is purchased separately.
2. See Pages 5021 and 5022 for additional accessories and hardware.

Receptacle Assemblies



Mates with—HDF-20 Low Profile All-Plastic Plug; Connector Saver, Plug/Receptacle Adapter, and Ribbon Cable.

Note: 25 Pos. Housing Dim. (Typ.)—2.090 [53.09] L x .496 [12.6] W x .563 [14.30] H

No. of Contact Pos. (Shell Size)	Optional Cable Stabilizer Part No.	Receptacle Assembly Part No.
		With Standard Mounting Holes
9 (1)	747275-4	747318-4
15 (2)	747275-3	747318-3
25 (3)	747275-2	747318-2
37 (4)	747275-1	747318-1

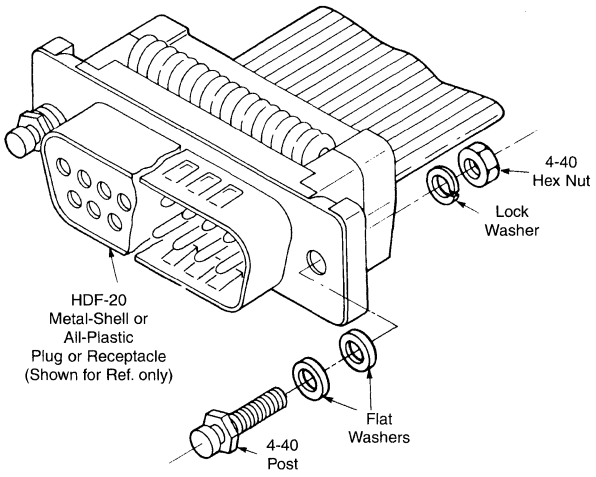
Notes:1. All plug assemblies are supplied with housing and cover preassembled; optional cable stabilizer is purchased separately.
2. See Pages 5021 and 5022 for additional accessories and hardware.

Specifications subject to change.
1-800-522-6752 Product Information Center/ AMP FAX Service
1-800-722-1111 Tooling/Technical Assistance Center

Subminiature D HDF-20 Connector Hardware

4-40 Locking Post Assemblies (for HDF-20 Metal-Shell and All-Plastic Connectors)

Mates with—Slide Latch Assemblies

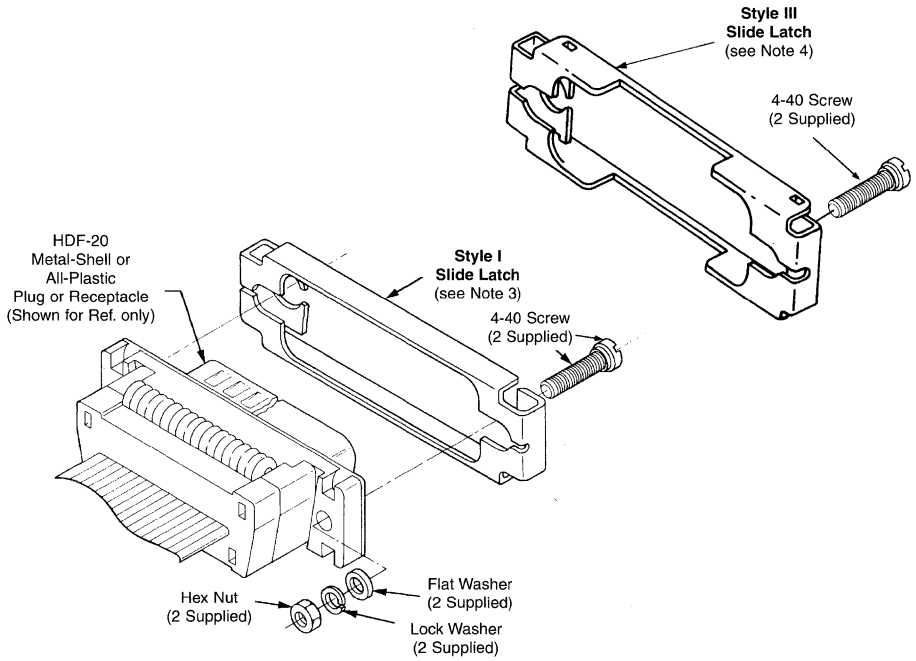


Thread Size	Locking Post Length	Locking Post Assembly Kit No.	
		Individual	Bulk Packed*
4-40	**.410** [10.41]	206514-1	206514-3
	.506 [14.22]	206514-6	206514-7

*Each part is individually bulk packed for multiple kit orders.
Notes: 1. All parts are packaged unassembled.
2. Each kit is comprised of two assemblies.

Slide Latch Assemblies (for HDF-20 Metal-Shell and All-Plastic Connectors)

Mates with—4-40 Locking Post Assemblies



Note: 25 Pos. Latch Dim. (Typ.)—2.265 [57.53] L x .160 [4.06] W x .468 [11.89] H

Shell Size (No. of Contact Pos.)	Style	Slide Latch Assembly Kit No.	
		Individual	Bulk Packed*
1 (9)	I	745404-1	745404-2
2 (15)	III	745583-5	745583-6
3 (25)	III	745584-3	745584-4
4 (37)	I	745407-1	745407-2
5 (50)	III	745578-3	745578-4

*Each part is individually bulk packed for multiple kit orders.
Notes: 1. All parts are packaged unassembled.
2. Each kit is comprised of a slide latch and two screws, flat washers, lock washers and key nuts.
3. Style I Slide Latch assemblies cannot be used with cable clamp bodies that extend beyond the front flange of the connector.
4. Style III Slide Latch assemblies can be used on connectors with or without cable clamps.

SOURCE: Catalog 82012

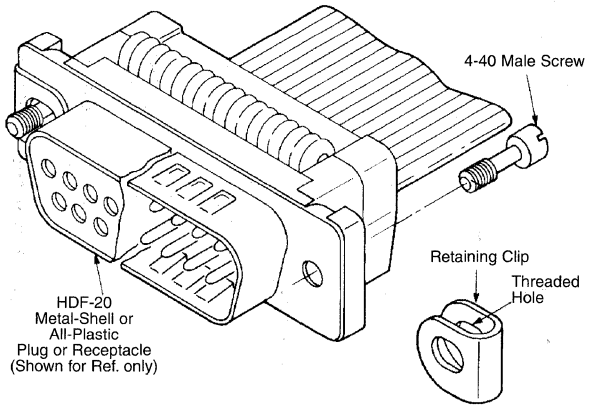
Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

Subminiature D HDF-20 Connector Hardware
(Continued)

Male Screw Retainers (for HDF-20 Metal-Shell and All-Plastic Connectors)

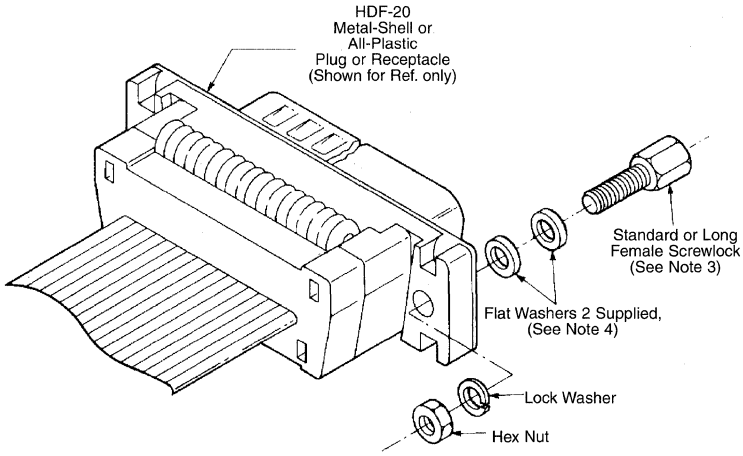
Kit No.:
746881-1
(two assemblies per package)
746881-2
(bulk packed)*

*Each part is individually bulk packed for multiple kit orders.



Notes: 1. All parts are packaged unassembled.
2. Each kit is comprised of two male screws and two retaining clips.
3. Retaining clips must be assembled onto connector flanges with threaded hole toward ribbon cable side of connector.

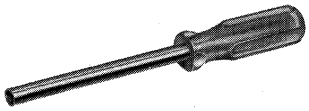
Female Screwlocks (for HDF-20 Metal-Shell and All-Plastic Connectors)



Thread Size	Finish	Kit No.			
		Standard Female Screwlock		Long Female Screwlock	
		Individual	Bulk Packed*	Individual	Bulk Packed*
4-40	Yellow Chromate	205817-1	205817-2	—	—
	Clear Chromate	205817-3	205817-4	—	—
M3 (Metric)	Yellow Chromate	207872-1	207872-2	—	—
	Clear Chromate	207872-3	207872-4	—	—
4-40	Yellow Chromate	—	—	207719-1	207719-2
	Clear Chromate	—	—	207719-3	207719-4
2-56 (See Note 4)	Clear Chromate	—	—	747223-3	747226-4

*Each part is individually bulk packed for multiple kit orders.

Notes: 1. All parts are packaged unassembled.
2. Each kit is comprised of two female screwlocks, lock washers, hex nuts and four flat washers.
3. Female screwlocks are not recommended for panel thicknesses greater than .060 [1.52].
4. One or two flat washers may be required for panel thicknesses less than .060 [1.52].
5. 2-56 is the male thread size. The female thread size is 4-40.



Nut Driver, Part No. 811262-1
(for assembling female screwlocks to connector flange)

SOURCE: Catalog 82012

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

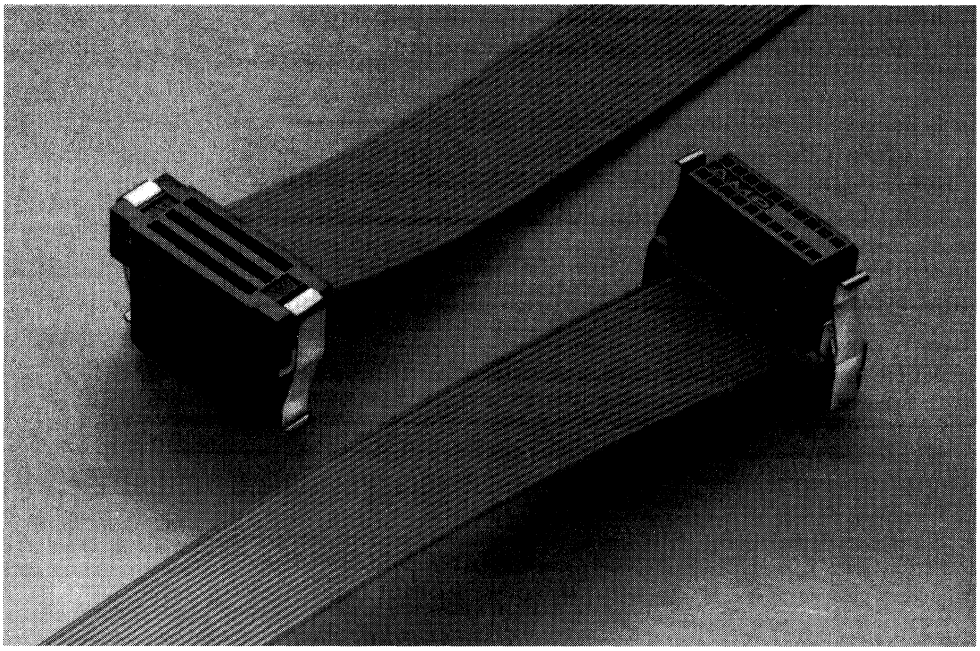
AMP-LATCH System 50 Receptacle Connectors, .025 [0.64] Centerline Ribbon Cable

Cable-to-Board

Product Facts

- **Preassembled housing and cover**
- **One-step termination**
- **End and daisy chain termination**
- **Positive end latching of connector to universal header**
- **Terminates 30 AWG [0.05 mm²] solid and 32 AWG [0.03 mm²]* stranded .025 [0.64] centerline ribbon cable**
- **0.5 ampere current rating (limited by cable)**

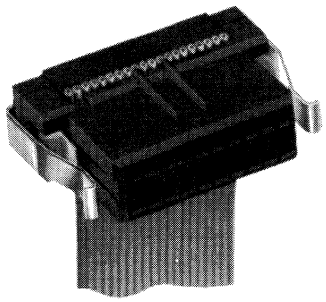
*Consult AMP for recommendations when using 32 AWG [0.03 mm²] stranded cable.



The AMP-LATCH System 50 Ribbon Cable connector is a receptacle connector that will terminate ribbon cable on .025 [0.64] centerlines. It is available in select sizes from 20 to 100 positions and will accommodate 30 AWG [0.05 mm²] solid and 32 AWG [0.03 mm²]* stranded conductors, and both TEFLON and PVC cable insulations.

The housing and cover are of a high temperature tolerant thermoplastic (black) with a 94V-0 rating. A beryllium copper single mating beam contact provides the interconnect between the conductor and the .015 [0.38] square posts on the .050 x .100 [1.27 x 2.54] grid. The contacts are duplex plated with .000030 [0.00076] gold. The latching feature is located on the receptacle, not the header, and saves board space and eliminates future problems of "latch height compatibility."

Double Row Receptacles



Mates with—.015 [0.38] square posts on .050 x .100 [1.27 x 2.54] grid

Note: 50 Pos. Housing Dim. (Typ.)—1.510 [38.35] L x .254 [6.45] W x .580 [14.73] H

No. of Pos.	Part No.*
20	111196-4
24	111196-5
30	111196-7
40	111196-9
44	1-111196-0
50	1-111196-1
60	1-111196-2
68	1-111196-7
80	1-111196-5
100	1-111196-6

*CSA certification pending

SOURCE: Catalog 82012

Specifications subject to change.

1-800-522-6752
Product Information Center/ AMP FAX Service

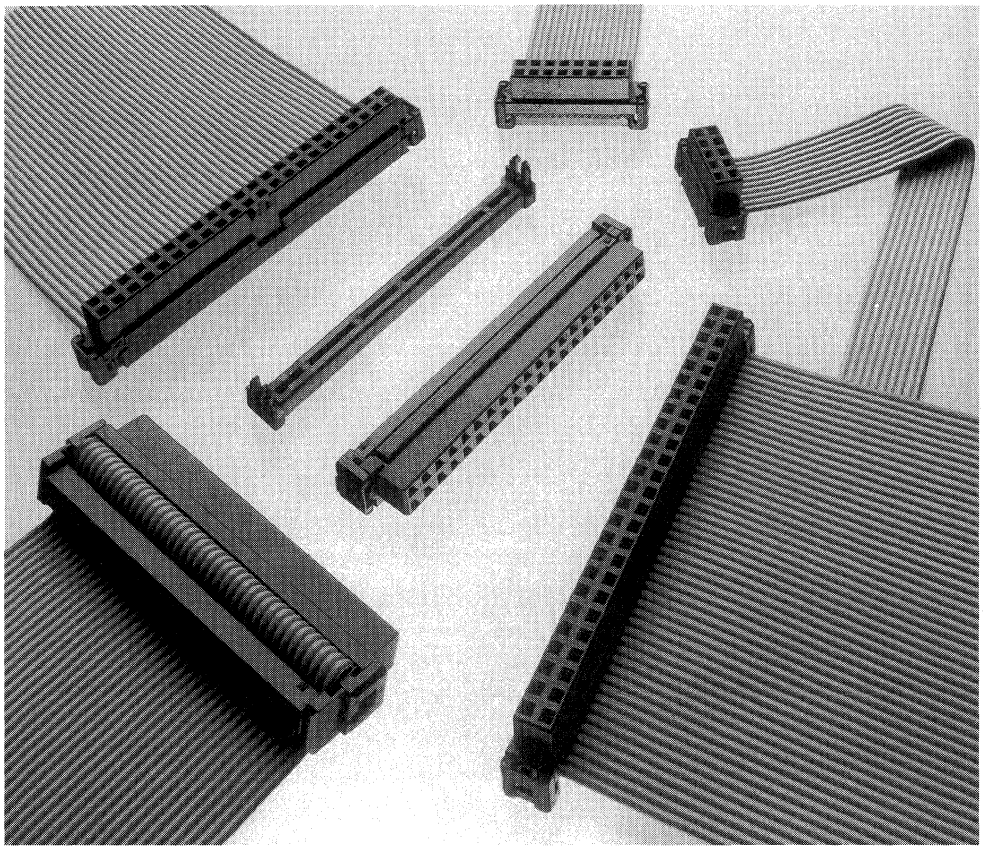
1-800-722-1111
Tooling/Technical Assistance Center

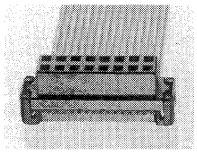
METRIC

2.0 mm [.079] Ribbon Cable Receptacle Connectors (AMP-LATCH)

Product Facts

- True hard metric 2.0 x 2.0 [.079 x .079] mating grid for 1.0 [.039] pitch ribbon cable
- Wide selection of configurations, 8–50 positions
- Insulation displacement contacts (IDC), beryllium copper duplex plated gold-over-nickel
- Top/bottom single beam contact orientation
- UL 94V-0 rated thermoplastic components
- Assemblies are furnished pre-assembled with termination covers
- Optional polarization
- Optional strain relief available
- Connector assemblies packaged for ease of handling and protection
- Recognized under the Component Program of Underwriters Laboratories Inc., File No. E28476
- Certified by Canadian Standards Association, File No. LR7189

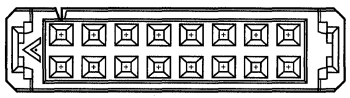




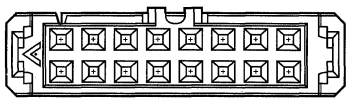
Note: Accepts 0.08-0.09 mm² [28 AWG] ribbon cable, 0.61-0.97 [.024-.038] thick PVC, 1.00 [.039] pitch.

Mates with—2.0 mm [.079] headers (AMPMODU), Catalog 82771. Accepts 0.50 [.0197] round or square posts.

Non-Polarized



Polarized



Note: 16 Pos. Housing Dim. (Typ.)—21.18 [.834] L x 5.16 [.203] W x 8.48 [.334] H (Terminated)

No. of Positions	Part Numbers						
	Left-Hand Cable Stop		Right-Hand Cable Stop		Feed-Thru Cover		Strain Relief
	Polarized	Non-Polarized	Polarized	Non-Polarized	Polarized	Non-Polarized	
8	1-111621-6	1-111624-6	1-111622-6	1-111625-6	1-111623-6	1-111626-6	1-111614-6
10	111621-1	111624-1	111622-1	111625-1	111623-1	111626-1	111614-1
12	—	—	—	—	1-111623-7	—	1-111614-7
14	111621-2	111624-2	111622-2	111625-2	111623-2	111626-2	111614-2
16	111621-3	111624-3	111622-3	111625-3	111623-3	111626-3	111614-3
20	111621-4	111624-4	111622-4	111625-4	111623-4	111626-4	111614-4
22	1-111621-5	1-111624-5	1-111622-5	1-111625-5	1-111623-5	1-111626-5	1-111614-5
24	111621-5	111624-5	111622-5	111625-5	111623-5	111626-5	111614-5
26	111621-6	111624-6	111622-6	111625-6	111623-6	111626-6	111614-6
30	111621-7	111624-7	111622-7	111625-7	111623-7	111626-7	111614-7
34	111621-8	111624-8	111622-8	111625-8	111623-8	111626-8	111614-8
40	111621-9	111624-9	111622-9	111625-9	111623-9	111626-9	111614-9
44	1-111621-0	1-111624-0	1-111622-0	1-111625-0	1-111623-0	1-111626-0	1-111614-0
50	1-111621-1	1-111624-1	1-111622-1	1-111625-1	1-111623-1	1-111626-1	1-111614-1

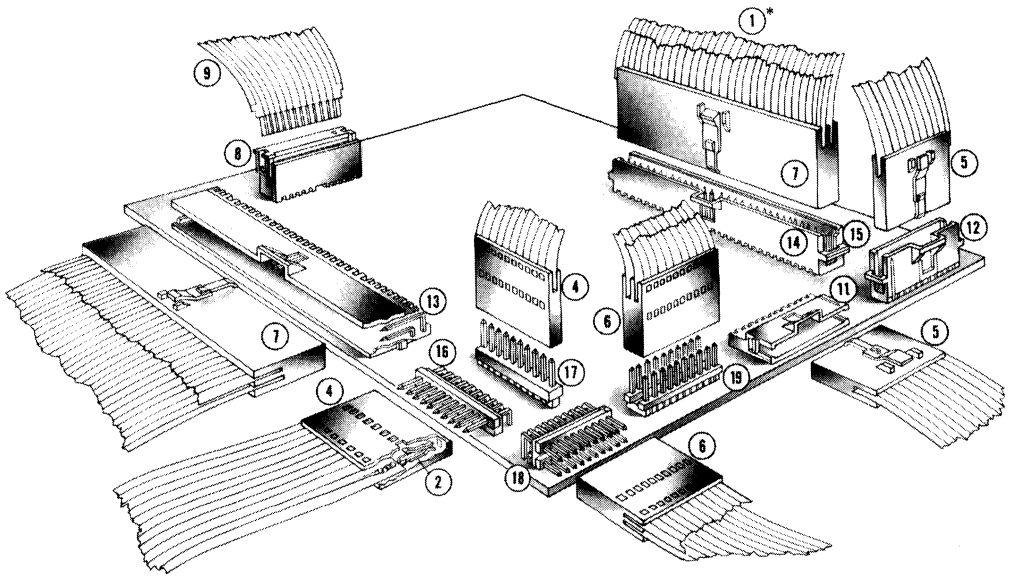
SOURCE: Catalog 65213

Flexible Film Products

.050 [1.27] Centerline Products

Approvals

- **Connectors Recognized under the Component Program of Underwriters Laboratories Inc., File No. E28476**
- **Flexible Flat Conductor Cable Recognized under the Component Program of Underwriters Laboratories Inc., File No. E53793 per UL Styles 2690 and 2742 (300 volts)**
- **Connectors Certified by Canadian Standards Association, File No. LR 7189A-91**
- **Flexible Flat Conductor Cable Certified by Canadian Standards Association, File No. LL 83498-2**
- **Cable Assemblies Certified by Canadian Standards Association, File No. LR 45924-5**



[2]Contact AMP for additional information.

***Unless otherwise indicated, typical of all FFC cable shown.**

1. Flexible Flat Conductor Cable Base Part No. 499795, Page 5026
2. MTF Receptacle Contact Base Part No. 487547, Page 5027
4. Single Row Receptacle Housing—Plain Base Part No. 487544, Page 5028
5. Single Row Receptacle Housing—Latch Base Part No. 487545, Page 5028
6. Double Row Receptacle Housing—Plain Base Part No. 487938, Page 5029
7. Double Row Receptacle Housing—Latch Base Part No. 487937, Page 5029
8. ZIF-Line Connector Base Part No. 487576, Page 5029
9. FFC Cable with Tin-Plated Prepared Ends[2], Page 5026
11. Header—Shrouded Single Row, Right-Angle, Page 3162
12. Header—Shrouded Single Row, Vertical, Page 3162
13. Header—Shrouded Double Row, Right-Angle, Page 3162
14. Header—Shrouded Double Row Vertical, Page 3163
15. Header—Shrouded Double Row Vertical Surface Mount Base Part No. 104059[2]
16. Header—Unshrouded Single Row Right-Angle, Page 3163
17. Header—Unshrouded Single Row, Vertical, Page 3163
18. Header—Unshrouded Double Row, Right-Angle, Page 3164
19. Header—Unshrouded Double Row, Vertical, Page 3164

SOURCE: Catalog 82007

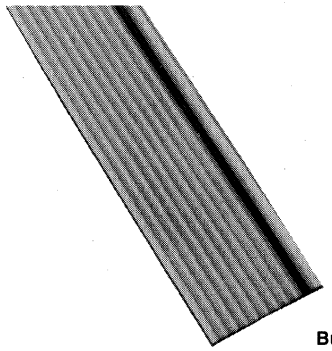
Specifications subject to change.

1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

.050 [1.27] Centerline Flexible Flat Conductor Cable

.026 [0.66] Wide x .003 [0.08] Thick Conductors



Bulk Cable

Related Product Data

Termination Capabilities

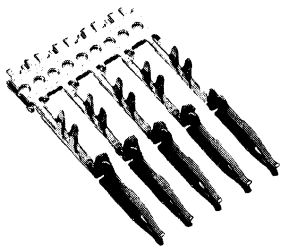
MTF Contact—Page 5027

Preloaded Housings—Page 5028

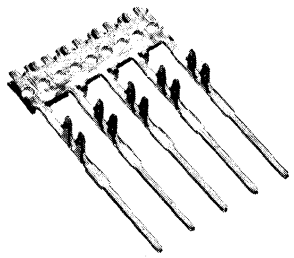
Cable Size (No. of Conductors)	Part Number 500 ft. [152.4 m]/Reel
4	3-499795-0
5	1-499795-9
6	2-499795-7
7	2-499795-5
8	2-499795-8
9	2-499795-9
10	499795-1
11	499795-2
12	499795-3
13	499795-4
14	499795-5
15	499795-6
17	499795-8
20	1-499795-1
22	1-499795-3
24	1-499795-5
25	1-499795-6
26	2-499795-6
30	2-499795-0
35	2-499795-1
36	1-499795-8
40	2-499795-2
45	2-499795-3
50	2-499795-4
55	3-499795-1

Note: Other cable sizes can be made available, consult AMP.

.050 [1.27] Centerline MTF Contact Combs (for Mass Termination)



Receptacle Strip



Solder Tab Strip

Related Product Data

FFC Cable—Page 5026

Note: Receptacle accepts .015 [0.38] Sq. Post, .125-.350 [3.18-8.89] Long

Type	Contacts		Application Tooling
	Configuration	Duplex	
Receptacle	Strip	487547-1[1]	768600-6
Solder Tab	Strip	487923-1[2]	768600-6
	Strip	487923-3[3]	768600-6
	Strip	487940-3[2]	768600-6

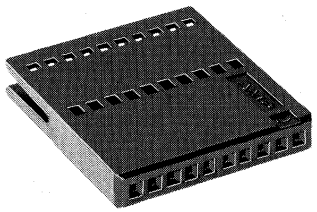
[1]Duplex plated .000030 [0.00076] gold on mating area, .000100 [0.00254] min. bright tin-lead in crimp area, with entire contact underplated .000050 [0.00127] min. nickel.
[2]Plated .000100 [0.00254] min. tin-lead over .000050 [0.00127] min. nickel.
[3]Duplex plated .000015 [0.00038] gold on solder tab end, .000100 [0.00254] min. bright tin-lead in crimp area, with entire contact underplated .000050 [0.00127] min. nickel.

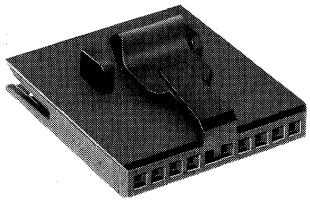
SOURCE: Catalog 82007

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

.050 [1.27] Centerline Single Row Receptacle Housings—Unloaded

Mates with—Unshrouded and Shrouded Right-Angle and Vertical Thru-hole Headers.





Note: 15 Pos. Plain Housing Dim. (Typ.)—.794 [20.17] L x .585 [14.86] W x .098 [2.49] H

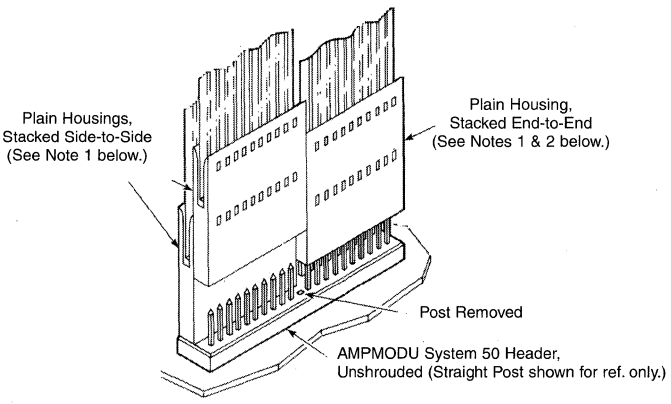
No. of Positions	Part Numbers	
	Plain Receptacle Housing	Latch Style Receptacle Housing
4	487544-1	487545-1
5	487544-2	487545-2
6	487544-3	487545-3
7	487544-4	487545-4
8	487544-5	487545-5
10	487544-7	487545-7
12	487544-9	487545-9
13	1-487544-0	1-487545-0
15	1-487544-2	1-487545-2
17	1-487544-4	1-487545-4
20	1-487544-7	1-487545-7
22	1-487544-9	1-487545-9
25	2-487544-2	2-487545-2
30	2-487544-7	2-487545-7
36	3-487544-3	3-487545-3
40	3-487544-7	3-487545-7
45	4-487544-2	4-487545-2

Note: Other sizes of receptacle housings (plain and latch style) can be made available, consult AMP.

Related Product Data

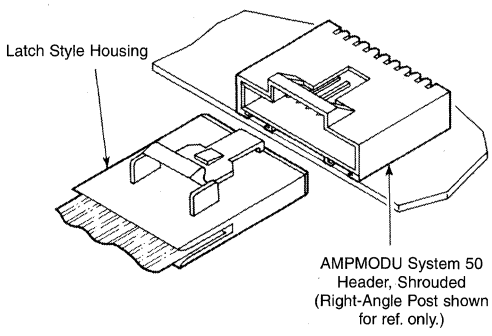
FFC Cable—Page 5026

Receptacle Contacts—Page 5027



Notes: 1. Plain housings are side-to-side stackable on either straight or right-angle posted, unshrouded AMPMODU System 50 headers.
2. For end-to-end stacking, the posts located between the adjoining housings must be removed to provide housing end clearance.

Typical Cable-to-Board Application of Plain Receptacle Housing



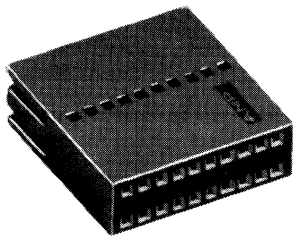
Typical Cable-to-Board Application of Latch Style Receptacle Housing

SOURCE: Catalog 82007

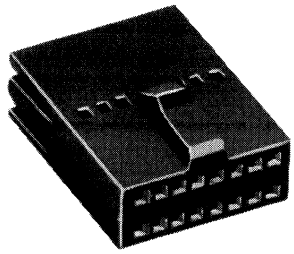
Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

.050 [1.27] Centerline Double Row Receptacle Housings

Plain Style Housings



Latch Style Housings



Mates with—Unshrouded and Shrouded Right-Angle and Vertical, Thru-hole Headers.

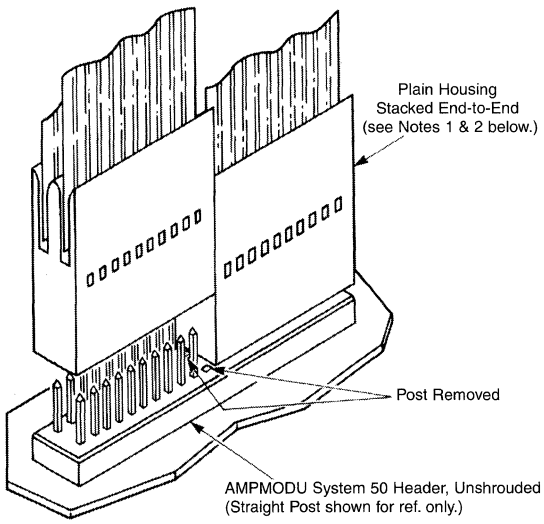
Note: 20 Pos. Plain Housing Dim. (Typ.)—.547 [13.89] L x .585 [14.86] W x .198 [5.03] H

No. of Positions	Part Numbers	
	Plain Housing	Latch Style Housing
8	487938-8	487937-8
10	1-487938-0	1-487937-0
12	1-487938-2	1-487937-2
14	1-487938-4	1-487937-4
16	1-487938-6	1-487937-6
20	2-487938-0	2-487937-0
24	2-487938-4	2-487937-4
26	2-487938-6	2-487937-6
30	3-487938-0	3-487937-0
34	3-487938-4	3-487937-4
40	4-487938-0	4-487937-0
44	4-487938-4	4-487937-4
50	5-487938-0	5-487937-0
60	6-487938-0	6-487937-0
72	7-487938-2	7-487937-2
80	8-487938-0	8-487937-0
100	487938-1	487937-1

Note: Other sizes of receptacle housings, up to 120 positions, can be made available, consult AMP.

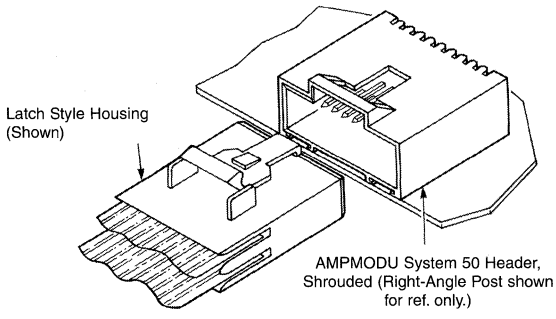
Related Product Data

FFC Cable—Page 5026
Receptacle Contacts—Page 5027



Notes: 1. Plain housings are end-to-end stackable on either straight or right-angle posted, unshrouded AMPMODU System 50 headers.
2. For end-to-end stacking, the two posts located between the adjoining housings must be removed to provide housing end clearance.

Typical Cable-to-Board Application of Plain Receptacle Housing



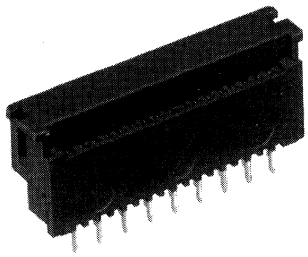
Typical Cable-to-Board Application of Latch Style Receptacle Housing

SOURCE: Catalog 82007

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

.050 [1.27] Centerline ZIF-Line Connectors

Vertical Cable Entry



Note: 25 Pos. Housing Dim. (Typ.)—1.470 [37.34] L x .240 [6.10] W x .310 [7.87] H

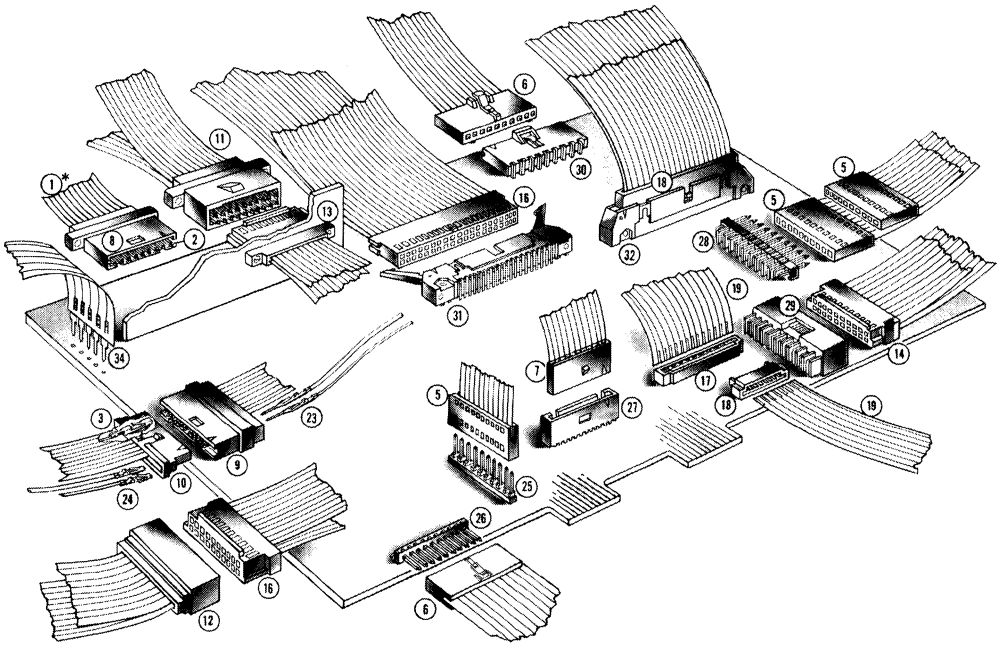
No. of Positions	Part Number	No. of Positions	Part Number
5	5-487576-0	31	2-487576-3
6	5-487576-1	32	2-487576-4
7	4-487576-8	33	2-487576-5
8	4-487576-9	34	2-487576-6
9	487576-1	35	2-487576-7
10	487576-2	36	2-487576-8
11	487576-3	37	2-487576-9
12	487576-4	38	3-487576-0
13	487576-5	39	3-487576-1
14	487576-6	40	3-487576-2
15	487576-7	41	3-487576-3
16	487576-8	42	3-487576-4
17	487576-9	43	3-487576-5
18	1-487576-0	44	3-487576-6
19	1-487576-1	45	3-487576-7
20	1-487576-2	46	3-487576-8
21	1-487576-3	47	3-487576-9
22	1-487576-4	48	4-487576-0
23	1-487576-5	49	4-487576-1
24	1-487576-6	50	4-487576-2
25	1-487576-7	51	4-487576-3
26	1-487576-8	52	4-487576-4
27	1-487576-9	53	4-487576-5
28	2-487576-0	54	4-487576-6
29	2-487576-1	55	4-487576-7
30	2-487576-2		

Note: FFC Cable with tin-plated prepared ends can be made available, contact AMP.

.100 [2.54] Centerline Products

Approvals

- **Connectors Recognized under the Component Program of Underwriters Laboratories Inc., File No. E28476**
- **Flexible Flat Conductor Cable Jumper Assemblies Recognized under the Component Program of Underwriters Laboratories Inc., File No. E53799**
- **Flexible Flat Conductor Cable Recognized under the Component Program of Underwriters Laboratories Inc., File No. E53793 per UL Style 2646, 2690, 2742, 2616 (300 volts)**
- **Connectors Certified by Canadian Standards Association, File No. LR 7189-140**
- **Flexible Flat Conductor Cable Assemblies Certified by Canadian Standards Association, File No.LR 45924-5**
- **Flexible Flat Conductor Cable Certified by Canadian Standards Association, File No. LL 83498-2**



[2] Contact AMP for additional information.

*Unless otherwise indicated, typical of all FFC cable shown.

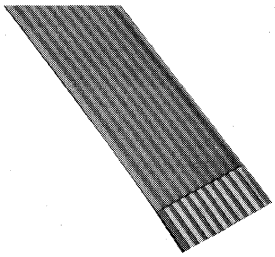
1. Flexible Flat Conductor Cable Base Part No. 88586, Page 5032
2. Contact—Pin, Page 5032
3. Contact—Receptacle, Page 5032
5. Single Row Slim-Line Receptacle Housing—Plain Base Part No. 487378, Page 5033
6. Single Row Slim-Line Receptacle Housing—Latch Base Part No. 487526, Page 5033
7. Single Row Slim-Line Receptacle Housing—Detent Base Part No. 487769, Page 5033
9. Single Row Pin Housing, Polarized Detent without Ears, Base Part No. 485893, Page 5034
10. Single Row Receptacle Housing—Polarized Detent without Ears Base Part No. 88859, Page 5035
11. Double Row Pin Housing—Polarized Detent with Ears Base Part No. 88190, Page 5036
12. Double Row Pin Housing—Polarized Detent without Ears Base Part No. 88189, Page 5036
13. Double Row Receptacle Housing—Polarized Detent with Ears Base Part No. 88637, Page 5037
14. Double Row Receptacle Housing—Polarized Detent without Ears Base Part No. 88179, Page 5037
16. Double Row Receptacle Housing with Center Polarization Base Part No. 487223, Page 5038
17. Trio-Mate Connector—Vertical Entry Base Part Nos. 520315, 520316, 520415 & 520355, Page 5039
18. Trio-Mate Connector—Horizontal Entry Base Part No. 520314, 176982 & 520353, Page 5039
19. FFC Cable with Tin-Plated Prepared Ends[2]
23. Round Wire Pin Contacts, Page 5041
24. Round Wire Receptacle Contacts, Page 5041
25. Header—Unshrouded Single Row Straight
26. Header—Unshrouded Single Row Right-Angle
27. Header—Shrouded Single Row Straight
28. Header—Unshrouded Double Row Right-Angle
29. Header—Shrouded Double Row Right-Angle, Page 5038
30. Header—Shrouded Single Row Right-Angle, Page 3143
31. Header—Ejection Style Right-Angle
32. Header—Ejection Style Straight
34. Contact—Solder Tab, Page 5032

SOURCE: Catalog 82007

Specifications subject to change.
1-800-522-6752 Product Information Center/ AMP FAX Service
1-800-722-1111 Tooling/Technical Assistance Center

.100 [2.54] Centerline Flexible Flat Conductor Cable

.050 [1.27] Wide x .003 [0.08] Thick Conductors



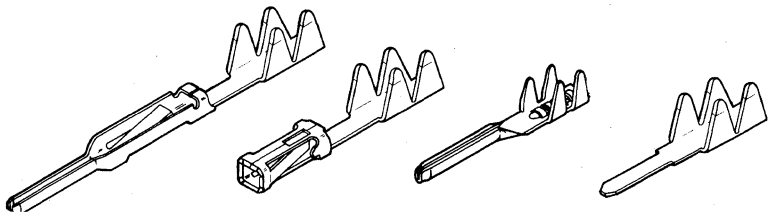
Tin Plated Conductors With Exposed Ends

Cable Size (No. of Conductors)	Part No. 500 ft. [152.4 m] Reel
2	88586-1
3	88586-2
4	88586-3
5	88586-4
6	88586-5
7	88586-6
8	88586-7
9	88586-8
10	88586-9
11	1-88586-0
12	1-88586-1
13	1-88586-2
14	1-88586-3
15	1-88586-4
16	1-88586-5
17	1-88586-6
18	1-88586-7

Cable Size (No. of Conductors)	Part No. 500 ft. [152.4 m] Reel
19	1-88586-8
20	1-88586-9
21	2-88586-0
22	2-88586-1
23	2-88586-2
24	2-88586-3
25	2-88586-4
26	2-88586-5
27	2-88586-6
28	2-88586-7
29	2-88586-8
30	2-88586-9
31	3-88586-0
32	3-88586-1
33	3-88586-2
34	3-88586-3
35	3-88586-4

Notes: 1. Other cable sizes can be made available. Consult AMP.
2. Contacts purchased separately, see chart below.

Flexible Film Contacts, Continuous Strip (for Sequential Termination)



Pin Contact (for use in housings)

Receptacle Contact (accepts .025[2] [0.64[2]] pins)

Pin Contact (for use without housings)

Solder Tab

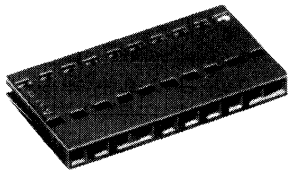
Type	Configuration	Contacts for Flexible Flat Conductor Cable — Part Numbers				Application Tooling
		Duplex[1]	Duplex[2]	Tin-Lead[3]	Duplex[4]	
Pin (for use in housings)	Strip	88117-3	88117-4	88117-5	88117-2	768600-2
Receptacle (standard pressure)	Strip	487406-1	487406-2	487406-4	487406-3	768600-2
Receptacle (high pressure)*	Strip	487117-4	487117-5	487117-8	—	768600-2
Solder Tab**	Strip	88997-4	88997-5	88997-2	—	768600-2
Pin (for use in housings)	Strip	88976-3	—	88976-2	—	768600-2

* High pressure receptacle contacts are recommended for a maximum connector size of 15 positions.
** Recommended hole size for solder tabs is .031-.035 [0.79-0.89] diameter.
[1]Duplex plated .000015 [0.00038] gold on a mating area, .000100 [0.00254] min. bright tin-lead in crimp area, with entire contact underplated .000050 [0.00127] min. nickel.
[2]Duplex plated .000030 [0.00076] gold on mating area, .000100 [0.00254] min. bright tin-lead in crimp area, with entire contact underplated .000050 [0.00127] min. nickel.
[3]Plated .000100 [0.00254] min. bright tin-lead over .000050 [0.00127] min. nickel on entire contact.
[4]Duplex plated .000050 [0.00127] gold on mating area, .000100 [0.00254] min. bright tin-lead in crimp area, with entire contact underplated .000050 [0.00127] min. nickel.
Note: Round wire contacts—Page 5041

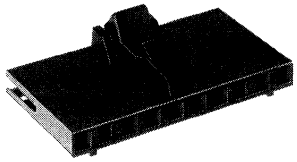
SOURCE: Catalog 82007

.100 [2.54] Centerline Single Row Slim-Line Receptacle Housings

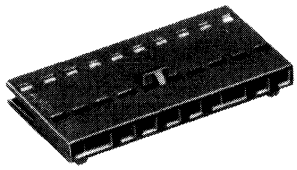
Mates with—AMPMODU Unshrouded Breakaway Headers, AMPMODU Unshrouded Retention Headers, and Shrouded Standard Profile, Polarized/ Latching Headers.



Plain Style Housing



Latch Style Housing

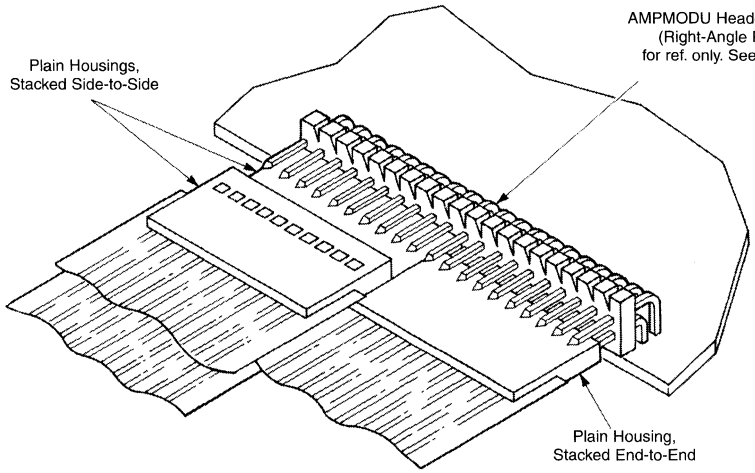


Housing with Detent

Related Product Data

FFC Cable—Page 5032

Receptacle Contacts—Page 5032



Typical Cable-to-Board Application

Note: Plain housings are side-to-side and end-to-end stackable on either straight or right-angle posted, unshrouded AMPMODU headers. Latch and detent styles are end-to-end stackable only.

Note: 10 Pos. Housing Dim. (Typ.)—.994 [25.25] L x .540 [13.72] W x .098 [2.49] H

No. of Positions	Receptacle Part Numbers			Extraction Tool
	Plain	Latch	Detent	
2	487378-1	487526-1	487079-1	—
3	487378-2	487526-2	487769-1	2-91200-1
4	487378-3	487526-3	487769-2	2-91200-4
5	487378-4	487526-4	487769-3	1-91200-9
6	487378-5	487526-5	487769-4	2-91200-2
7	487378-6	487526-6	487769-5	—
8	487378-7	487526-7	487769-6	2-91200-5
9	487378-8	487526-8	487769-7	91200-1
10	487378-9	487526-9	487769-8	91200-5
11	1-487378-0	1-487526-0	487769-9	1-91200-3
12	1-487378-1	1-487526-1	1-487769-0	91200-8
13	1-487378-2	1-487526-2	1-487769-1	91200-9
14	1-487378-3	1-487526-3	1-487769-2	1-91200-0
15	1-487378-4	1-487526-4	1-487769-3	—
16	1-487378-5	1-487526-5	1-487769-4	—
17	1-487378-6	1-487526-6	1-487769-5	1-91200-5
18	1-487378-7	1-487526-7	1-487769-6	1-91200-4
19	1-487378-8	1-487526-8	1-487769-7	91200-2
20	1-487378-9	1-487526-9	1-487769-8	91200-6
21	2-487378-0	2-487526-0	1-487769-9	—
22	2-487378-1	2-487526-1	2-487769-0	1-91200-1
23	2-487378-2	2-487526-2	2-487769-1	1-91200-2
24	2-487378-3	2-487526-3	2-487769-2	1-91200-6
25	2-487378-4	2-487526-4	2-487769-3	2-91200-0
34	2-487378-5	—	—	—

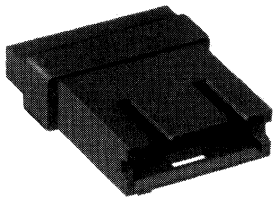
Note: Other sizes of receptacle housings can be made available, consult AMP.

SOURCE: Catalog 82007

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

.100 [2.54] Centerline Single Row Pin Housings

Polarized Housings with Detent Window



Without Mounting Ears

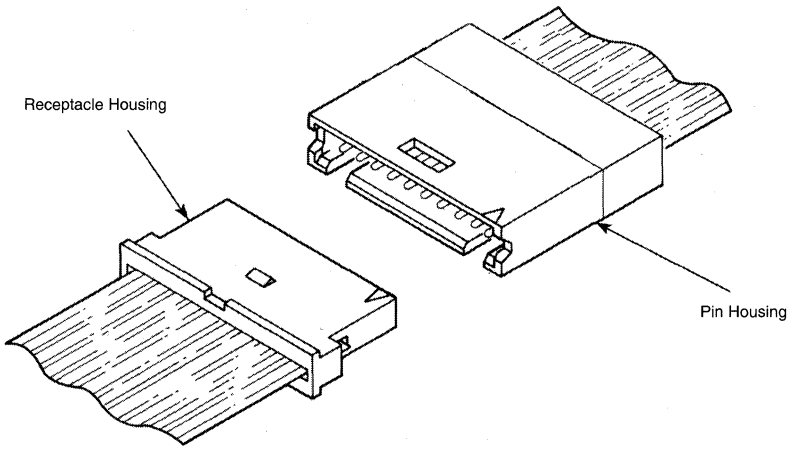
Mates with—Single Row Receptacle Housings, Page 5035

Note: 15 Pos. Housing Dim. (Typ.)—1.750 [44.45] L x .930 [23.63] W x .250 [6.35] H

No. of Positions	Pin Housing Part No. Without Mounting Ears	Extraction Tool Part No.
3	494032-2	1-91047-9
4	485893-2	2-91047-4
5	485893-3	1-91047-8
6	485893-4	2-91047-0
7	485893-5	2-91047-5
8	485893-6	2-91047-6
9	485893-7	91047-1
10	485893-8	1-91047-0
11	485893-9	2-91047-7
12	1-485893-0	1-91047-4
13	1-485893-1	1-91047-3
14	1-485893-2	1-91047-5
15	1-485893-3	1-91047-6
16	1-485893-4	2-91047-8
18	1-485893-6	2-91047-2
19	1-485893-7	91047-3
20	—	91047-5
25	2-485893-3	2-91047-3
28	—	3-91047-4
32	—	—
33	3-485893-1	91047-4

Notes: 1. Other sizes of pin housings can be made available, consult AMP.
2. Use Extraction Tool **Part No. 91092-1** for round wire contacts.

Related Product Data
FFC Cable—Page 5032
Pin Contacts—Page 5032

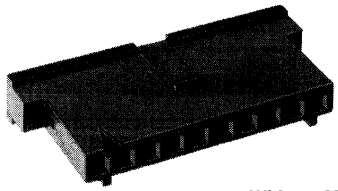


Typical Cable-to-Cable Application

SOURCE: Catalog 82007

.100 [2.54] Centerline Single Row Receptacle Housings

Polarized Housings with Detent



Without Mounting Ears

Mates with—Single Row Pin Housings, Page 5034, AMPMODU Shrouded Single Row Standard Profile Headers, (Cat. 82187)

Related Product Data

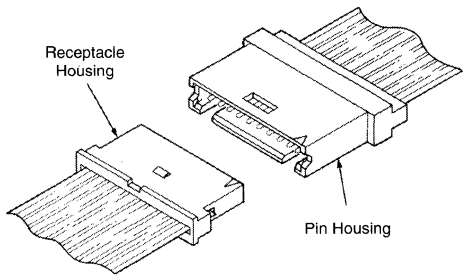
FFC Cable—Page 5032

Receptacle Contacts—Strip, Page 5032

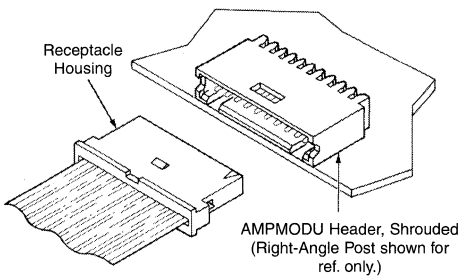
Note: 20 Pos. Housing Dim. (Typ.)—2.190 [55.63] L x .540 [13.72] W x .186 [4.72] H

No. of Positions	Receptacle Housing Part No.	Extraction Tool No.
3	88859-9	1-91047-9
4	1-88859-0	2-91047-4
5	1-88859-1	1-91047-8
6	88859-1	2-91047-0
7	1-88859-2	2-91047-5
8	88859-2	2-91047-6
9	1-88859-3	91047-1
10	88859-3	1-91047-0
11	1-88859-4	2-91047-7
12	88859-4	1-91047-4
13	88859-5	1-91047-3
14	88859-7	1-91047-5
15	88859-6	1-91047-6
16	1-88859-5	2-91047-8
18	1-88859-7	2-91047-2
19	1-88859-8	91047-2
20	88859-8	91047-5
22	2-88859-0	1-91047-1
25	2-88859-3	2-91047-3
26	2-88859-4	—
29	2-88859-7	91047-3
30	2-88859-8	1-91047-7
32	3-88859-0	—
35	3-88859-3	1-91047-2

Note: Use Extraction Tool **Part No. 91092-1** for round wire contacts.



Typical Cable-to-Cable Application



Typical Cable-to-Board Application

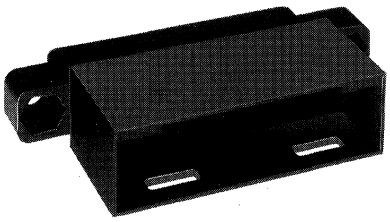
SOURCE: Catalog 82007

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

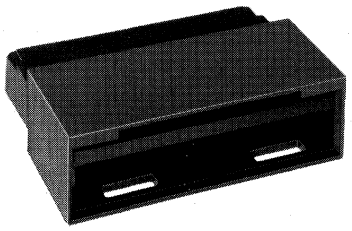
.100 [2.54] Centerline Double Row Pin Housings

Polarized Housing with Detent Windows, Shrouded 4 Sides

Mates with—Double Row Receptacle Housings, Page 5037



With Mounting Ears



Without Mounting Ears

Note: 34 Pos. Housing Dim. (Typ.)— With mounting ears 2.460 [62.48] L x .930 [23.63] W x .400 [10.16] H

No. of Positions	Pin Housing Part No.		Extraction Tool No.
	With Mounting Ears	Without Mounting Ears	
6	3-88190-2	3-88189-2	1-91047-9
10	3-88190-0	3-88189-0	1-91047-8
12	—	3-88189-4	2-91047-0
14	—	3-88189-8	2-91047-5
16	3-88190-4	—	2-91047-6
18	88190-6	88189-4	91047-1
20	88190-8	88189-6	1-91047-0
24	1-88190-0	88189-8	1-91047-4
26	1-88190-2	1-88189-0	1-91047-3
28	1-88190-4	1-88189-2	1-91047-5
34	—	3-88189-6	2-91047-1
36	1-88190-6	1-88189-4	2-91047-2
38	88190-2	88189-2	91047-2
40	1-88190-8	1-88189-6	91047-5
50	88190-4	2-88189-0	2-91047-3
58	—	2-88189-2	91047-3
60	2-88190-4	2-88189-4	1-91047-7
66	2-88190-6	2-88189-6	91047-4
70	2-88190-8	2-88189-8	1-91047-2

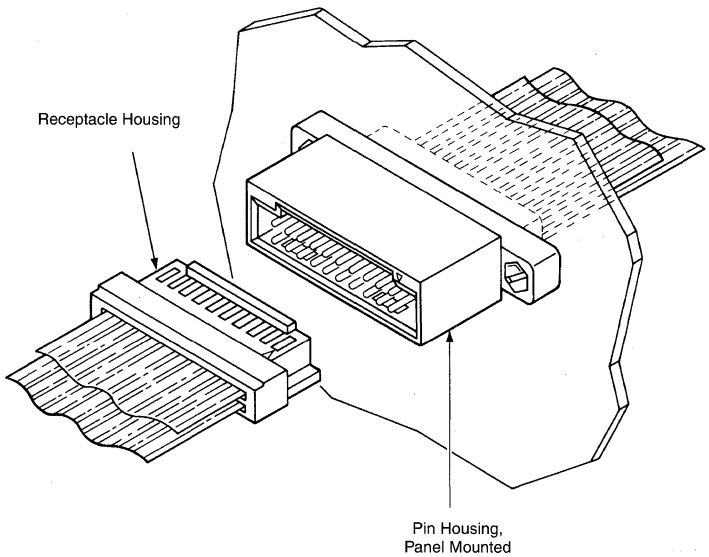
Notes: 1. All housings listed above have no markings, except for AMP and Pos. 1 Identification, which are molded into the housing. Housings with special markings can be made available, consult AMP.
2. Housing sizes smaller than 20-position have only one detent window.
3. Use Extraction Tool **Part No. 91092-1** for round wire contacts.

Related Product Data

FFC Cable—Page 5032

Pin Contacts—Strip, Page 5032

Accessories (Jackscrews)—Pages 5042 and 5043

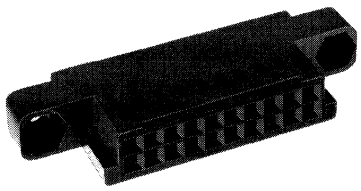


Typical Cable-to-Cable Application

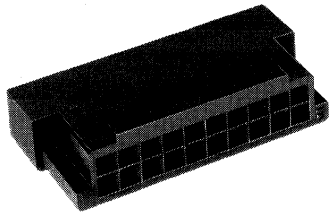
SOURCE: Catalog 82007

.100 [2.54] Centerline Double Row Receptacle Housings

Polarized Housings with Detents



With Mounting Ears



Without Mounting Ears

Mates with—

Double Row Pin Housings, Page 5036; AMPMODU Double Row Standard Profile Shrouded Headers, (Cat. 82187)

Note: 34 Pos. Housing Dim. (Typ.)—With mounting ears, 2.460 [62.48] L x .600 [15.24] W x .331 [8.41] H

No. of Positions	Receptacle Housing Part No.		Extraction Tool No.
	With Mounting Ears	Without Mounting Ears	
6	88637-5	3-88179-2	2-91200-1
10	88637-7	3-88179-0	1-91200-9
12	88637-1	3-88179-4	2-91200-2
16	88637-3	—	2-91200-2
18	88637-9	1-88179-0	91200-1
20	1-88637-1	88179-5	91200-5
24	1-88637-3	1-88179-4	91200-8
26	1-88637-5	1-88179-6	91200-9
28	1-88637-7	1-88179-8	1-91200-0
34	—	3-88179-6	1-91200-5
36	—	2-88179-0	1-91200-4
38	2-88637-1	88179-6	91200-2
40	2-88637-3	2-88179-2	91200-6
44	2-88637-5	2-88179-4	1-91200-1
50	2-88637-7	1-88179-2	2-91200-0
58	2-88637-9	—	91200-3
60	3-88637-1	88179-4	1-91200-8
66	3-88637-3	88179-8	91200-4
70	3-88637-5	—	91200-7

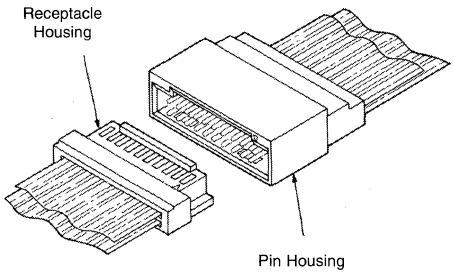
Notes: 1. All housings listed above have no markings, except for AMP and Pos. 1 Identification, which are molded into the housing. Housings with special markings can be made available, consult AMP.
2. Housing sizes smaller than 20-position have only one detent.
3. Use Extraction Tool **Part No. 91093-1** for round wire contacts.

Related Product Data

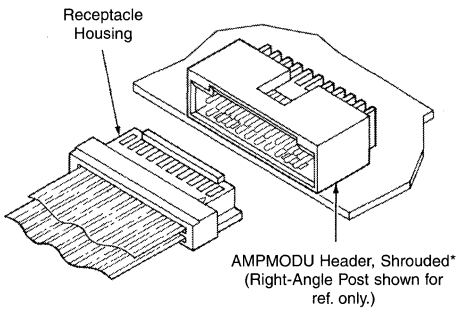
FFC Cable—Page 5032

Receptacle Contacts—Strip, Page 5032

Accessories—Jackscrews, Pages 5042 and 5043; Keying Plugs, Page 5042



Typical Cable-to-Cable Application



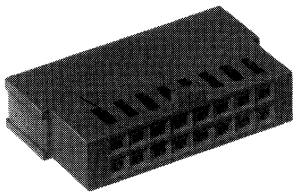
*Mating AMPMODU shrouded headers have a .150 [3.81] end dimension (from inside shroud wall to centerline of first post).

Typical Cable-to-Cable Application

SOURCE: Catalog 82007

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

.100 [2.54] Centerline Double Row Receptacle Housings, With Center Polarization



Mates with—AMP-LATCH Universal I/O Pin and Ejection Style Pin Headers; AMPMODU Low Profile Shrouded Pin Headers

Related Product Data

FFC Cable—Page 5032

Receptacle Contacts—Strip, Page 5032

Accessories—Keying Plugs, Page 5042

Note: 16 Pos. Housing Dim. (Typ.)—1.050 [26.67] L x .600 [15.24] W x .240 [6.10] H

No. of Positions	Receptacle Housing Part No.	Extraction Tool No.
10	487223-1	1-91200-9
14	487223-2	—
16	487223-3	—
18	487223-4	91200-1
20	487223-5	91200-5
24	487223-6	91200-8
26	487223-7	91200-9
30	487223-8	—
34	487223-9	1-91200-5
40	1-487223-0	91200-6
44	1-487223-1	1-91200-1
50	1-487223-2	2-91200-0
56	1-487223-4	—
60	1-487223-5	1-91200-8
64	1-487223-6	—

Notes: 1. Tin plated contacts are not recommended for use in receptacle housings larger than 40-position.
2. Other housing sizes can be made available, consult AMP.
3. Use Extraction Tool **Part No. 91093-1** for round wire contacts.

SOURCE: Catalog 82007

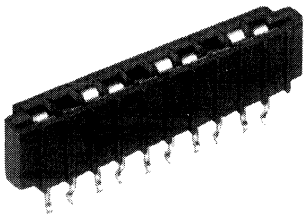
.100 [2.54] Centerline Trio-Mate Connectors

Product Facts

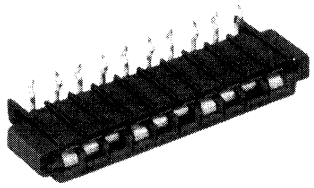
- Accepts FFC cable, flexible etched circuitry or membrane switch circuitry .005 to .015 [0.13 to 0.38] thick in contact area
- High extraction force
- Reusable 25 times with same cable thickness
- Certified by Canadian Standards Association, File No. LR 53931-10

Related Product Data

Cable with Tin Plated Conductors with Exposed Ends.



Vertical Cable Entry for .062 [1.57] and .093 [2.36] Thick Pc Boards

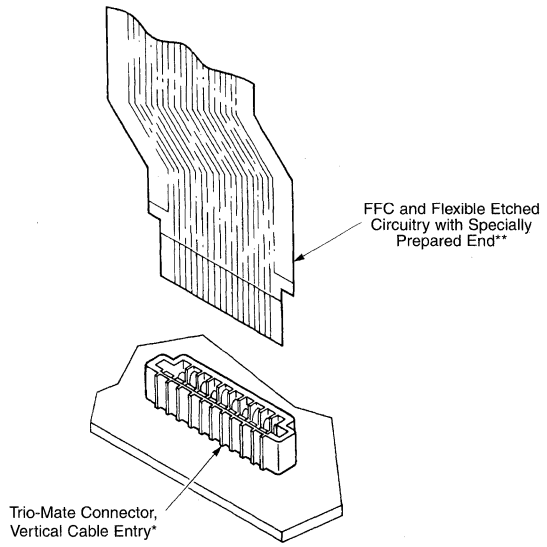


Horizontal Cable Entry for .062 [1.57] Thick Pc Boards

Note: 12 Pos. Housing Dim. (Typ.)—Vertical, 1.393 [35.38] L x .190 [4.83] W x .273 [6.93] H; Horizontal, 1.393 [35.38] L x .353 [8.97] W x .190 [4.83] H

No. of Positions	Connector Part No.						
	Vertical Cable Entry				Horizontal Cable Entry		
	For .062 [1.57] Thk. Pc Board		For .093 [2.36] Thk. Pc Board		For .062 [1.57] Thk. Pc Board		
	Str. Leg	Z Bend Leg	Str. Leg	Z Bend Leg	Str. Leg[1]	Str. Leg[2]	Z Bend Leg
2	520415-2	520315-2	520355-2	520316-2	176982-2	520353-2	520314-2
3	520415-3	520315-3	520355-3	520316-3	176982-3	520353-3	520314-3
4	520415-4	520315-4	520355-4	520316-4	176982-4	520353-4	520314-4
5	520415-5	520315-5	520355-5	520316-5	176982-5	520353-5	520314-5
6	520415-6	520315-6	520355-6	520316-6	176982-6	520353-6	520314-6
7	520415-7	520315-7	520355-7	520316-7	176982-7	520353-7	520314-7
8	520415-8	520315-8	520355-8	520316-8	176982-8	520353-8	520314-8
9	520415-9	520315-9	520355-9	520316-9	176982-9	520353-9	520314-9
10	1-520415-0	1-520315-0	1-520355-0	1-520316-0	1-176982-0	1-520353-0	1-520314-0
11	1-520415-1	1-520315-1	1-520355-1	1-520316-1	1-176982-1	1-520353-1	1-520314-1
12	1-520415-2	1-520315-2	1-520355-2	1-520316-2	1-176982-2	1-520353-2	1-520314-2
13	1-520415-3	1-520315-3	1-520355-3	1-520316-3	1-176982-3	1-520353-3	1-520314-3
14	1-520415-4	1-520315-4	1-520355-4	1-520316-4	1-176982-4	1-520353-4	1-520314-4
15	1-520415-5	1-520315-5	1-520355-5	1-520316-5	1-176982-5	1-520353-5	1-520314-5
16	1-520415-6	1-520315-6	1-520355-6	1-520316-6	1-176982-6	1-520353-6	1-520314-6
17	1-520415-7	1-520315-7	1-520355-7	1-520316-7	1-176982-7	1-520353-7	1-520314-7
18	1-520415-8	1-520315-8	1-520355-8	1-520316-8	1-176982-8	1-520353-8	1-520314-8
19	1-520415-9	1-520315-9	1-520355-9	1-520316-9	1-176982-9	1-520353-9	1-520314-9
20	2-520415-0	2-520315-0	2-520355-0	2-520316-0	2-176982-0	2-520353-0	2-520314-0
21	2-520415-1	2-520315-1	2-520355-1	2-520316-1	2-176982-1	2-520353-1	2-520314-1
22	2-520415-2	2-520315-2	2-520355-2	2-520316-2	2-176982-2	2-520353-2	2-520314-2

[1]Leg length—.120 [3.05]
[2]Leg length—.110 [2.54]



Typical Flexible Etched Circuitry-to-Board Application

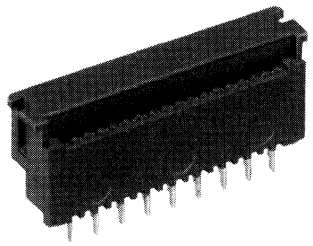
*Vertical cable entry configuration shown for reference only. Termination of either configuration is completed by simply inserting flexible etched circuitry into housing (prepared end on either side).
**Contact AMP for additional information.

SOURCE: Catalog 82007

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

.100 [2.54] Centerline ZIF-Line Connectors

Vertical Cable Entry

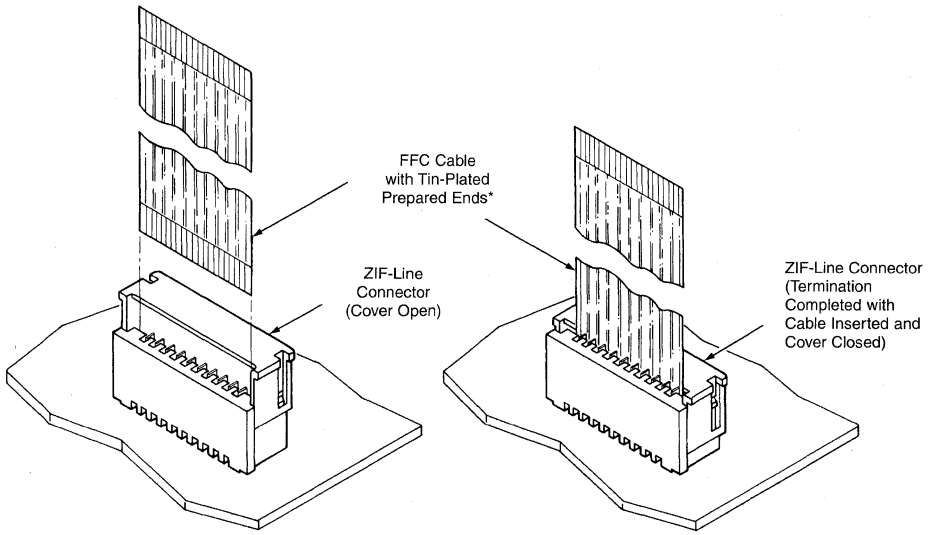


Note: 12 Pos. Housing Dim. (Typ.)—
1.470 [37.34] L x .240 [6.10] W x .310 [7.87] H

No. of Positions	Connector Part No.
8	487925-1
9	487925-7
10	487925-6
11	487925-8
12	487925-9
13	1-487925-0
14	487925-2
15	1-487925-1
16	487925-3
20	487925-4
22	487925-5

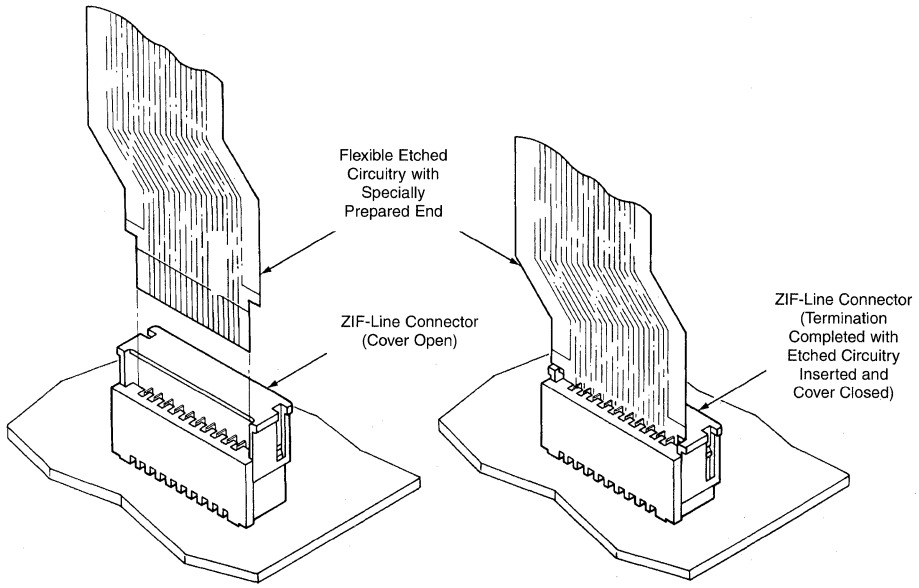
Note: Other sizes of connectors can be made available, consult AMP.

Typical Flexible Flat Conductor Cable-to-Board Application



*FFC Cable with tin-plated prepared ends can be made available.

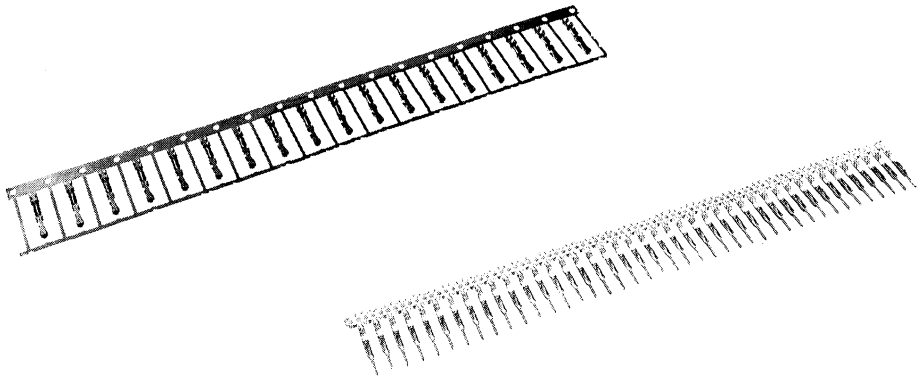
Typical Flexible Etched Circuitry-to-Board Appplication



SOURCE: Catalog 82007

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

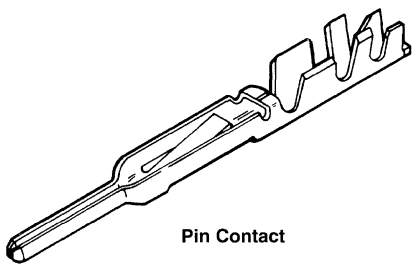
.100 [2.54] Centerline Round Wire Contacts, Continuous Strip and Loose Piece



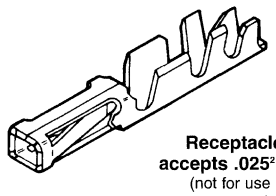
Related Product Data

Pin Housings—
Pages 5034 and 5036

Receptacle Housing—
Pages 5035, 5037 and 5038



Pin Contact



Receptacle Contact, accepts .025[2] [0.64[2]] Posts
(not for use in Slim-Line receptacle housings)

Contact Type	Wire Size Range AWG	Wire Size Range mm²	Ins. Dia. Range	Contact Finish	Strip Form Contact No.	Application Tooling: Applicator Numbers for AMP-O-LECTRIC[5] Machine	Application Tooling: Applicator Numbers for AMPOMATOR CLS Machine	Application Tooling: Applicator Numbers for AMP-O-MATIC* Machine No. 854040-3	Loose Piece Contact No.	Hand Tool No.
Pin	32-26	0.03-0.15	**.025-.048** 0.64-1.22	Sel. Gold[1]	88048-4	—	—	466933-1	86561-6	90222-6
				Sel. Gold[2]	88048-8	—	—	466933-1	86561-4	90222-6
				Tin-Lead	88048-2	—	—	466933-1	86561-9	90222-6
	26-22	0.12-0.4	**.040-.056** 1.02-1.42	Sel. Gold[1]	86557-6	466572-3	466572-1	466909-1	86658-2	90378-1
				Sel. Gold[2]	86557-4	466572-3	466572-1	466909-1		
				Tin-Lead[3]	1-86557-4	466572-3	466572-1	466909-1	494034-1	90378-1
	24-22		**.040-.056** 1.02-1.42	Sel. Gold[1]	86656-2	—	—	—	88017-6	90313-2
				Sel. Gold[1]	494033-2	—	567308-1	—	86571-2	90222-6
									86571-4	90222-6
									86571-8	90222-6
Receptacle	32-26	0.03-0.15	**.025-.048** 0.64-1.22	Sel. Gold[1]	88017-2	—	—	466933-1	86657-2	90378-1
	26-22	0.12-0.4	**.040-.056** 1.02-1.42	Sel. Gold[1]	86566-2	466572-3	466572-1	466909-1		
				Sel. Gold[2]	86566-4	466572-3	466572-1	466909-1		
				Tin-Lead[3]	86566-8	466572-3	466572-1	466909-1		
	24-22		**.040-.056** 1.02-1.42	Sel. Gold[1]	86655-2	—	567308-1	—		

*Side Feed Stripper/Crimper Machine Model II.

[1]Selectively plated .000015 [0.00038] gold on mating area, gold flash on remainder of contact, with entire contact underplated .000050 [0.00127] min. nickel.
[2]Selectively plated .000030 [0.00076] gold on mating area, gold flash on remainder of contact, with entire contact underplated .000050 [0.00127] min. nickel.
[3]Plated .000100 [0.00254] min. bright tin-lead over .000050 [0.00127] min. nickel on entire contact.
Note: Use Extraction Tool **Part No. 91092-1** for end locking lance slot and Extraction Tool **Part No. 91093-1** for side locking lance slot.

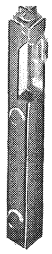
SOURCE: Catalog 82007

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

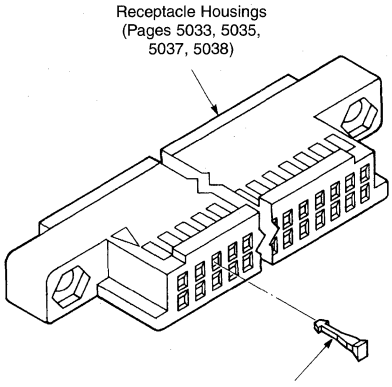
Accessories, .100 [2.54] Centerline

Keying Plugs for Receptacle Housings

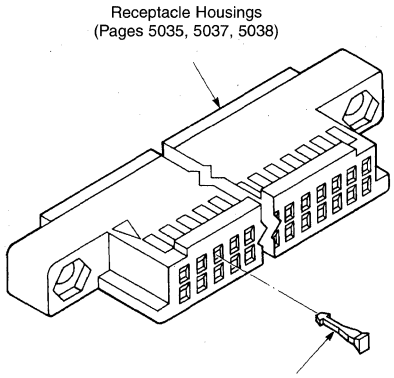
Keying Plug Part No. 86286-1
(Used with contact; plugs into contact)



Keying Plug Part No. 87077-2
(Used without contact; plugs directly into back-end of housing)



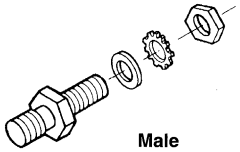
Note: Keying plug, **Part No. 86286-1**, can be used in all .100 [2.54] centerline receptacle housings, except pcb edge connectors.



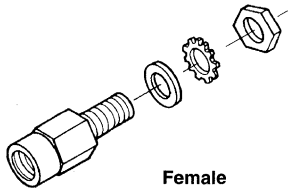
Note: Keying plug, **Part No. 87077-2**, can be used in all .100 centerline receptacle housings, except slim-line versions and pcb edge connectors.

Jackscrews for Cable-to-Cable Applications

Fixed Jackscrews

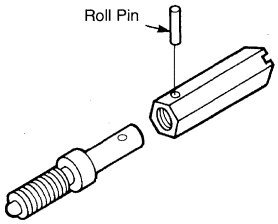


Male

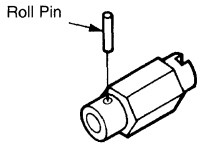


Female

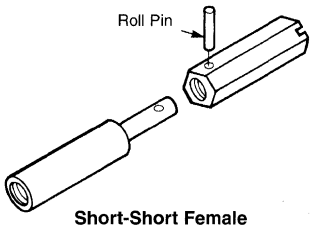
Turnable Jackscrews



Short-Short Male



Roll-Pin Body Style Supplied with Turnable Jackscrew Kit Nos. 87185-3 and 86603-3

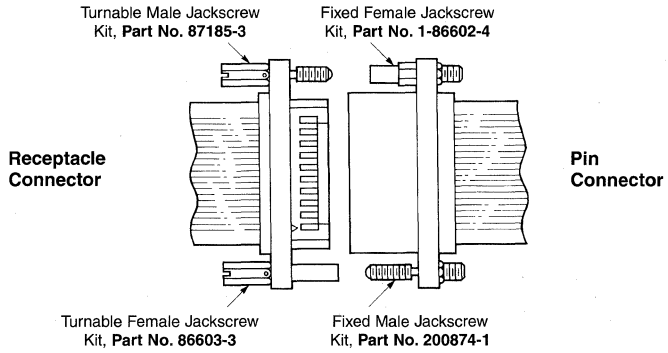


Short-Short Female

Type	Material	Fixed Jackscrew Kit No.	Turnable Jackscrew Kit No.
Male	Stainless Steel	200874-1	87185-3
Female	Stainless Steel	1-86602-4	86603-3

Notes: 1. These jackscrews can be used with all housings having mounting ears.
2. Other jackscrew kits are available, consult AMP.

Typical Cable-to-Cable Application



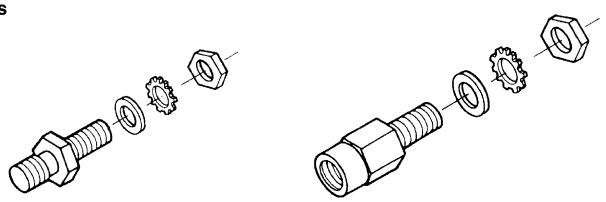
SOURCE: Catalog 82007

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

Accessories, .100 [2.54] Centerline (Continued)

Jackscrews for Cable-to-Board Applications

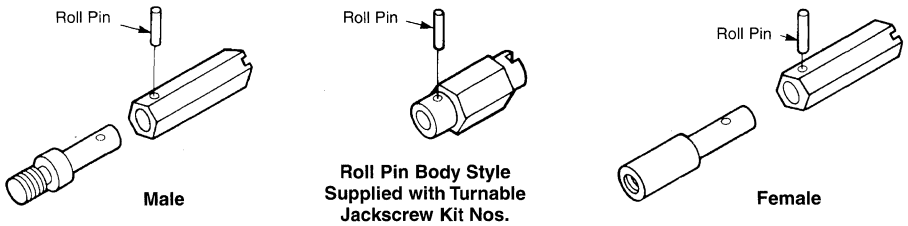
Fixed Jackscrews



Male

Female

Turnable Jackscrews



Male

Roll Pin Body Style Supplied with Turnable Jackscrew Kit Nos. 88618-2 and 88616-2

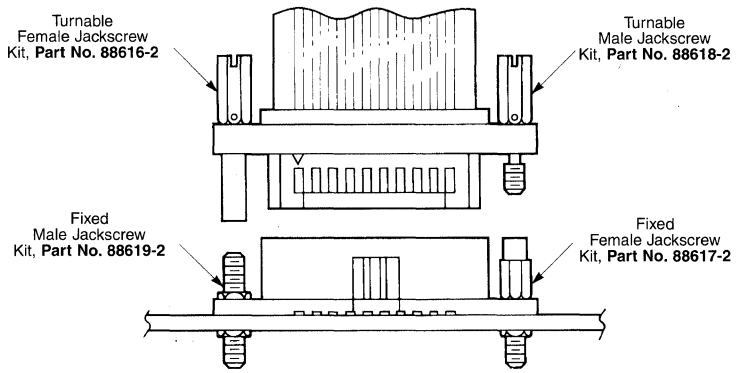
Female

Type	Material	Jackscrew Kit No.
Fixed Male	Stainless Steel	88619-2
Turnable Male	Stainless Steel	88618-2
Fixed Female	Stainless Steel	88617-2
Turnable Female	Stainless Steel	88616-2

Note: Other jackscrew kits are available, consult AMP.

Typical Cable-to-Board Application

Receptacle Connector



Board Mounted Pin Header

SOURCE: Catalog 82007

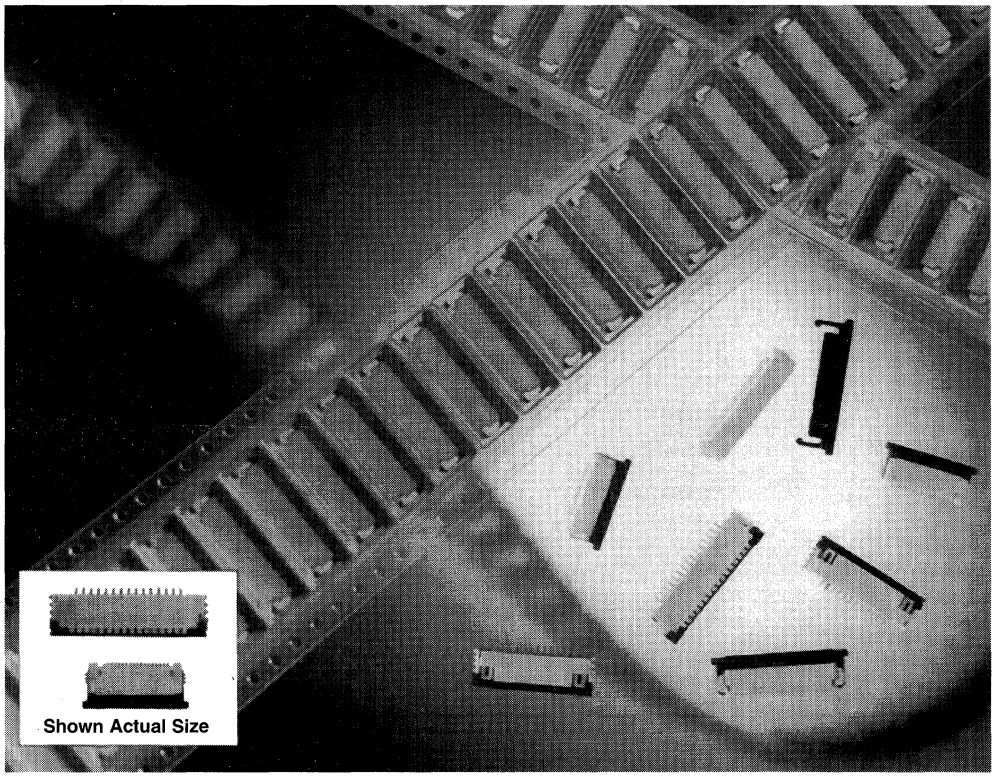
Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

0.5 [.020] and 1.00 [.039] FPC Connectors (Flexible Printed Circuit)

Thru-Hole and Surface Mount Styles

Product Facts

- High-density packaging
- Low-profile design
- 0.5 [.020] size available in 10, 16, 18, 24 and 30 positions
- 1.0 [.039] size available in 4 thru 30 positions
- Choice of top or bottom contact styles
- Surface mount application
- Zero insertion force
- Durable—tested up to 30 cycles
- Convenient embossed tape packaging



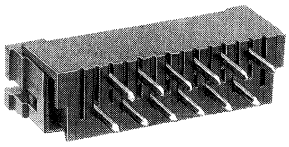
As the demands for higher-density packaging of electronic equipment increases, the use of flexible printed circuits (FPC) to reduce size, weight and assembly costs has expanded. FPC is finding wide acceptance in the computer industry, particularly in such applications as Lap Top, Notebook, Palm Top and Note Pad Computers. Other markets include: Disk Drives, Printers, Plotters, Copiers, Cellular Phones, and Medical Equipment.

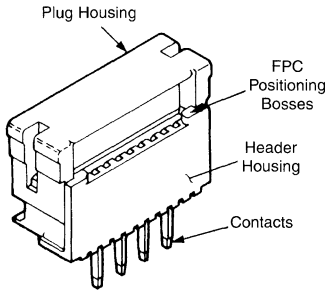
AMP FPC connectors have been developed to meet the challenges of this expanding market. Available in two centerline spacings, 0.5 [.020] and 1.0 [.039], they incorporated all the most wanted features: low profile, lightweight, AMP quality and economy, plus convenient embossed tape packaging. Thru-hole and Surface mount, zero insertion force, FPC Connectors are available in 10, 14, 16, 18, 20, 24 and 30 positions in the 0.5 [.020] size and 4 through 30 positions in the 1.0 [.039] size. Both sizes provide a choice of top or bottom contact styles. All feature a low-profile design, 2.0 [.079] for the 0.5 [.020] connectors and 2.5 [.099] for the 1.0 [.039] connectors. Contacts are phosphor bronze, tin-lead plated on the mating end and tin plated on the solder tail end, and are highly durable.

SOURCE: Catalog 82007

AMP FPC Connectors

Vertical Mount Type (Thru-Hole)

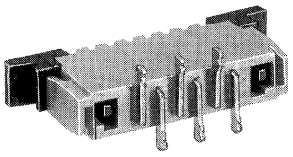




No. of Pos.	Part Number
4	172940-4
6	172940-6
8	172940-8
12	1-172940-2
16	1-172940-6
20	2-172940-0
24	2-172940-4

AMP 1.0 [.039] FPC Connectors

Vertical Surface Mount Type

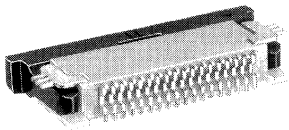


No. of Pos.	Part Number
4	487953-4
5	487953-5
6	487953-6
7	487953-7
8	487953-8
9	487953-9
10	1-487953-0
11	1-487953-1
12	1-487953-2
13	1-487953-3
14	1-487953-4
15	1-487953-5
16	1-487953-6
17	1-487953-7

No. of Pos.	Part Number
18	1-487953-8
19	1-487953-9
20	2-487953-0
21	2-487953-1
22	2-487953-2
23	2-487953-3
24	2-487953-4
25	2-487953-5
26	2-487953-6
27	2-487953-7
28	2-487953-8
29	2-487953-9
30	3-487953-0

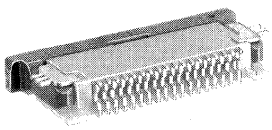
AMP 0.5 [.020] FPC Connectors

Top Contact Type



No. of Pos.	Part[1] Number	Part[2] Number
10	1-175337-0	1-178777-0
14	1-175337-4	1-178777-4
16	1-175337-6	1-178777-6
18	1-175337-8	1-178777-8
20	2-175337-0	2-178777-0
24	2-175337-4	2-178777-4
30	3-175337-0	3-178777-0

Bottom Contact Type



No. of Pos.	Part[1] Number	Part[2] Number
10	1-175338-0	1-178778-0
14	1-175338-4	1-178778-4
16	1-175338-6	1-178778-6
18	1-175338-8	1-178778-8
20	2-175338-0	2-178778-0
24	2-175338-4	2-178778-4
30	3-175338-0	3-178778-0

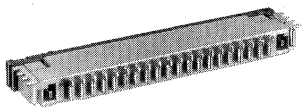
[1]To order product mounted on tape, use **Part No. □-175337-□** or **Part No. □-175338-□**.
[2]To order only a customer print of a specific size use **Part No. □-178777-□** or **Part No. □-178778-□**.

SOURCE: Catalog 82007

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

AMP 1.0 [.039] FPC Connectors

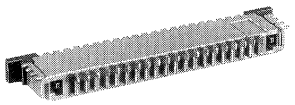
Top Contact Type



No. of Pos.	Part Number
4	487951-4
5	487951-5
6	487951-6
7	487951-7
8	487951-8
9	487951-9
10	1-487951-0
11	1-487951-1
12	1-487951-2
13	1-487951-3
14	1-487951-4
15	1-487951-5
16	1-487951-6
17	1-487951-7

No. of Pos.	Part Number
18	1-487951-8
19	1-487951-9
20	2-487951-0
21	2-487951-1
22	2-487951-2
23	2-487951-3
24	2-487951-4
25	2-487951-5
26	2-487951-6
27	2-487951-7
28	2-487951-8
29	2-487951-9
30	3-487951-0

Bottom Contact Type



No. of Pos.	Part Number
4	487952-4
5	487952-5
6	487952-6
7	487952-7
8	487952-8
9	487952-9
10	1-487952-0
11	1-487952-1
12	1-487952-2
13	1-487952-3
14	1-487952-4
15	1-487952-5
16	1-487952-6
17	1-487952-7

No. of Pos.	Part Number
18	1-487952-8
19	1-487952-9
20	2-487952-0
21	2-487952-1
22	2-487952-2
23	2-487952-3
24	2-487952-4
25	2-487952-5
26	2-487952-6
27	2-487952-7
28	2-487952-8
29	2-487952-9
30	3-487952-0

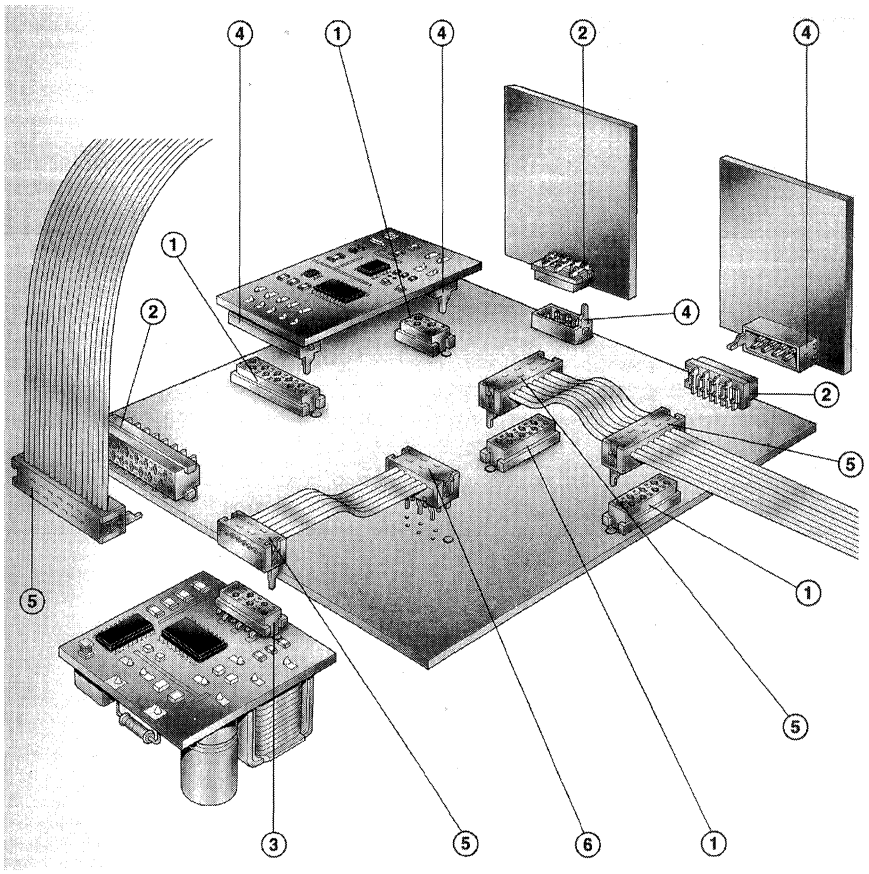
SOURCE: Catalog 82007

METRIC

AMP Micro-MaTch Miniature Connector System

Product Facts

- 1.27 [.050] contact spacing
- 5.0 [.197] wide, 7.0 [.276] height of mated connector
- Suitable for mass termination of 28 AWG [0.08-0.09 mm²] ribbon cable
- No fretting corrosion due to extra spring member
- Contacts fully protected by plastic housings
- Board connectors supplied on tape. For automated handling of connector, please consult AMP
- Built-in polarization
- Full range of application tooling from low to high volume production
- Recognized under the Component Program of Underwriters Laboratories Inc., File No. E28476



① Female-on-Board Connector, Top Entry, see chart below
② Female-on-Board Connector, Side Entry, see page 5048
③ Female Surface Mount Compatible Connector, see page 5048
④ Male-on-Board Connector, see page 5049
⑤ Male-on-Wire Connector, see page 5049
⑥ Paddle Board Connector, see page 5049

Note: Board-to-Board Stack Height 6.2 [.244] and 7.1 [.280]

Female-on-Board Connector, Top Entry

Note: 10 Pos. Housing Dim. (Typ.)—14.7 [.578] L x 5.1 [.201] W x 4.0 [.157] H

No. of Positions	Part Numbers	
	Reel[1]	Box[2]
4	215079-4	7-215079-4
6	215079-6	7-215079-6
8	215079-8	7-215079-8
10	1-215079-0	8-215079-0
12	1-215079-2	8-215079-2
14	1-215079-4	8-215079-4
16	1-215079-6	8-215079-6
18	1-215079-8	8-215079-8
20	2-215079-0	9-215079-0

[1] Packaging quantity of 2,500
[2] Packaging quantity of 250
Note: Recommended Pc board thickness–1.6 [.062]

SOURCE: Catalog 82170

Specifications subject to change.
1-800-522-6752 Product Information Center/ AMP FAX Service
1-800-722-1111 Tooling/Technical Assistance Center

METRIC

Female-on-Board Connector, Side Entry with Polarization

Note: 10 Pos. Housing Dim. (Typ.)—14.7 [.578] L x 5.3 [.209] W x 5.8 [.228] H

No. of Positions	Part Numbers	
	Reel[1]	Box[2]
4	215460-4	7-215460-4
6	215460-6	7-215460-6
8	215460-8	7-215460-8
10	1-215460-0	8-215460-0
12	1-215460-2	8-215460-2
14	1-215460-4	8-215460-4
16	1-215460-6	8-215460-6
18	1-215460-8	8-215460-8
20	2-215460-0	9-215460-0

[1] Packaging quantity of 2,500
[2] Packaging quantity of 250

Female-on-Board Connector, Side Entry without Polarization

Note: 10 Pos. Housing Dim. (Typ.)—14.7 [.578] L x 5.3 [.209] W x 5.8 [.228] H

No. of Positions	Part Numbers	
	Reel[1]	Box[2]
4	100400-4	7-100400-4
6	100400-6	7-100400-6
8	100400-8	7-100400-8
10	1-100400-0	8-100400-0
12	1-100400-2	8-100400-2
14	1-100400-4	8-100400-4
16	1-100400-6	8-100400-6
18	1-100400-8	8-100400-8
20	2-100400-0	9-100400-0

[1] Packaging quantity of 2,500
[2] Packaging quantity of 250

Female-on-Board Connector, Surface Mount Compatible

(Suitable for Epoxy and Paper Phenolic Pc Boards)

Note: 10 Pos. Housing Dim. (Typ.)—14.7 [.578] L x 5.2 [.204] W x 5.0 [.197] H

No. of Positions	Part Numbers	
	Reel[1]	Box[2]
4	100411-4	7-100411-4
6	100411-6	7-100411-6
8	100411-8	7-100411-8
10	1-100411-0	8-100411-0
12	1-100411-2	8-100411-2
14	1-100411-4	8-100411-4
16	1-100411-6	8-100411-6
18	1-100411-8	8-100411-8
20	2-100411-0	9-100411-0

[1] Packaging quantity of 2,500
[2] Packaging quantity of 250

SOURCE: Catalog 82170

Specifications subject to change.

1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

METRIC

Male-on-Board Connector

Note: 10 Pos. Housing Dim. (Typ.)—11.43 [.450] L x 5.0 [.197] W x 7.1 [.280] H

No. of Positions	Part Numbers	
	Reel[1]	Box[2]
4	215464-4	7-215464-4
6	215464-6	7-215464-6
8	215464-8	7-215464-8
10	1-215464-0	8-215464-0
12	1-215464-2	8-215464-2
14	1-215464-4	8-215464-4
16	1-215464-6	8-215464-6
18	1-215464-8	8-215464-8
20	2-215464-0	9-215464-0

[1] Packaging quantity of 2,500
[2] Packaging quantity of 250
Note: Recommended Pc board thickness—1.6 [.062]

Male-on-Wire Connector

Note: 10 Pos. Housing Dim. (Typ.)—16.2 [.637] L x 5.1 [.197] W x 10.4 [.409] H

No. of Positions	Part Numbers	
	Reel[1]	Box[2]
4	215083-4	7-215083-4
6	215083-6	7-215083-6
8	215083-8	7-215083-8
10	1-215083-0	8-215083-0
12	1-215083-2	8-215083-2
14	1-215083-4	8-215083-4
16	1-215083-6	8-215083-6
18	1-215083-8	8-215083-8
20	2-215083-0	9-215083-0

[1] Packaging quantity of 2,500
[2] Packaging quantity of 250

Paddle Board Connector

Note: 10 Pos. Housing Dim. (Typ.)—16.2 [.637] L x 5.1 [.197] W x 8.3 [.327] H

No. of Positions	Part Numbers	
	Reel[1]	Box[2]
4	215570-4	7-215570-4
6	215570-6	7-215570-6
8	215570-8	7-215570-8
10	1-215570-0	8-215570-0
12	1-215570-2	8-215570-2
14	1-215570-4	8-215570-4
16	1-215570-6	8-215570-6
18	1-215570-8	8-215570-8
20	2-215570-0	9-215570-0

[1] Packaging quantity of 2,500
[2] Packaging quantity of 250
Note: Recommended Pc board thickness—1.6 [.062]

SOURCE: Catalog 82170

Specifications subject to change.

1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

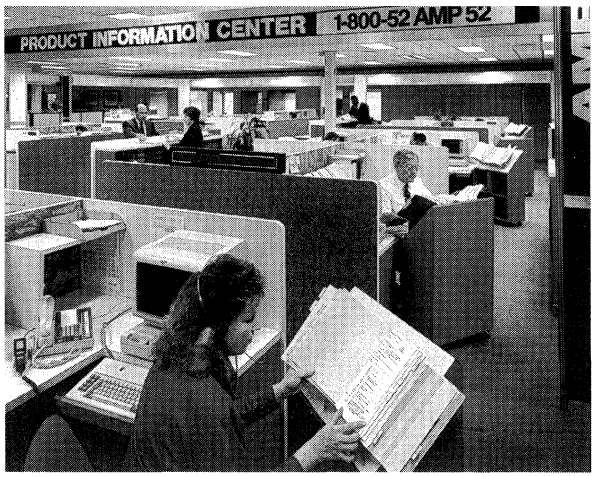
Need Information?
Call the AMP

PRODUCT INFORMATION CENTER

1-800-522-6752

The Product Information Center is staffed with specialists well versed in all AMP products. The Center can provide you with:

- Catalogs
- Technical Support
- Product Samples



AMP FAX SERVICE

Instant information by FAX 24-hours a day.

- Drawings
- Instruction Sheets (IS#)
- Product Specifications
- Application Specifications
- Latest Revision of Catalog Pages
- AMP Authorized Distributors Locations
- Instructions for AMP FAX Service

See Inside Front Cover for Instructions on "How to Access" AMP FAX SERVICE

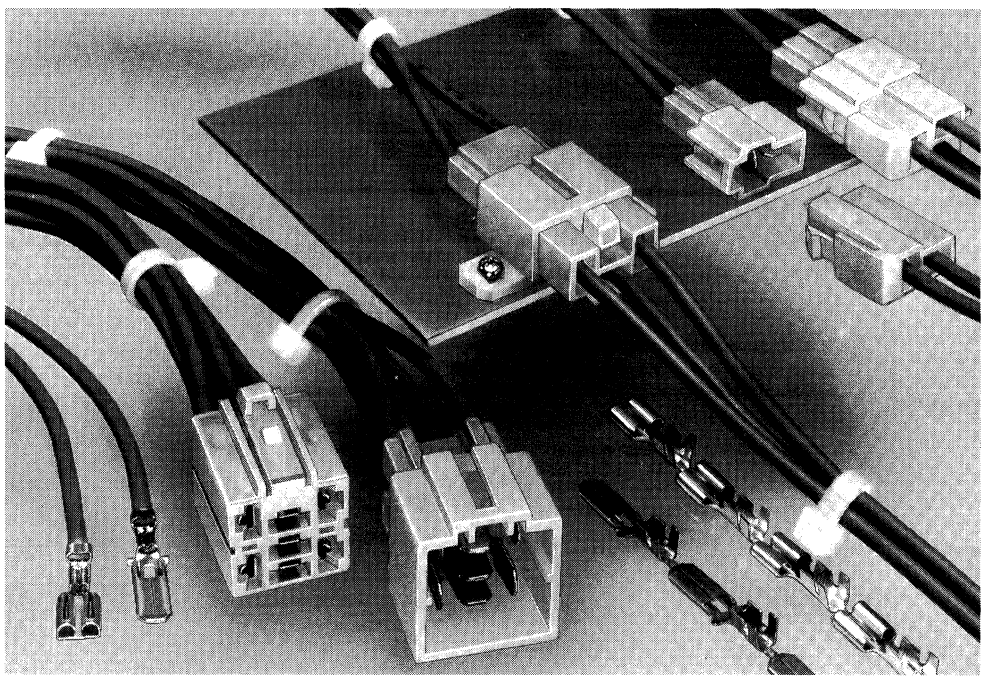
METRIC

AMP 250 Series Housing Lance Connectors

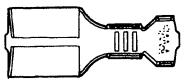
Wire-to-Wire Connectors

Product Facts

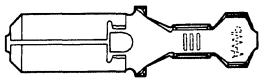
- Tab and receptacle contacts provide positive electrical contact
- Housing lance design makes connector assembling operations easier and faster
- Standard and Interlock Types, each available in two styles, one for panel-mounting and the other for free-hanging applications
- Both types use the same tab and receptacle contacts
- Contacts accept AWG 22-12 (0.3-3.37 mm²) wires with insulation diameters of 1.5-3.8 [.06-.15]



Receptacle and Tab Contacts



Receptacle (for Plug)



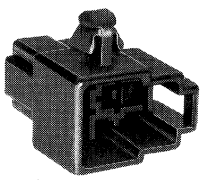
Tab (for Cap)

Wire Range AWG	Wire Range mm²	Wire Ins. Diameter	Finish	Part Numbers (Strip) Receptacle	Part Numbers (Strip) Tab
22-20	0.3-0.5	**1.5-2.2** [.06-.087]	—	170384-1	170349-1
				2-170384-1	
				3-170384-1[1]	
			Tin	170384-2	170349-2*
				3-170384-2[1]	
				4-170384-2[2]	
20-14	0.5-2.27	**2.2-3.4** [.087-.134]	—	170032-2	170340-1
			Tin	170032-5	170340-3*
14-12	2.0-3.37	**2.9-3.8** [.114-.15]	—	170258-1	170341-1
				2-170258-1	
				3-170258-1[1]	
			Tin	170258-2	—
				4-170258-2[2]	170341-3*

[1] Reverse Reel
[2] Inverted Reel
*Pre-Tin

Standard Type

Cap Housings, Panel Mount



Applicable Contact Part Nos.
For Cap: 170349
170340
170341

Note: 3 Pos. Housing Dim. (Typ.)—22.9 [.902] L x 28.5 [1.122] W x 16.4 [.646] H

No. of Pos.	Cap Housing Part No.	Cap Housing Color	Mating Plug Housing
2	172383-1	Natural	172130-❑
	172383-2	Black	
	172383-3	Brown	
	172383-4	Green	
	172383-5	Blue	
	172383-6	Gray	
	172383-7	Yellow	
	172383-8	Orange	
	172383-9	Red	
	1-172383-0	Pink	

No. of Pos.	Cap Housing Part No.	Cap Housing Color	Mating Plug Housing
3	172384-1	Natural	172132-❑
	172384-2	Black	
	172384-3	Brown	
	172384-4	Green	
	172384-5	Blue	
	172384-6	Gray	
	172384-7	Yellow	
	172384-8	Orange	

Note: Numbers in ❑ varies by Plug Housing color (refer to Cap Housing)

SOURCE: Catalog 124962

Specifications subject to change.

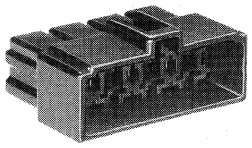
1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

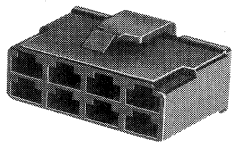
METRIC

Standard Type
(Continued)

Cap and Plug Housings, Free-Hanging



Cap Housing



Plug Housing

Applicable Contact Part Nos.
For Cap: 170349
170340
170341
For Plug: 170384
170032
170258

Note: 8 Pos. Housing Dim. (Typ.)—Cap, 40.5 [1.594] L x 28.5 [1.122] W x 18.6 [.732] H; Plug, 37.0 [1.457] L x 25.0 [.984] W x 18.6 [.732] H

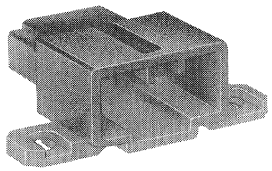
No. of Pos.	Part Numbers	
	Cap Housing	Plug Housing
1	172127-❑	172128-❑
2	172129-❑	172130-❑
3	172131-❑	172132-❑
4	172133-❑	172134-❑
6	171897-❑	171898-❑
8	172135-❑	172136-❑
10	172137-❑	172138-❑

Note: Number in ❑ varies by color (refer to table at right)

Suffix No. (❑)	Housing Color
-1	Natural
-2	Black
-3	Brown
-4	Green
-5	Blue
-6	Gray
-7	Yellow
-8	Orange
-9	Red

Interlock Type

Cap Housings, Panel Mount



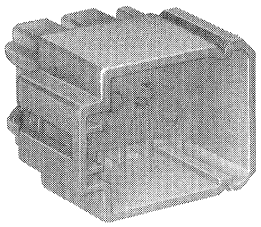
Applicable Contact Part Nos.
For Cap: 170349
170340
170341

Note: 3 Pos. Housing Dim. (Typ.)—44.6 [1.756] L x 33.0 [1.299] W x 15.4 [.606] H

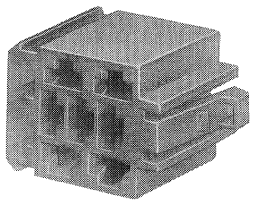
No. of Pos.	Cap Housing		Mating Plug Housing
	Part No.	Color	
3	172387-1	Natural	172220-❑
	172387-2	Black	
	172387-3	Brown	
	172387-4	Green	
	172387-5	Blue	
	172387-6	Gray	
	172387-7	Yellow	

Note: Number in ❑ varies by color (refer to Cap Housing)

Cap and Plug Housings, Free-Hanging



Cap Housing



Plug Housing

Applicable Contact Part Nos.
For Cap: 170349
170340
170341
For Plug: 170384
170032
170258

Note: 9 Pos. Housing Dim. (Typ.)—Cap, 25.2 [.992] L x 33.0 [1.299] W x 32.2 [1.268] H; Plug, 21.4 [.843] L x 25.0 [.984] W x 34.5 [1.358] H

No. of Pos.	Part Numbers	
	Cap Housing	Plug Housing
1	172215-❑	172216-❑
2	172217-❑	172218-❑
3	172219-❑	172220-❑
4	172221-❑	172222-❑
5	172223-❑	172224-❑
7	172225-❑	172226-❑
9	172227-❑	172228-❑

Note: Number in ❑ varies by color (refer to table at right)

Suffix No. (❑)	Housing Color
-1	Natural
-2	Black
-3	Brown
-4	Green
-5	Blue
-6	Gray
-7	Yellow

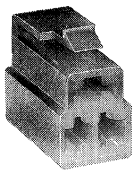
SOURCE: Catalog 124962

METRIC

Standard Type

Cap Housing with Double Lock Plate, Panel Mount

Applicable Contact Part Nos.
For Cap: 170349
170340
170341



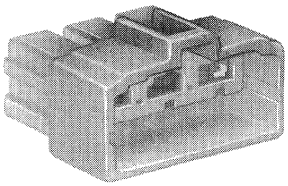
Note: 3 Pos. Housing Dim. (Typ.)—22.9 [.902] L x 28.5 [1.122] W x 16.4 [.646] H

No. of Pos.	Cap Housing		Mating Plug Housing
	Part Number	Color	
2	176992-1	Natural	172130-❑
3	178001-1	Natural	172132-❑

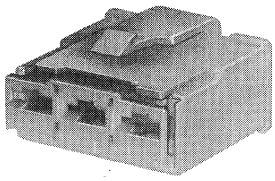
Note: Numbers in ❑ varies by color: -1 (natural), -2 (black), -3 (brown), -4 (green), -5 (blue), -6 (gray), -7 (yellow), -8 (orange), and -9 (red)

Cap and Plug Housing with Double Lock Plate, Free-Hanging

Applicable Contact Part Nos.
For Cap: 170349
170340
170341
For Plug: 170384
170258
170032



Cap Housing



Plug Housing

Note: 6 Pos. Housing Dim. (Typ.)—Cap, 31.5 [1.240] L x 28.5 [1.122] W x 18.6 [.732] H; Plug, 28.0 [1.102] L x 25.0 [.984] W x 18.6 [.732] H

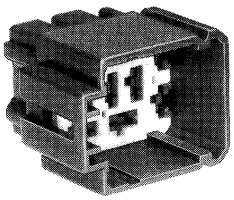
No. of Pos.	Color	Part Numbers	
		Cap Housing	Plug Housing
1	Natural	—	176986-1
4	Natural	178007-1	178004-1
6	Natural	178025-1	178022-1

Also Mates with—Standard Type Cap and Plug Housings, see page 6002

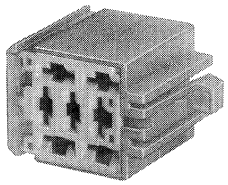
Interlock Type

Cap and Plug Housing with Double Lock Plate, Free-Hanging

Applicable Contact Part Nos.
For Cap: 170349
170340
170341
For Plug: 170384
170032
170258



Cap Housing



Plug Housing

Note: 9 Pos. Housing DIm. (Typ.)—Cap, 25.2 [.992] L x 33.0 [1.299] W x 32.2 [1.268] H; Plug, 21.4 [.843] L x 25.0 [.984] W x 34.5 [1.358] H

No. of Pos.	Color	Part Numbers	
		Cap Housing	Plug Housing
1	Natural	—	176989-1
3	Natural	176998-1	176995-1
4	Natural	178013-1	178010-1
5	Natural	178019-1	178016-1
7	Natural	—	178028-1
9	Natural	178034-1	178031-1

Also Mates with—Interlock Type Cap and Plug Housings, see page 6002

SOURCE: Catalog 124962

Specifications subject to change.

1-800-522-6752
Product Information Center/ AMP FAX Service

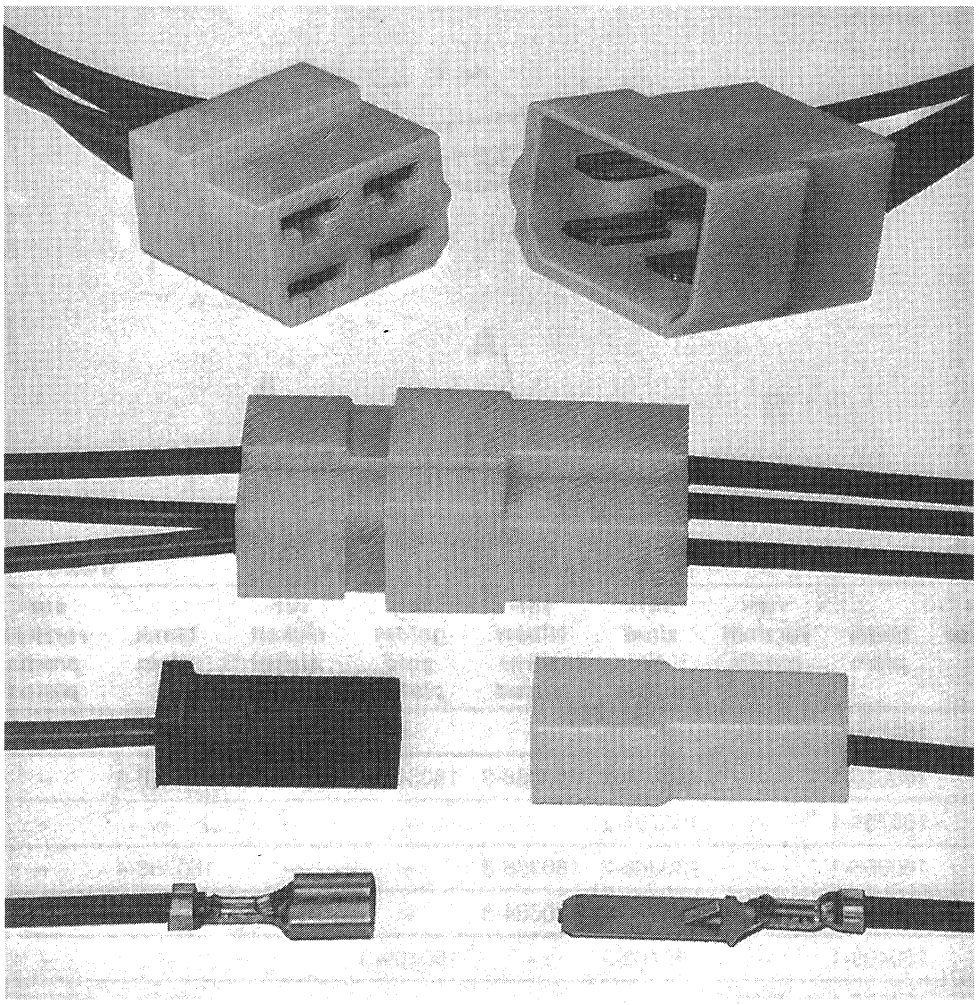
1-800-722-1111
Tooling/Technical Assistance Center

FASTIN-FASTON Connectors

FASTIN-FASTON Connectors are the multiple-connector version of the basic FASTON Terminal Line. Primarily used as harness connectors, they make possible simultaneous and quick attachment of up to eight separate circuits with a maximum of 20 leads. The finished housing can be panel mounted or left free-hanging and is ideally suited for such applications as electric ranges, washers, dryers and other appliances and automotive wiring.

Receptacles and tabs, with the exception of small locking lances to help retention in housing, are identical to those in the FASTON Terminal Line. FASTIN-FASTON connectors are CSA Certified and Recognized under the Component Program of Underwriters Laboratories Inc.

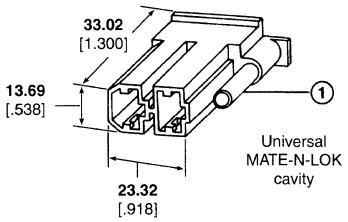
Notes: Temperature range of housing is rated at up to 125°C to permit use of assembly in areas of relatively high temperatures. Circuits are identified by numbered points on both male and female housings.

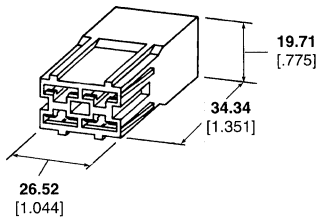


SOURCE: Catalog 82004/124799/124962

".375" Series [9.5 Series] FASTIN-FASTON Connectors

Receptacle Housings





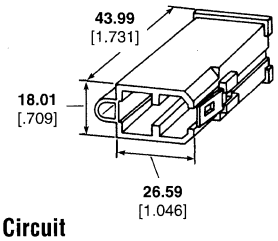
3 Circuit

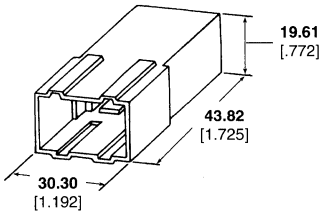
Material	Color	Part Number
Polyamide	Natural	171447-1
Polyamide	Black	171447-2
Polyamide	Brown	171447-3

4 Circuit

Material	Color	Part Number
Polyamide	Natural	280073-0
Polyamide	Red	280073-1

Tab Housing





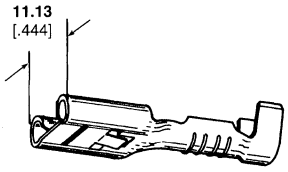
3 Circuit

Material	Color	Part Number
Polyamide	Natural	171448-1
Polyamide	Black	171448-2
Polyamide	Brown	171448-3

4 Circuit

Material	Color	Part Number
Polyamide	Natural	280072-0

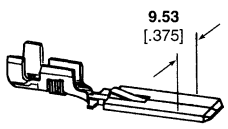
Receptacle with Insulation Support



Fits Tab Size 2.8 x mm	Wire Size Range mm²	Insulation Diameter mm	Part Numbers					
			Brass			Phosphor Bronze		
			brightly dip	tin plated	brightly dip	tin plated	plain	silver plated
1.22	1.0-2.5	2.4-3.7	—	—	—	—	962835-1	962835-2
1.22	2.5-4.0	3.3-4.5	—	—	—	—	962834-1	962834-2
1.22*	4.0-6.0	3.8-5.1	—	280756-2	280756-3	280756-4	—	—
1.22	4.0-6.0	4.0-5.1	—	—	—	—	962833-1	—
1.22	4.0-6.0	4.1-5.3	—	151667-2	—	151667-4	—	—
1.22*	6.0-10.0	5.1-7.0	280755-1	280755-2	280755-3	280755-4	—	—

* According to DIN 46340, Part 4

Tabs with Insulation Support



Wire Size Range mm²	Insulation Diameter mm	Part Numbers			
		Brass		Phosphor Bronze	
		plain	tin plated	plain	tin plated
4.0-6.0*	3.8-5.1	280075-1	280075-2	280075-3	—
6.0-10.0*	5.1-7.0	—	280074-2	280074-3	280074-4

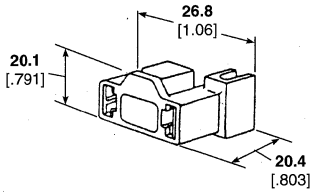
* According to DIN 46343, Part 4

SOURCE: Catalog 82004/124799/124962

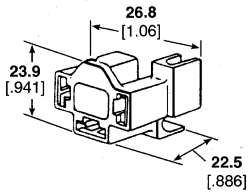
Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

".312" Series [8.0 Series] FASTIN-FASTON Connectors

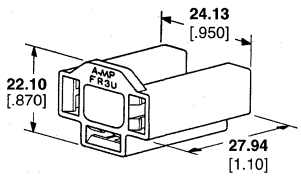
Receptacle (Head Lamp Connector) Housings



Style A
2 Circuit Housing
Right Angle



Style B
3 Circuit Housing
Right Angle

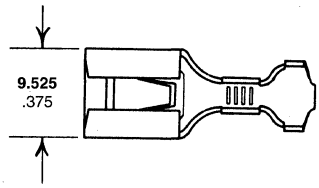


Style C
3 Circuit Housing
Horizontal

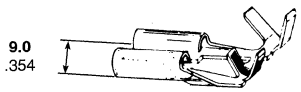
Style	Material	Color	Part Numbers
A	—	—	180914
B	Polyamide	Natural	925176
B	—	—	180913
C, B	Polyamide	Grey	925176-3
C, B	Polyester	Natural	925176-4
C, B	Polyamide	Black	925176-5

Style	Material	Color	Part Numbers
C	Polyester	Natural	925306-1
C	Polyamide	Natural	925306-2
C	Polyamide	Black	925306-3
C	Cycolac	—	480100-1

Receptacles

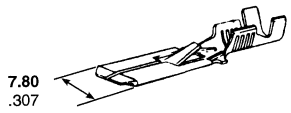


Fits Housing Style	Wire Size AWG	Wire Ins. Dia.	Material and Finish	Part Numbers
C	16-12	**.160 [4.06]** 1.30 [3.30] Max.	Tin Plated Brass	42663-2
	18-16	**.090-1.30** 2.29-3.30	Brass	62392-1



Contact Style	Tab Size 8.0 x mm	Wire Size Range mm²	Insulation Diameter	Part Numbers						
				Plain	Tin Plated	Silver Plated	Nickel Plated	Plain	Tin Plated	Silver Plated
*	0.75	0.5-1.5	2.0-3.1	160741-3	—	—	—	160741-4	—	—
**	0.75	1.0-2.5	2.5-3.8	180373-1	180373-2	180373-6	180373-7	180373-3	180373-5	180373-4
***	0.75	1.0-2.5	2.5-3.8	180453-1	180453-2	180453-4	—	180453-5	180453-6	180453-3
***	0.75	1.0-2.5	2.1-3.1	160862-5	160862-6	—	—	160862-7	160862-8	160862-9
*	0.75	2.5-4.0	3.5-4.6	180374-1	180374-2	180374-6	—	180374-3	180374-5	180374-4
***	0.75	2.5-4.0	3.5-4.6	280315-1	280315-2	280315-3	—	280315-5	280315-6	280315-4

*For Standard Applicator
**According to DIN 46340, Part 5, Form B
***For Mini Applicator



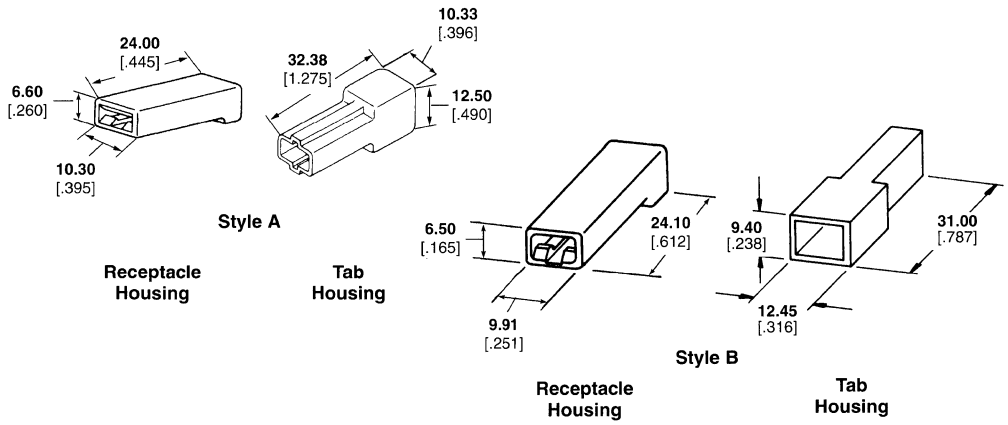
Fits Housing Style	Wire Size AWG mm²	Wire Insulation Diameter	Material and Finish	Part Number
C	12-10 3.08-5.27	1.50-.193 3.8-4.9	Brass	170105-1

SOURCE: Catalog 82004/124799/124962

Specifications subject to change.
1-800-522-6752 Product Information Center/ AMP FAX Service
1-800-722-1111 Tooling/Technical Assistance Center

".250" Series [6.3 Series] FASTIN-FASTON Connectors

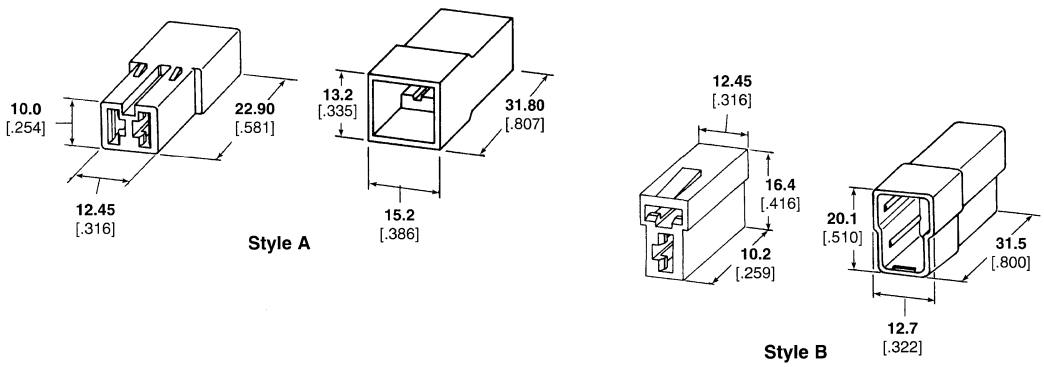
Single Circuit Housings



Style	Material	UL 94[1]	Color	Housing Part Numbers	
				Receptacle	Tab
A	Cycolac	HB	Black	480054-2	480053-2
	Nylon	V2	Natural	480054-3	480053-3
			Black	480054-4	—
			Red	480054-5	480053-5
B	Polyamide	—	Natural	925324-2	180916-0
				73514-0	—
	Polycarbonate	—	Black	—	1-180916-0

[1]Flammability Rating

Two-Circuit Housings



Style	Material	Color	Housing Part Numbers	
			Receptacle	Tab
A	Polyamide	Natural	737245-1	—
			180923*	180924*
			280843	280542
B	Polylamide	Natural	926474	—
			180407	180908

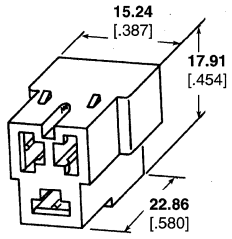
*Material: Nylon

SOURCE: Catalog 82004/124799/124962

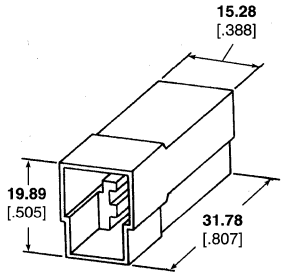
Specifications subject to change.
1-800-522-6752 Product Information Center/ AMP FAX Service
1-800-722-1111 Tooling/Technical Assistance Center

".250" Series [6.3 Series] FASTIN-FASTON Connectors (Continued)

Three Circuit Housings



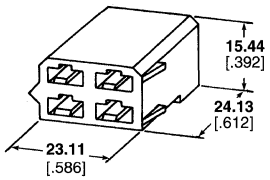
Receptacle Housing



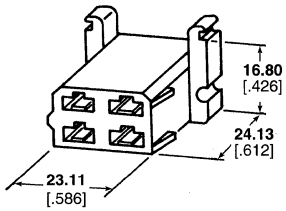
Tab Housing

Material	Color	Housing Part Numbers	
		Receptacle	Tab
Polyamide	Natural	180941	180940
		—	926097-1

Four Circuit Housings

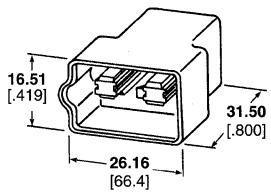


Style A



Style A[1]

Receptacle Housings



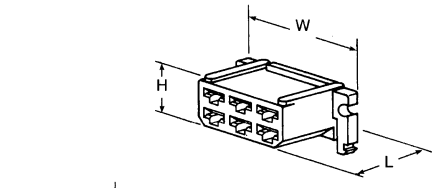
Style B

Tab Housing

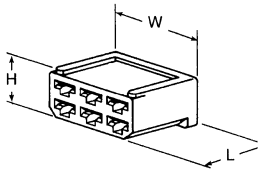
Style	Material	Color	Housing Part Numbers	
			Receptacle	Tab
A	Polyamide	Natural	180900	180901
A[1]	Polyamide	Natural	163498	737021
B	Polyamide	Natural	163120	—

".250" Series [6.3 Series] FASTIN-FASTON Connector Housings (Continued)

Six Circuit Housings

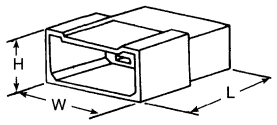


Tab Housing

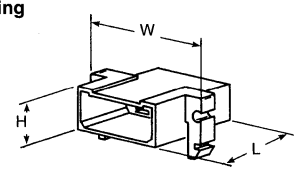


Receptacle Housing

Style A



Receptacle Housing



Tab Housing

Style B

Receptacle Housings

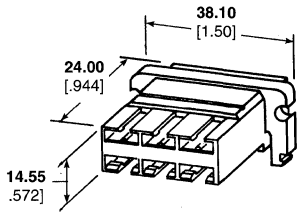
Style	Material	Color	Part Number	Dimensions		
				W	L	H
A	Polyamide V-2	Natural	925276-0	**28.55** [1.124]	**24.26** [.955]	**16.81** [.661]
	Polyamide V-2*	Natural	163006-0	**37.44** [1.474]	**24.13** [.950]	**13.77** [.542]
B	Polyamide V-2	Natural	280314-0	**28.10** [1.106]	**24.26** [.955]	**13.77** [.542]
	Polyamide V-0	Natural	480003-9	**38.10** [1.50]	**24.26** [.955]	**13.77** [.542]
	Nylon V-2	Natural	480003-5	—	**24.00** [.944]	—
	Nylon	Natural	171432-1	—	—	—

* with reinforced locking latches

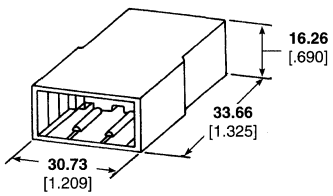
Tab Housings

Style	Material	Color	Part Number	Dimensions		
				W	L	H
A	Polyamide V-2	Natural	189906-0	**31.39** [1.235]	**32.39** [1.275]	**18.03** [.709]
	Polyamide V-0	Natural	480004-9	**31.50** [1.240]	**32.39** [1.275]	**18.14** [.714]
	Nylon V-2	Natural	480004-5	—	—	—
	Nylon	Natural	171433-1	—	—	—
B	Polyamide	Natural	180948-0	**40.50** [1.594]	**32.40** [1.594]	**18.00** [.708]

Six Circuit Housings Reversible



Receptacle Housing



Tab Housing

Material	Color	Housing Part Numbers	
		Receptacle	Tab
Polyamide	Natural	1-140779-1	140831-1

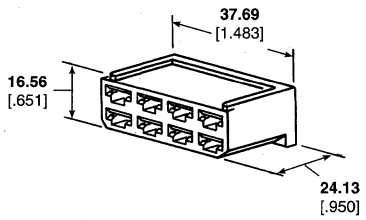
SOURCE: Catalog 82004/124799/124962

Specifications subject to change.
1-800-522-6752 Product Information Center/ AMP FAX Service
1-800-722-1111 Tooling/Technical Assistance Center

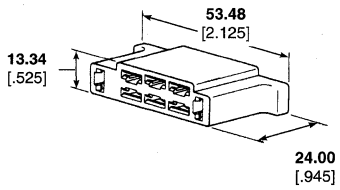
".250" Series [6.3 Series] FASTIN-FASTON Connectors (Continued)

Eight Circuit Receptacle Housings

Style A



Style B



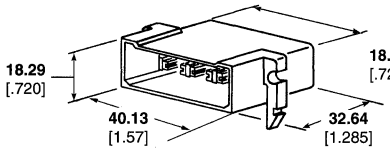
Receptacle Housings

Style	Material	Color	Part Numbers
A	Polyamide V-2	Natural	163007
B	Nylon	Natural	48173-1
			520965-1[1]

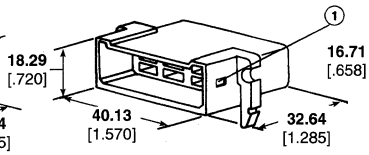
[1]All circuits accept receptacles without locking dimple.

Eight Circuit Tab Housings

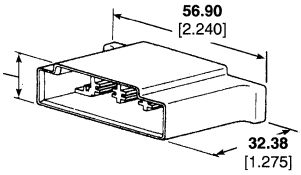
Style A



Style A[1]



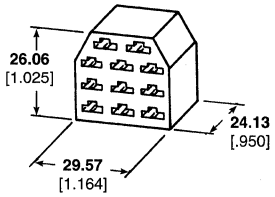
Style B



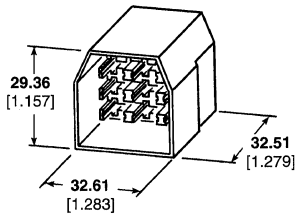
Style	Material	Color	Part Numbers
A	Polyamide	Natural	163008-1
A[1]	Polyamide	Natural	280430-0
B	Nylon	Natural	925341-1

[1]Locking Window for Double Leaf-Spring Housing **Part No. 925340**

Eleven Circuit Housings



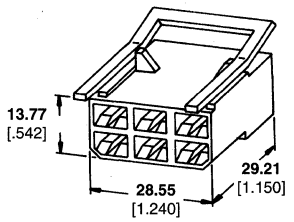
Receptacle Housing



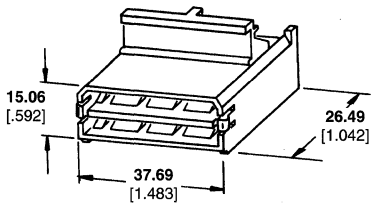
Tab Housing

Housing	Material	Color	Part Number
Receptacle	Polyamide	Natural	151325-1
Tab	Polyamide	Natural	151326-1

Double Leaf-Spring Housings



6 Position
(mates with Tab Housing)
Part No. 180906

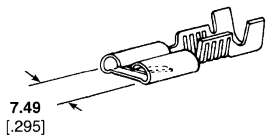


8 Position
(mates with Tab Housing)
Part No. 925341

SOURCE: Catalog 82004/124799/124962

".250" Series [6.3 Series] FASTIN-FASTON Connectors (Continued)

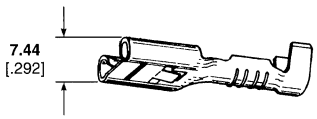
Receptacles (For use with single circuit connectors)



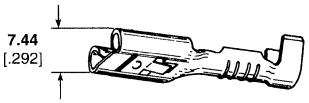
Wire Range AWG	Wire Ins. Dia.	Material and Finish	Part Number
18-14	.120-.160 3.05-4.10	Brass	606341[1]
16-12	.160-.220 or 4.06-5.59 2.130 [3.30] mm	Brass	60249-1[2]
		Tin Plated Brass	60249-2[2]

[1] No front slot
[2] Also capable of accepting (2) 16 AWG wires

Receptacles



Style A

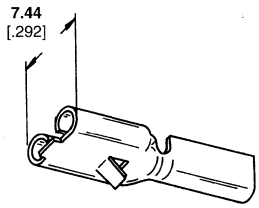


Style B

Type	Fits Tab Size 6.3 x mm²	Wire Size Range mm	Insulation Diameter	Part Numbers						
				Brass				Phosphor Bronze		
				Plain	Pre-tin Plated	Tin Plated	Silver Plated	Plain	Tin Plated	Silver Plated
A	0.8	0.3-0.8	2.2-3.2	60295-1	—	60295-2	—	—	—	—
	0.8	0.3-0.8	2.2-3.2	280095-1	—	280095-2	—	—	—	—
A+	0.8	0.5-1.0	1.4-2.3	160928-1	—	160928-2	—	160928-3	160928-4	—
B+	0.8	0.5-1.0	1.4-2.3	160860-1	—	160860-2	—	160860-3	160860-4	—
	0.8	0.5-1.0	2.0-3.3	160870-1	—	160870-2	—	160870-3	160870-4	—
A	0.8	0.5-1.5	2.2-3.2	160825-5	—	—	—	160825-6	160825-4	—
A+*	0.8	0.5-1.5	2.3-3.3	5-160526-6	—	5-160526-7	6-160526-1	5-160526-8	5-160526-9	6-160526-0
B+*	0.8	0.5-1.5	2.3-3.3	5-160558-1	—	5-160558-2	—	5-160558-3	5-160558-9	6-160558-0
A	0.8	0.8-2.1	3.1-4.1	1-42100-1	1-42100-4	1-42100-2	1-42100-3	1-42100-5	1-42100-6	1-42100-8
	0.8	0.8-2.1	3.1-4.3	735213-1	—	735213-2	—	—	—	—
B	0.8	0.8-2.1	3.1-4.1	42281-1	—	42281-2	42281-3	—	—	—
B+	0.8	1.0-2.5	3.1-4.1	5-160446-4	—	5-160446-5	5-160446-6	5-160446-1	5-160446-2	—
A+*	0.8	1.0-2.5	3.4-5.1	6-160448-0	—	6-160448-5	6-160448-6	6-160448-1	6-160448-2	6-160448-3
A+	0.8	>1.0-2.5	2.1-3.1	160927-1	—	160927-2	—	160927-3	160927-4	—
B+	0.8	>1.0-2.5	2.1-3.1	160917-1	—	160917-2	—	160917-3	160917-4	—
	0.8	1.3-3.4	3.8-4.8	42904-1	—	42904-2	—	—	—	—
	0.8	>2.5-4.0	3.3-4.5	160913-1	—	160913-2	—	160913-3	160913-4	—
A	0.8	4.0-6.0	3.4-5.1	180351-1	—	180351-2	—	—	—	—
A+*	0.8	4.0-6.0	3.4-5.1	180351-7	—	180351-8	2-180351-2	180351-9	2-180351-0	2-180351-1
B	0.8	4.0-6.0	3.4-5.1	160811-7	—	180560-2	180560-9	180560-7	180560-8	—
B+	0.8	4.0-6.0	4.0-5.2	160914-1	—	160914-2	—	160914-3	160914-4	—

B For connection with less than 4 contacts
* According to DIN 46340, Part 3
+ Chamfered

Receptacle for Pc Board Soldering (for tab and relay connection)



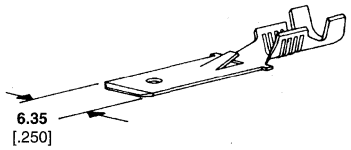
Fits Tab Size mm	Part Numbers		
	Plain	Brass pre-tin plated	Phosphor Bronze pre-tin plated
0.8	—	341037-1	341037-2
	153259-1	153259-3	—

SOURCE: Catalog 82004/124799/124962

Specifications subject to change.
1-800-522-6752 Product Information Center/ AMP FAX Service
1-800-722-1111 Tooling/Technical Assistance Center

".250" Series [6.3] Series FASTIN-FASTON Connectors
(Continued)

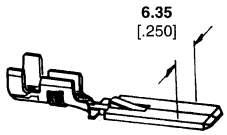
Tabs
(for use with single or multiple circuit connectors)
Tab Thickness .032 [0.81]



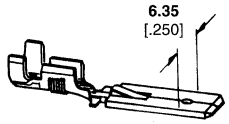
Wire Range AWG	Wire Ins. Dia.	Material and Finish	Part Numbers
22-18	**2.16-3.18** [.085-.125]	Brass	63553-2
		Tin Plated Brass	62553-3
14-10	**3.05-4.32** [.120-.170]	Tin Plated Brass	60701-1

Tabs

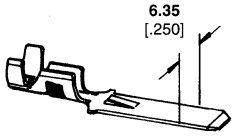
Style A



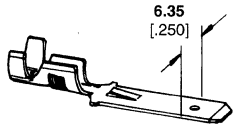
Style B



Style C



Style D



Type	Wire Size Range mm²	Insulation Diameter	Part Numbers						
			Brass				Phosphor Bronze		
			Plain	Pre-tin plated	Tin plated	Silver plated	Plain	Tin plated	Silver plated
B**	0.2-0.5	1.0-1.6	962825-1	962825-8	962825-2	—	962825-3	962825-4	962825-5
A	0.3-0.8	1.5-2.5	60412-2	—	60412-1	—	—	—	—
B	0.3-0.8	2.2-3.2	160645-1	—	160645-2	—	160645-3	—	—
A*	0.3-0.8	2.2-3.2	60294-1	—	60294-2	—	—		
A	0.3-0.8	2.3-3.3	280096-1	—	280096-2	—	280096-3	280096-4	—
B*	0.3-0.8	2.2-3.4	160691-1	—	160691-2	160691-5	160691-3	160691-4	—
B**	0.5-1.0	1.4-2.3	160859-1	—	160859-2	—	160859-3	160859-4	160859-5
B**	0.5-1.0	2.0-2.7	160869-1	—	160869-2	—	160869-3	160869-4	—
A*	0.8-2.1	3.1-4.1	42098-1	42098-6	42098-2	42098-3	160450-1	160450-2	160450-3
CX	0.8-2.1	3.1-4.1	42099-1	—	42099-2	42099-3	160452-1	160452-2	160452-3
B	0.8-2.1	3.1-4.1	42460-1	—	42460-2	42460-3	160457-1	160457-2	160457-3
DX	0.8-2.1	3.1-4.1	42580-1	—	42580-2	42580-3	—	160459-2	160459-3
B**	>1.0-2.5	2.7-3.7	928947-1	—	928947-2	—	928947-3	928947-4	—
B	>1.0-2.5	2.2-3.0	928962-1	—	928962-2	—	928962-3	928962-4	—
B	2.1-3.4	2.8-4.3	160786-4	—	160786-5	—	160786-1	160786-2	160786-3
B**	>2.5-4.0	3.3-4.5	928949-1	—	928949-2	—	928949-3	928949-4	—
A	4.0-6.0	3.4-5.1	180352-1	180352-7	180352-2	180352-6	180352-3	180352-5	180352-4
B	4.0-6.0	3.4-5.1	280080-1	—	280080-2	280080-5	280080-3	280080-4	—
B**	>4.0-6.0	4.0-5.1	928951-1	—	928951-2	—	928951-3	928951-4	—

* According to DIN, except Wire Size Range
** According to DIN 46343, Part 3
X For Back-to-Back Mounting

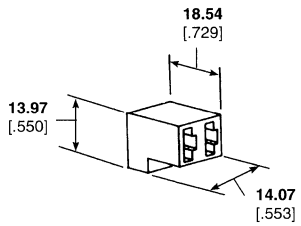
Extraction Tool
Part No. 725864-1

SOURCE: Catalog 82004/124799/124962

Specifications subject to change.
1-800-522-6752 Product Information Center/ AMP FAX Service
1-800-722-1111 Tooling/Technical Assistance Center

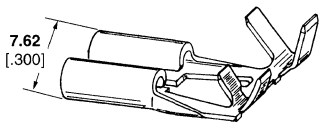
".250" Series [6.3 Series] FASTIN-FASTON Connectors
(Continued)

Flag Receptacle Housing



No. of Postions	Material	Part Numbers	
		Natural	Black
2	Polyamide	180918	—
3	Polyamide	180929	180929-5
5	Polyamide	180919	—

Receptacles (For Flag Receptacle Housing)



Contact Style	Fits Tab Size 6.3 x mm	Wire Size Range mm²	Insulation Diameter mm	Part Numbers					
				Brass			Phosphor Bronze		
				Plain	Tin plated	Silver plated	Plain	Tin plated	Silver plated
*	0.8	0.5-1.0	1.4-2.3	60861-5	160861-6	—	160861-7	160861-8	—
**	0.8	0.5-1.0	2.0-2.7	160919-1†	160919-2†	—	160919-3†	160919-4†	—
**	0.8	0.5-1.0	2.0-3.3	160871-5	160871-6	—	160871-7	160871-8	—
*	0.8	0.5-1.5	2.3-3.3	280357-3	280357-4	—	280357-1	280357-2	—
*	0.8	0.5-1.5	2.3-3.3	280428-3	280428-4	—	280428-1	280428-2	—
*	0.8	1.0-2.5	2.5-3.8	180398-1†	180398-2†	180398-3†	180398-4†	180398-5†	180398-6†
**	0.8	1.0-2.5	2.5-3.8	280085-1†	280085-2†	—	280085-3†	280085-4†	—

* For Standard Applicator
** For Mini Applicator
† Without Dimple

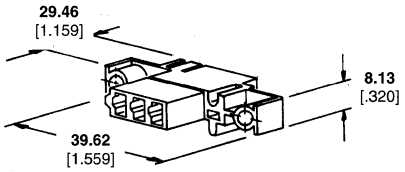
Extraction Tool Part No. 725864-1

SOURCE: Catalog 82004/124799/124962

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

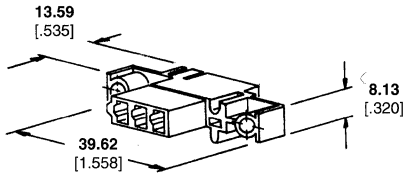
".187" Series [4.8 Series] FASTIN-FASTON Connectors

Three Circuit Receptacle Housings



No. of Positions	Material	Color	Part Number
3	Polyamide	white	1-480252-0
		orange	1-480252-2
		yellow	1-480252-3
		green	1-480252-4
		blue	1-480252-5
		violet	1-480252-6
		grey	1-480252-7
		black	1-480252-8
		red	1-480252-9

Three Circuit Tab Housings

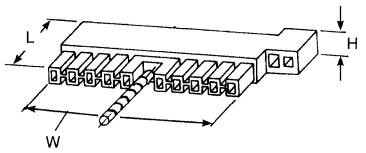


No. of Positions	Material	Color	Part Number
3	Polyamide	white	1-480251-0
		brown	1-480251-1
		orange	1-480251-2
		yellow	1-480251-3
		green	1-480251-4
		violet	1-480251-6
		grey	1-480251-7
		black	1-480251-8
		red	1-480251-9

SOURCE: Catalog 82004/124799/124962

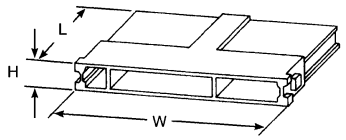
".187" Series [4.8 Series] FASTIN-FASTON Connectors
(Continued)

Decade Connector Housings



With Center Fastener for Receptacles

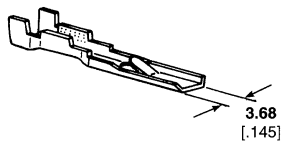
Type	Material	Color	Part Number	Dimensions		
				W	L	H
A	Polyamide	natural	825274-1	**75.18** [2.959]	**27.89** [1.098]	**6.88** [.270]



With Thread Socket for Tab

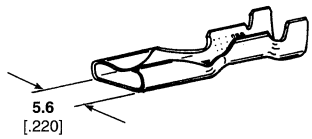
Type	Material	Color	Part Number	Dimensions		
				W	L	H
B	Polyamide	natural	825273-1	**82.80** [3.260]	**20.00** [.787]	**9.91** [.390]
	Polycarbonate	green	925283-1	**82.85** [3.261]	**29.97** [1.180]	**9.91** [.390]

Receptacles



Wire Size Range mm²	Insulation Diameter mm	Tab Thickness mm	Part Numbers				
			Brass			Phosphor Bronze	
			Plain	Pre-tin Plated	Tin plated	Plain	Pre-tin Plated
0.5-1.4	2.3-3.3	0.4	152367-1	—	—	152367-0	—
			925614-1	925614-3	925614-5	915614-4	925614-2
			—	60434-1	60434-3	60434-2	—
			925656-1	925656-3	—	—	925656-2

Tabs



Wire Size Range mm²	Insulation Diameter mm	Tab Thickness mm	Part Numbers				
			Brass			Phosphor Bronze	
			Plain	Pre-tin Plated	Tin plated	Plain	Pre-tin Plated
0.5-1.4	2.3-3.3	0.3	152368-1	60435-1*	—	60435-2	152368-0
			925617-1	—	—	—	925617-1

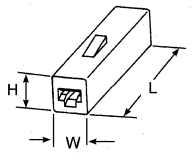
* Loose Piece **Part No. 60520-1**

SOURCE: Catalog 82004/124799/124962

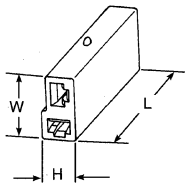
Specifications subject to change.
1-800-522-6752 Product Information Center/ AMP FAX Service
1-800-722-1111 Tooling/Technical Assistance Center

".110" Series [2.8 Series] FASTIN-FASTON Connectors

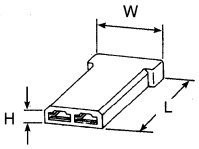
Receptacle Housings



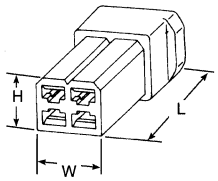
Style A



Style B



Style C



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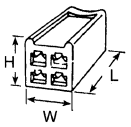
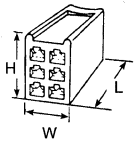


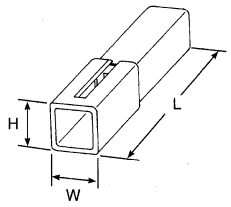
Style E



Style F

Housing Style	No. of Circuits	Material	Color	Part Number	Dimensions W	L	H
A	1	Polyamide	Natural	626062-0	**5.99** [.235]	**18.01** [.709]	**5.99** [.235]
B	2	Polyamide	Natural	626064-0	**6.30** [.248]	**18.01** [.709]	**11.23** [.442]
C	2	Polyamide	Natural	925014-0	**14.00** [.551]	**18.03** [.709]	**5.00** [.196]
	3	Polyamide	Natural	925015-0	**19.00** [.748]	**18.03** [.709]	**5.00** [.196]
	4	Polyamide	Natural	925016-0	**21.08** [.829]	**18.03** [.709]	**5.00** [.196]
D	4	Polyamide	Natural	626056-0	**10.74** [.272]	**17.98** [.707]	**8.74** [.344]
E	4	Nylon	Natural	170801-3	**14.2** [.559]	**23.5** [.925]	**13.6** [.535]
F	6	Nylon	Natural	170803-3	**14.2** [.559]	**23.5** [.925]	**17.6** [.692]

Tab Housings



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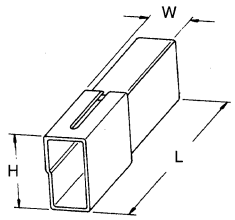

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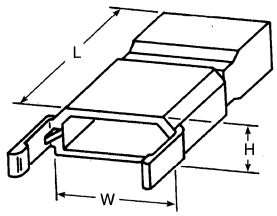

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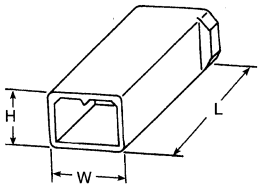

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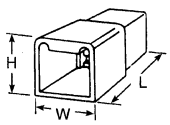
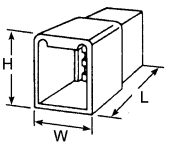


Style E



Style F

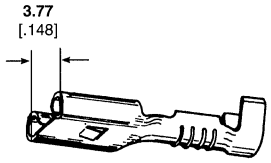
Housing Style	No. of Circuits	Material	Color	Part Number	Dimensions W	L	H
A	1	Polyamide	Natural	626063-0	**8.31** [.327]	**25.43** [1.001]	**8.31** [.327]
B	2	Polyamide	Natural	626065-0	**8.10** [.319]	**25.43** [1.001]	**12.90** [.508]
C	3	Polyamide	Natural	925475-1	**18.80** [.740]	**27.48** [1.082]	**7.21** [.284]
	4	Polyamide	Natural	925475-2	**18.80** [.740]	**27.48** [1.082]	**7.21** [.284]
D	4	Polyamide	Natural	626057-0	**13.00** [.512]	**27.33** [1.076]	**11.00** [.433]
E	4	Nylon	Natural	170800-3	**11.20** [.441]	**18.50** [.728]	**10.00** [.394]
F	6	Nylon	Natural	170802-3	**11.20** [.441]	**18.50** [.728]	**14.00** [.551]

SOURCE: Catalog 82004/124799/124962

Specifications subject to change.
1-800-522-6752 Product Information Center/ AMP FAX Service
1-800-722-1111 Tooling/Technical Assistance Center

".110" Series [2.8 Series] FASTIN-FASTON Connectors (Continued)

Receptacles

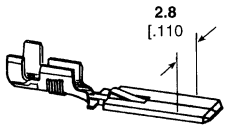


Style A

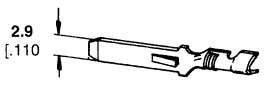
Style	Fits Tab Size 2.8 x mm	Wire Size Range mm²	Insulation Diameter mm	Part Numbers									
				Brass						Phosphor Bronze			
				Plain	Pre-Tin Plated	Tin Plated	Silver Plated	Gold Plated	Nickel Plated	Plain	Pre-tin Plated	Tin Plated	Silver Plated
A	0.4	0.3-0.8	1.3-2.0	160750-1	160750-2	—	—	—	—	—	—	—	—
	0.5	0.05-0.14	0.8-1.3	160388-1	—	160388-2	160388-3	160388-4	—	160388-6	—	160388-7	
	0.5	0.12-0.35	1.0-2.0	160754-1	—	160754-2	—	—	—	—	—	—	—
	0.5*	0.3-0.6	1.3-2.0	160366-1	—	160366-2	160366-3	—	—	160366-4	—	160366-5	160366-6
	0.5*	0.5-1.5	2.0-3.1	160684-3	160684-4	—	160684-8	—	—	160684-1	160684-2	—	160684-9
	0.8	0.51-1.42	2.0-3.0	170015-1[1]									
				170042-1[2]									
	0.8	0.05-0.14	0.8-1.3	160409-1	—	160409-2	—	160409-3	—	—	—	—	—
	0.8	0.2-0.5	1.0-1.6	160922-1	160922-2	—	—	—	—	160922-3	160922-3	—	—
	0.8	0.2-0.56	1.5-2.0	—	150571-1	150571-2	—	—	—	—	—	—	—
	0.8	0.2-0.56	1.5-2.0	—	150571-1	150571-2	—	—	—	—	—	—	—
	0.8*	0.3-0.6	1.3-2.0	160173-1	—	160173-2	160173-3	160173-5	160173-4	160173-6	—	160173-7	—
	0.8	0.5-1.0	1.4-2.3	160864-1	160864-2	—	—	—	—	160684-3	160864-4	—	—
	0.8	0.5-1.0	1.4-2.3	737255-1	—	737255-3	—	—	—	737255-2	—	737255-4	
	0.8	0.5-1.4	2.0-3.1	—	150572-2	—	—	—	—	—	—	—	
	0.8*	0.5-1.5	2.0-3.1	160655-1	160655-2	160655-6	160655-5	—	—	160655-3	160655-4	—	

[1]Strip Form
[2]Loose Piece
* According to DIN 46340, Part 1

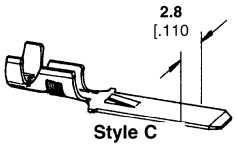
Tabs



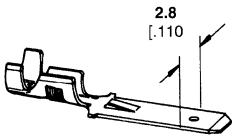
Style A



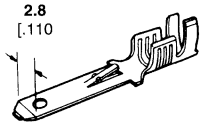
Style B



Style C



Style D



Style E

Type	Wire Size Range mm²	Insulation Diameter mm	Part Numbers					
			Brass				Phosphor Bronze	
			Plain	Tin Plated	Silver Plated	Nickel Plated	Plain	Tin Plated
A	0.12-0.22	0.9-1.4	—	—	—	—	160781-1	160781-2
	0.12-0.35	0.9-1.4	—	—	—	—	160174-3	160174-4
B	0.3-0.6	1.4-2.2	160174-1	160174-2	160174-3	160174-4	160174-5	160174-6
	0.5-1.0	1.4-2.3	160887-3	160887-4	—	—	160887-1	160887-2
C*	0.5-1.5	2.3-3.1	160743-3	160743-4	—	—	160732-1	160743-2
	1.0-1.5	1.9-2.4	160888-3	160888-4	—	—	160888-1	160888-2
	0.2	1.0-1.6	160923-1	160923-2	—	—	160923-3	160923-4
D	.051-1.42	2.0-3.0	170014-1[1]	—	—	—	—	—
			170041-1[2]	—	—	—	—	—

[1]Strip Form
[2]Loose Piece
* According to DIN 46343, Part 1

Extraction Tool Part No. 725864-1

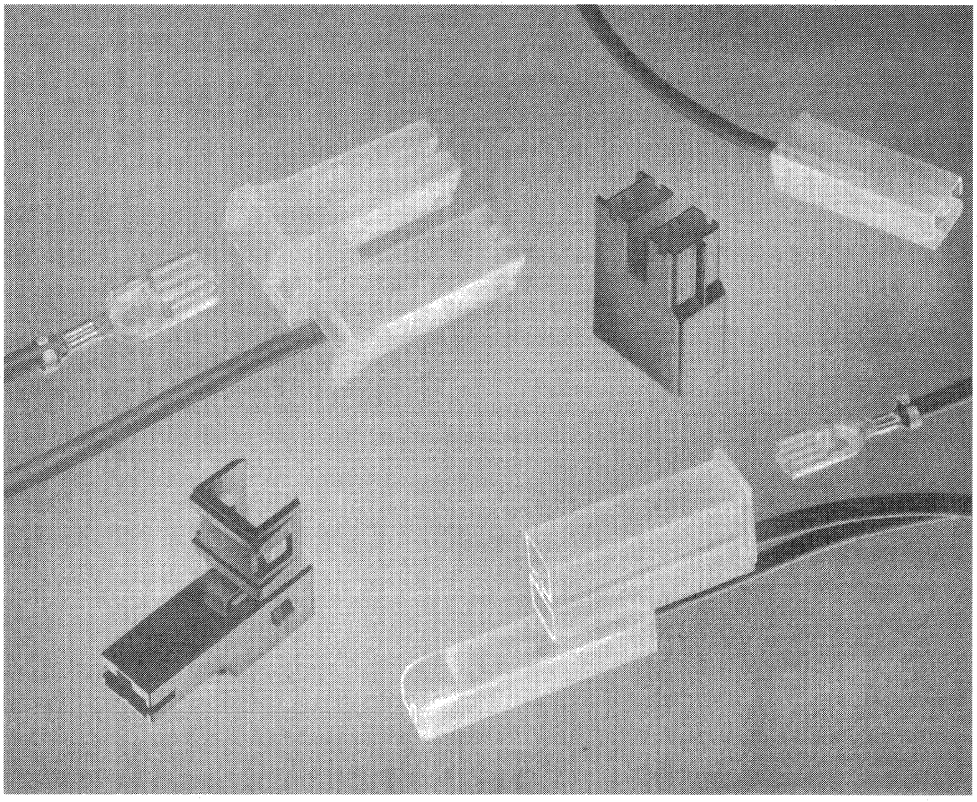
SOURCE: Catalog 82004/124799/124962

Specifications subject to change.
1-800-522-6752 Product Information Center/ AMP FAX Service
1-800-722-1111 Tooling/Technical Assistance Center

Positive Lock Receptacles

Product Facts

- Reduced insertion force
- Locks onto tabs containing holes
- Housing insulates and serves as a removal tool
- "Snap" action tells assembler receptacle is mated properly
- Mark I 250 Series accepts 20-10 AWG wire
- Mark II 187 Series accepts 24-16 AWG wire; 250 Series accepts 22-10 AWG wire
- Terminated by automatic or semi-automatic equipment
- Single and multiple circuit housings available
- Recognized under the Component Program of Underwriters Laboratories Inc., File Nos. E66717 and E28476
- Certified by Canadian Standards Association File Nos. LR 38721 and LR 49710



Positive Lock receptacles are specifically designed to provide ease of assembly and secure retention to mating tabs. These unique features are attainable by the reduced insertion force of the product and the locking dimple. The receptacle locks onto mating tabs containing holes and is removable only by deflecting an integrally designed depressor prior to withdrawal. The depressor can be deflected manually by thumb pressure, or automatically by a cam inside a specially designed nylon housing. If the housing is employed, removal of the terminal from the tab is performed by simply applying withdrawal force to the housing. In addition to providing a means of disconnecting the terminal, the housing performs its traditional insulating function.

Aside from reduced insertion forces, Positive Lock receptacles give the assembler a definite mechanical "snap" when the terminal is correctly seated over the mating tab. This facilitates correct assembly in hard-to-reach areas such as under dashboards, recessed switch tabs, etc.

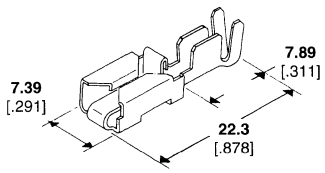
Safety is enhanced by the locking capability of the product. Unless the depressor is deliberately deflected, either manually or by withdrawal force applied directly to the optional housing, a terminal will not easily disconnect from the tab. Thus, the danger from exposed live parts or disruption of critical circuitry due to improperly seated or accidentally removed terminals is greatly reduced.

SOURCE: Catalog 124799

Mark I ".250" Series Receptacles

Stock Thickness: .016 [.41]

Recognized under the Component Program of Underwriters Laboratories Inc., File No. E28476

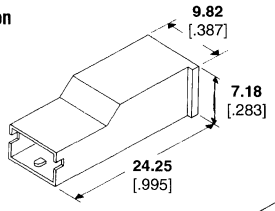


Wire Range AWG	Insulation Diameter	Material and Finish	Part Numbers			
			Receptacle		Quick Change Applicator No. ■	Hand Tool
20-16	.090–.130	Brass/Pre-Tin	1-160759-1	X	567181-2	654174-1
18-14	.095–.125	Brass/Tin	154718-3	X	466542-3	525651-1
13-11	.190	Brass/Tin	154717-3	X	466883-2	654174-1
12-10	.135–.200	Brass/Tin	790319-2	—	567417-2	—
12-10	.135–.200	Brass/Pre-Tin	790319-3	—	567417-2	—

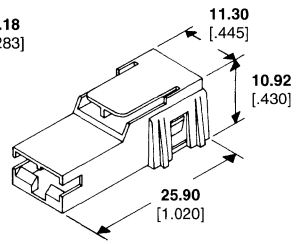
Receptacle Housings

Material: 94 V-2, 6/6 nylon

1 Position



Style A

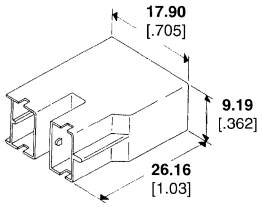


Style B

Style	Color	Part No.
A	Black	154719-0
A	Natural	154719-1
B	Black	520961-1[1]

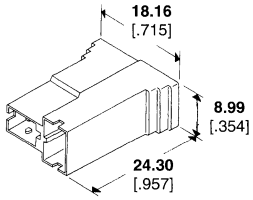
[1]Press-to-Release with secondary lock.

2 Positions



H-Type

Color	Part No.
Black	926521-2

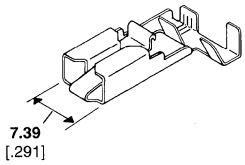


T-Type

Color	Part No.
Black	926522-1
Natural	926522-2

Mark I 250 Series Flag Receptacle

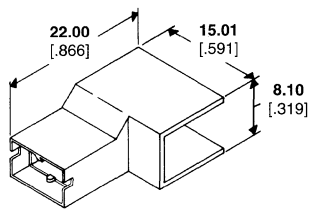
Stock Thickness: .016 [.41]



Wire Range AWG	Insulation Diameter	Material and Finish	Part Numbers	
			Receptacle	Quick Change Applicator No. ■
20-16	.090–.130	Brass/Pre-Tin	926820-4	2-878423-2

Receptacle Housings

Material: 94 V-2, 6/6 nylon



Color	Part No.
Black	926291-1

■ Quick-Change Applicator for AMP-O-LECTRIC Machine 565435-5. For AMPOMATOR Machine and other machines not listed, contact AMP.

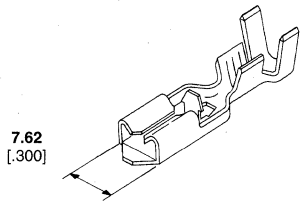
SOURCE: Catalog 124799

Specifications subject to change.
1-800-522-6752 Product Information Center/ AMP FAX Service
1-800-722-1111 Tooling/Technical Assistance Center

Mark II ".250" Series Receptacles

Recognized under the Component Program of Underwriters Laboratories Inc., File No. E66717 and E28476

CSA Certified Report LR 49710-18



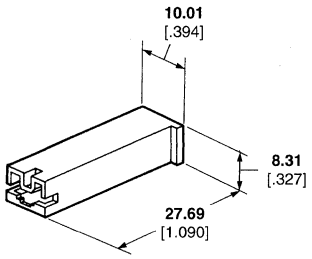
Wire Range AWG	Insulation Diameter	Part Numbers	
		Receptacles	Quick-Change Applicator No. ■
22-18	.060–.100	63119-1	567064[1]
18-14	.090–.155	63097-1	567049[1]
12-10	.150–.200	63239-1	567132[1]

[1]Quick-Change Applicator Part No. with -1 is for a "T" terminating unit used in automatic machines; -2 is for a "K" AMP-O-LECTRIC bench machine.

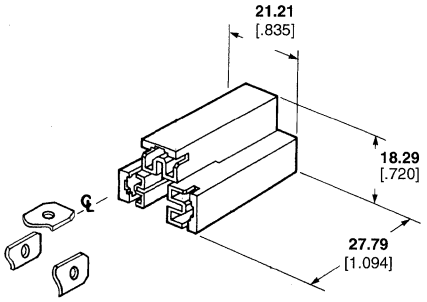
Receptacle Housings

Recognized under the Component Program of Underwriters Laboratories Inc., File No. E28476

CSA Certified Report File No. LR 38721



Part No. 172076-1

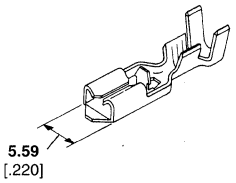


Part No. 172410-1

Mark II 187 Series Receptacles

Recognized under the Component Program of Underwriters Laboratories Inc., File No. E66717 and E28476

CSA Certified Report File No. LR 49710-18



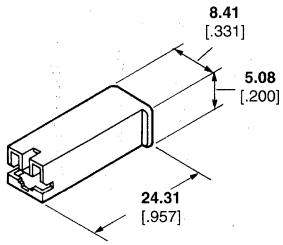
Wire Range AWG	Insulation Diameter	Part Numbers	
		Receptacles	Quick-Change Applicator No. ■
20-16	.090–.130	63195-1	567109[1]
	.060–.110	63498-1[2]	567366[1]
24-20	.060–.110	63196-1	567110[1]

[1]Quick-Change Applicator Part No. with -1 is for a "T" terminating unit used in automatic machines; -2 is for a "K" AMP-O-LECTRIC bench machine.
[2]Fits .032 tab; requires a special housing.

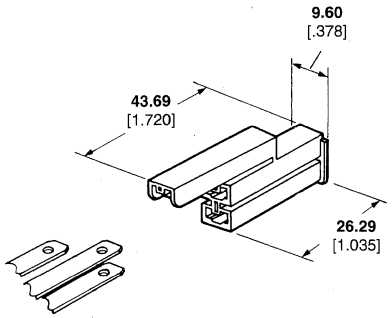
Receptacle Housings

Recognized under the Component Program of Underwriters Laboratories Inc., File No. E28476

CSA Certified Report File No. LR 38721



Part No. 172074-1



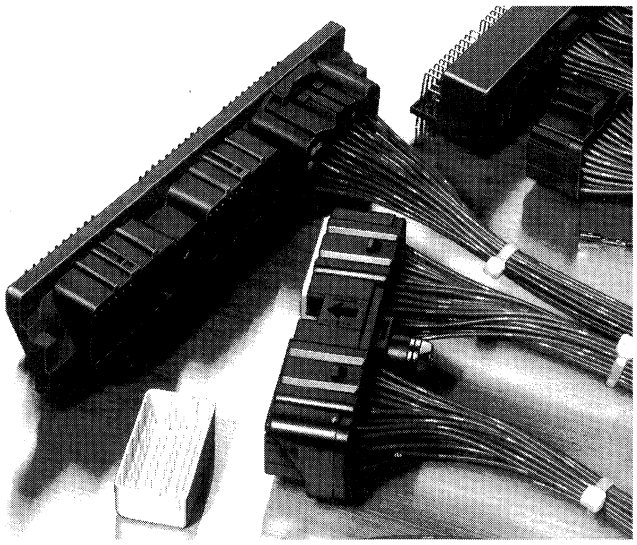
Part No. 172075-1

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

METRIC

AMP 040 Series Pairmate Connectors

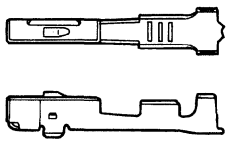
Wire-to-Board Connectors



Product Facts

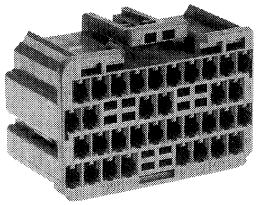
- Multi-position I/O connectors best suited for high-density packaging
- Available in two styles—120-position sealed and 100-position unsealed versions
- 100-position cap housing is a one-piece unit consisting of four separate plug connectors in sizes 16, 22, 28 and 34 positions
- 120-position cap housing is a one-piece housing comprised of three 40-position connectors ganged together
- 120-position plug housing consists of an 80-position housing with two 40-position connectors ganged together and a 40-position housing
- Selectively gold-plated contacts greatly improve contact reliability

Receptacle Contact (for Plug Housing)



Wire Size Range AWG	Wire Size Range mm²	Wire Ins. Diameter	Finish	Part Numbers
22-18	0.3-0.85	1.1-1.8 [.043-.071]	Sel. Gold	175266-2
			Pre-Tin	175265-1
20-16	0.5- 1.25	1.8-2.1 [.071-.083]	Sel. Gold	175267-2
			Pre-Tin	179008-1

Plug Housing for 100-Position Connectors (for Wire Application)



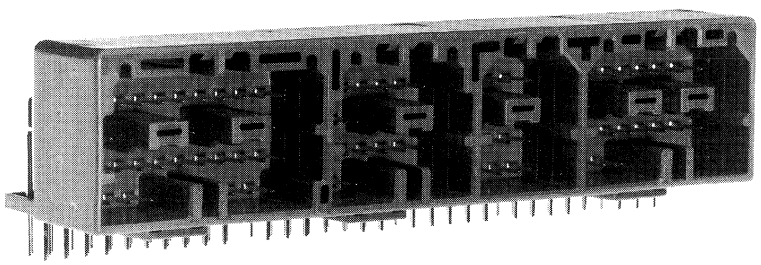
Note: 22 Position Housing Dim. (Typ.)— 25.6 [1.01] L x 21.0 [.827] W x 25.3 [.996] H

No. of Pos.	Color	Part Numbers
16	Gray	178198-6
22	Gray	178199-6
28	Gray	178200-6
34	Gray	178201-6

Cap Housing for Horizontal Mount Type (for Pc Board Application)

100 Position
Part Number 1-178203-6

Note: 100 Position Housing Dim. (Typ.)— 124.8 [4.913] L x 30.7 [1.21] W x 27.0 [1.063] H



SOURCE: Catalog 124962

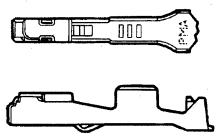
Specifications subject to change.

1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

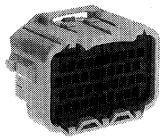
METRIC

Receptacle Contact (for Plug Housing)

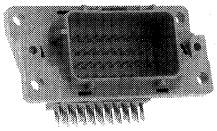


Wire Size Range		Wire Ins. Dia.	Finish	Part Number
AWG	mm²			
20-16	0.5-1.25	**1.6-2.2** [.063-.087]	Sel. Gold	175197-2

Plug Housings for 120 Position/Sealed Type Connector (for Wire Application)



Plug Housing



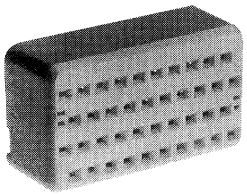
Cap Housing

Note: 40 Pos. Housing Dim. (Typ.)— 46.7 [1.84] L x 26.7 [1.051] W x 35.6 [1.401] H

No. of Pos.	Color	Part Numbers	
		Plug Housing	Mating Cap Housing
40	Gray	6-177504-6	177503
40	Gray	178409-6	178405
80	Gray	178411-6	178405

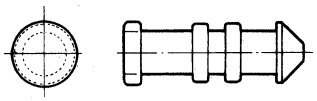
Double-Lock Plate

Part Number 178413-7
Color: Yellow



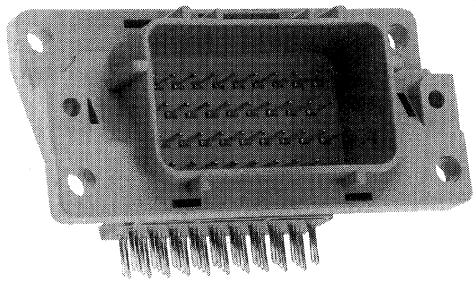
Cavity Plug

Part Number 178421-7
Color: Yellow



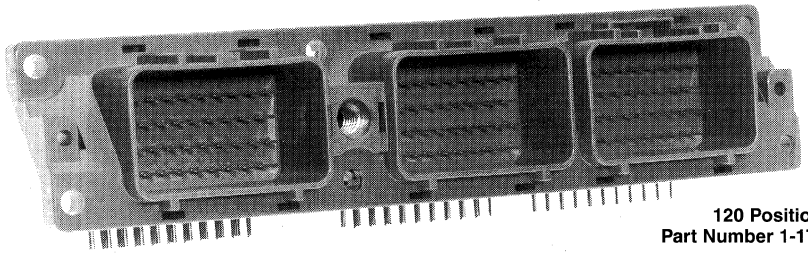
Cap Housings for 120 Position/Sealed Type Horizontal Mount Connector (for Pc Board Applications)

Note: 40 Pos. Housing Dim. (Typ.)—72.2 [2.843] L x 34.5 [1.358] W x 36.5 [1.437] H



40 Position
Part Number 1-177503-9

Note: 120 Pos. Housing Dim. (Typ.)—176.1 [6.933] L x 34.5 [1.358] W x 36.5 [1.437] H



120 Position
Part Number 1-178405-6

SOURCE: Catalog 124962

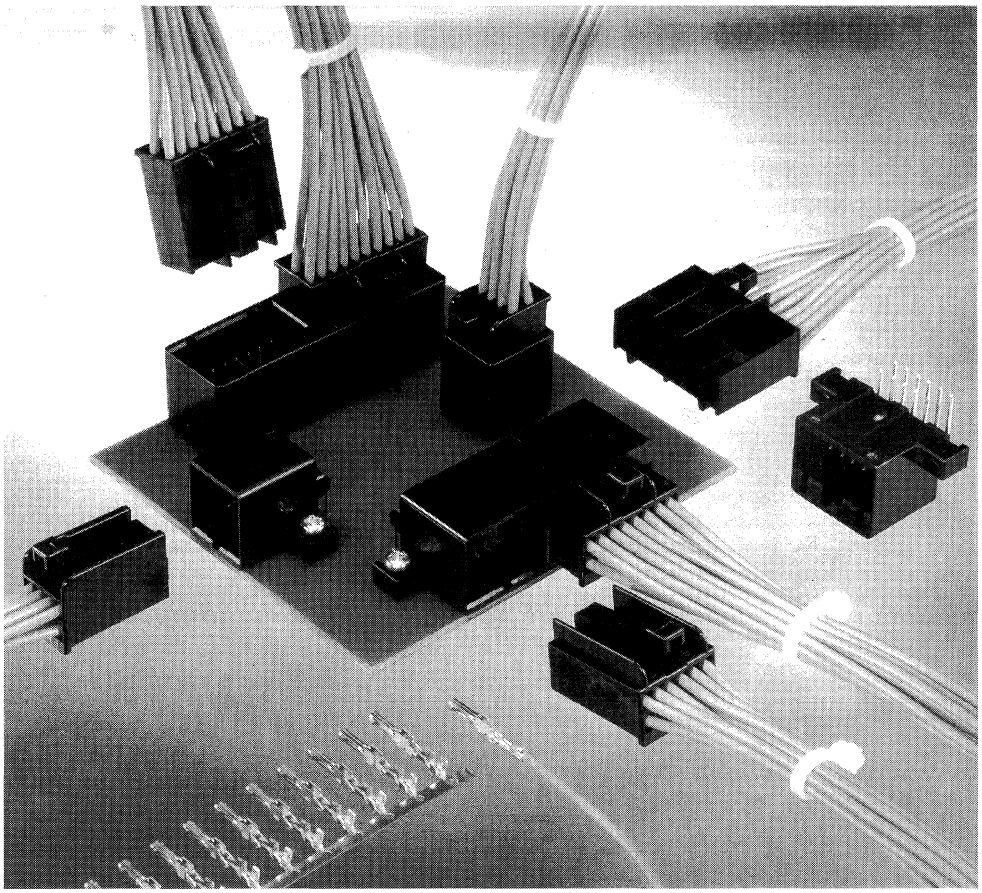
METRIC

AMP Dual-Line Interlock (DLI) Connectors

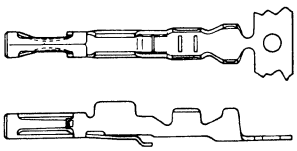
Wire-to-Board Connectors

Product Facts

- Used for wire-to-board connection
- Compact in size and rugged in construction
- Requires low insertion force; mating and unmating is easy
- Good electrical connection; performs well in low current circuit applications
- Arrayed in double rows, contacts are on 3 mm [.118] centers and 4.6 mm .181] or 4.0 mm [.157] between rows
- Plug for wire termination loaded with crimp snap-in contacts
- Board mount cap housing available in two styles, horizontal and vertical mount; both preloaded with post contacts
- Housing made of UL 94V-2 grade 66 nylon, black
- Contacts made of pretinned brass and accept wire size ranges of AWG 22-20 [0.30-0.56 mm²]



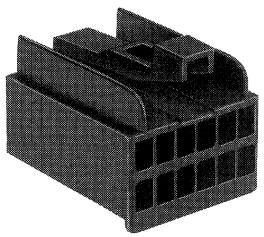
Receptacle Contacts



Wire Size Range AWG	Wire Size Range mm²	Wire Ins. Dia.	Material/Finish	Part No. Strip	Part No. Loose Piece	Hand Tool Part No.
22-20	0.3-0.56	**2.4** Max. [.094]	Brass/Pre-Tin	1-170291-1	1-170321-1	724748-1
				3-170291-1*	—	
			Brass/Sel. Gold	1-170291-3	—	
			Phos. Brz/Pre-Tin	1-170291-4	1-170321-4	
			Phos. Brz./Sel. Gold	1-170291-7	—	

Note: 0.38 µm selective gold on contact area.
Extraction Tool **Part No. 724655-1**
*Reverse Reel

Plug Housings



Note: 12 Pos. Housing Dim. (Typ.)—
18.8 [.740] L x 24 [.945] W x 19.7 [.776] H

No. of Circuits	Color	Part Numbers
8	Black	172246-2
12	Black	172245-2
16	Black	172021-2
20	Black	172047-2

SOURCE: Catalog 124962

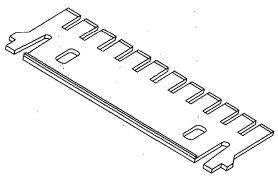
Specifications subject to change.

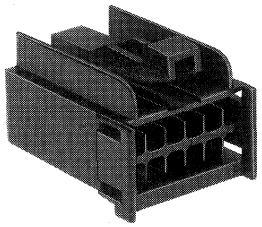
1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

METRIC

Double-Lock Plug Housing and Locking Plate



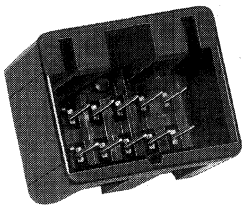


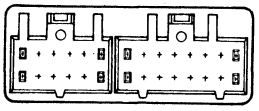
Note: 12 Pos. Housing Dim. (Typ.)—
20.0 [.787] L x 26.0 [1.02] W x 19.7 [.776] H

No. of Circuits	Part Numbers	
	Double-Lock Plug Housing*	Locking Plate**
8	172856-2	172857-1
12	172854-2	172855-1
16	172852-2	172853-1
20	172850-2	172851-1

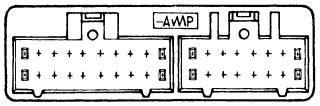
*Housing color is black.
**Locking plate color is natural.
Note: To be used with two locking plates per plug housing.
Locking Plate Extraction Tool **Part No. 753879-1**

Vertical Mount Cap Headers





28 Position Split Type

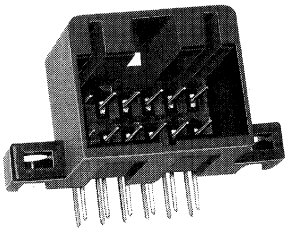


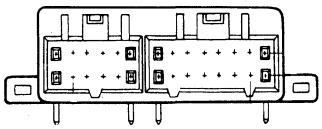
36 Position Split Type

Note: 12 Pos. Housing Dim. (Typ.)—
21.5 [.846] L x 18.1 [.713] W x 18.7 [.736] H

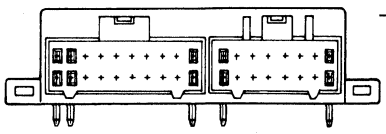
No. of Circuits	Color	Cap Header Part Numbers	Mating Plug
8	Black	172260-2	8 Circuit
12	Black	172259-2	12 Circuit
16	Black	172258-2	16 Circuit
20	Black	172257-2	20 Circuit
28 Split Type	Black	172256-2	One 12 Circuit
			One 16 Circuit
36 Split Type	Black	172255-2	One 16 Circuit
			One 20 Circuit

Horizontal Mount Cap Headers

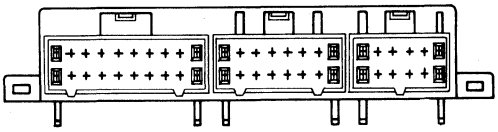




28 Position Split Type



36 Position Split Type



48 Position Split Type

Note: 12 Pos. Housing Dim. (Typ.)—
35.7 [1.406] L x 18.7 [.736] W x 18.1 [.713] H

No. of Circuits	Color	Cap Header Part Numbers		Mating Plug
		Contact Finish		
		Pre-Tin	Sel. Gold	
8	Black	172244-2	1-172244-3	8 Circuit
12	Black	172243-2	1-172243-2	12 Circuit
16	Black	172242-2	1-172242-2	16 Circuit
20	Black	172143-2	1-172143-2	20 Circuit
28 Split Type	Black	172241-2	1-172241-2	One 12 Circuit
				One 16 Circuit
36 Split Type	Black	172023-2	1-172023-2	One 16 Circuit
				One 20 Circuit
48 Split Type	Black	172892-1	—	One 12 Circuit
				One 16 Circuit
				One 20 Circuit

SOURCE: Catalog 124962

Specifications subject to change.

1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

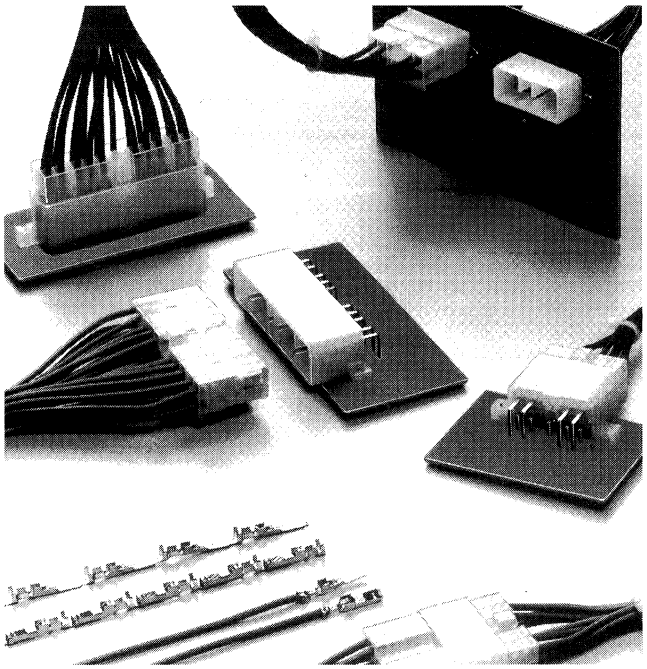
METRIC

AMP Multiple Interlock Connectors (MIC)

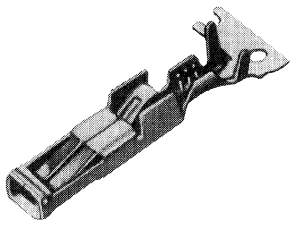
Wire-To-Board Connectors

Product Facts

- Versatile applications from low level circuits to power level circuits
- Mark I, Mark II and board mount connectors
- Free-hanging and panel mount styles in both Mark I and Mark II
- A double-lock plate is available to ensure positive loading and retention of contacts within housing (for Mark II)
- Housing has contact cavities in two rows and is easy to assemble
- Receptacle contacts are a cantilever beam design for low mating-unmating force
- Contacts are available in brass and phosphor bronze with pretinned plating, selective gold plating is also available
- Contacts accept 0.3-2.27 mm² [22-14 AWG] wire sizes and can accommodate a combination of two wires
- Type 66 nylon housings in 5, 7, 9, 11, 13, 17 and 21 positions, plus 22-position board mount split type connector to accept 9- and 13-position plug housings
- Recognized under the Component Program of Underwriters Laboratories Inc., File No. E28476
- Certified by Canadian Standards Association, File No. LR 38721



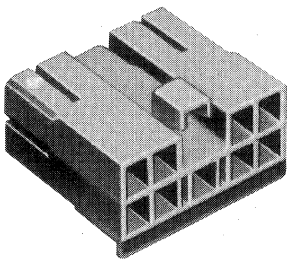
Mark I
Receptacle Contacts



Wire Size Range mm²/AWG	Ins. Dia. Range	Material and Finish	Part Numbers: Strip Form	Part Numbers: Loose Piece	Hand Tool Part Nos.
0.3-0.89 22-18	**1.5-2.6** [0.59-.102]	Phosphor Bronze/Pre-Tin	170307-1	170458-1	724682-1
		Phosphor Bronze with selective gold plating over nickel	170307-2	170458-2	
		Brass/Pre-Tin	170487-1†	—	
0.5-2.27 20-14	**2.2-3.4** [.087-.134]	Phosphor Bronze/Pre-Tin	170286-1	170289-1	755338-1* and 755339-1*
		Phosphor Bronze with 0.38 µm Selective gold plating over nickel	170286-2	170289-2	
		Phosphor Bronze with 0.76 µm Selective gold plating in addition to gold flash over nickel	170286-4	170289-3	
		Brass/Pre-Tin	170177-1†	170189-1	

† Contacts marked with † are end feed type. All other contacts are side feed type.
*Hand Tool **Part No. 755338-1** is used for automotive wires. Hand Tool **Part No. 755339-1** is used for all wires, except automotive wires.
Extraction Tool **Part No. 723735-1**

Plug Housings



Note: 9 Pos. Housing Dim. (Typ.)— 30.1 [1.185] L x 26.5 [1.043] W x 15.0 [.591] H

No. of Positions	Part Numbers*
5	172026-1
7	172025-1
9	171892-1
11	172024-1
13	171358-1
17	171354-1
21	171364-1

* Housing color is natural. Other colors, black (-2), brown (-3), green (-4), blue (-5), gray (-6) and yellow (-7) are also available.

SOURCE: Catalog 124962

Specifications subject to change.

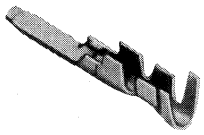
1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

METRIC

Mark I
(Continued)

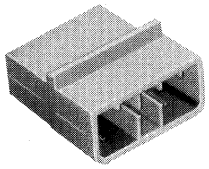
Tab Contacts



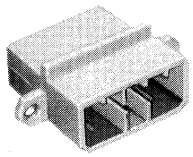
Wire Size Range mm²/AWG	Ins. Dia. Range	Material and Finish	Part Numbers Strip Form	Part Numbers Loose Piece	Hand Tool Part Nos.
0.3-0.89 22-18	**1.5-2.6** [.059-.102]	Phosphor Bronze/Pre-Tin	170308-3	170459-4	724682-1
		Brass/Pre-Tin	170308-1	170459-1	
0.5-2.27 20-14	**2.2-3.4** [.087-.134]	Phosphor Bronze/Pre-Tin	170221-3	170222-4	755338-1* and 755339-1*
		Brass/Pre-Tin	170221-1	170222-1	
		Brass/0.76 µm Selective gold over nickel	170221-4	170222-3	

*Hand Tool **Part No. 755338-1** is used for automotive wires, Hand Tool **Part No. 755339-1** is used for all wires, except automotive wires.
Extraction Tool **Part No. 724763-1**

Free-Hanging and Panel Mount Cap Housings



Free-Hanging



Panel Mount

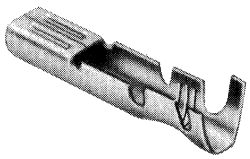
Note: 9 Pos. Housing Dlm. (Typ.)—33.6 [1.323] L x 36.5 [1.437] W x 18.0 [.709] H

No. of Positions	Part Numbers* Free-Hanging	Part Numbers* Panel Mount
5	172044-1	—
7	172043-1	—
9	172042-1	172096-1
11	172041-1	—
13	171725-1	172347-1
17	171827-1	171828-1
21	171829-1	171830-1

*Housing color is natural. Other colors, black (-2), brown (-3), green (-4), blue (-5), gray (-6), and yellow (-7) are also available.

Mark II

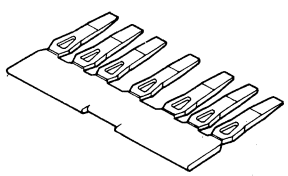
Receptacle Contacts



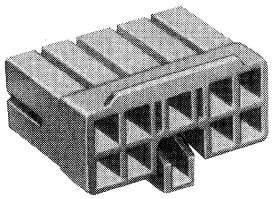
Wire Size Range mm²/AWG	Ins. Dia. Range	Material and Finish	Part Numbers Strip Form	Part Numbers Loose Piece	Hand Tool Part No.
0.3-0.89 22-18	**1.5-2.6** [.059-.102]	Brass/Pre-Tin	172775-1	172776-1	755401-1
		Brass/Sel. Gold	172775-2	172776-2	
		Phosphor Bronze/Pre-Tin	172775-4	172776-4	
0.5-2.27 20-14	**2.2-3.4** [.087-.134]	Brass/Pre-Tin	172773-1	172774-1	755400-1
		Brass/Sel. Gold	172773-2	172774-2	
		Phosphor Bronze/Pre-Tin	172773-4	172774-4	

Extraction Tool **Part No. 753787-1**

Plug Housings and Double Lock Plate



Double Lock Plate



Note: 9 Pos. Housing Dim. (Typ.)—30 [1.181] L x 24.0 [.945] W x 14.5 [.571] H

No. of Positions	Part Numbers Plug Housing*	Part Numbers Double Lock Plate**
5	172494-1	174395-2
7	172495-1	174396-2
9	172496-1	174397-2
11	172497-1	174398-2
13	172498-1	174399-2
17	172500-1	174400-2
21	172501-1	174401-2

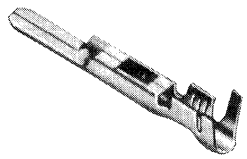
*Housing color is natural. Other colors, black (-2), brown (-3), green (-4), blue (-5), gray (-6) and yellow (-7) are also available.
**Double lock plate color is black.

SOURCE: Catalog 124962

Mark II
(Continued)

METRIC

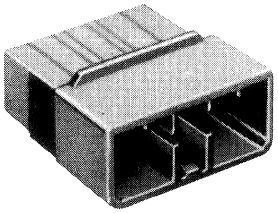
Tab Contacts



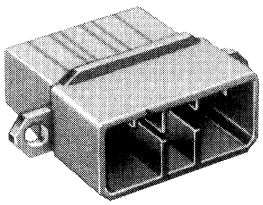
Wire Size Range mm²/AWG	Ins. Dia. Range	Material and Finish	Part Numbers: Strip Form	Part Numbers: Loose Piece	Hand Tool Part No.
0.3-.089 22-18	**1.5-2.6** [.059-.102]	Brass/Pre-Tin	172779-1	172780-1	724682-1
		Brass/Sel. Gold	172779-2	172780-2	
		Phos. Brz./Pre-Tin	172779-4	172780-4	
0.5-2.27 20-14	**2.2-3.4** [.087-.134]	Brass/Pre-Tin	172777-1	172778-1	755402-1
		Brass/Sel. Gold	172777-2	172778-2	
		Phos. Brz./Pre-Tin	172777-4	172778-4	

Extraction Tool **Part No. 753787-1**

Free-Hanging and Panel Mount Cap Housings



Free-Hanging



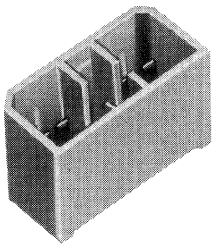
Panel Mount

Note: 9 Pos. Housing Dim. (Typ.)—33.6 [1.323] L x 36.5 [1.437] W x 17.9 [.705] H

No. of Positions	Part Numbers*: Free-Hanging	Part Numbers*: Panel Mount
5	172504-1	—
7	172505-1	172827-1**
9	172506-1	172513-1
11	172507-1	172514-1
13	172508-1	172515-1
17	172509-1	172516-1
21	172510-1	172517-1

*Housing color is natural. Other colors, black (-2), brown (-3), green (-4), blue (-5), gray (-6), and yellow (-7) are also available.
**This is a through type configuration.

PC Board Vertical Mount Cap Housings
(Accepts Both Mark I and Mark II)



Note: 9 Pos. Housing Dim. (Typ.)—33.6 [1.323] L x 16.7 [.657] W x 22.0 [.866] H

No. of Pos.	Housing Colors*	Part Numbers: Contact Finish: Pre-Tin	Part Numbers: Contact Finish: Selective Gold[1]	Part Numbers: Contact Finish: Selective Gold[2]
5	Natural	172037-1	2-172037-1	1-172037-1
	Green	172037-4	2-173037-4	1-172037-4
7	Natural	172036-1	2-172036-1	1-172036-1
	Green	172036-4	2-172036-4	1-172036-4
9	Natural	172035-1	2-172035-1	1-172035-1
	Green	172035-4	2-172035-4	1-172035-4
11	Natural	172034-1	2-172034-1	1-172034-1
	Green	172034-4	2-172034-4	1-172034-4
13	Natural	171362-1	1-171362-1	2-171362-1
	Green	171362-4	1-171362-4	2-171362-4
17	Natural	171363-1	1-171363-1	2-171363-1
	Green	171363-4	1-171363-4	2-171363-4
21	Natural	171457-1	1-171457-1	171457-5
	Green	171457-4	1-171457-4	171457-8

*Other colors than listed above are also available, contact AMP.
Finish Code:
[1]0.38 µm selective gold at contact area in addition to overall gold flash over nickel.
[2]0.76 µm selective gold at contact area in addition to overall gold flash over nickel.
Note: Recommended Pc board thickness—1.6 [.062]

SOURCE: Catalog 124962

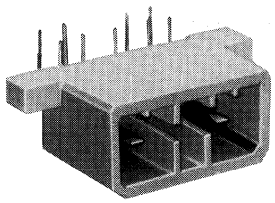
Specifications subject to change.

1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

METRIC

PC Board Horizontal Mount Cap Housings
(Accepts both Mark I and Mark II)



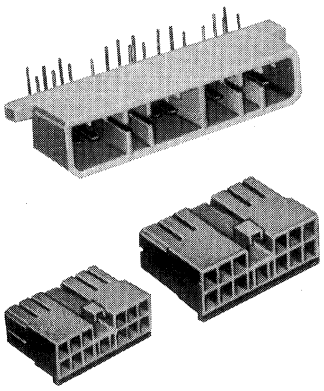
Note: 9 Pos. Housing Dim. (Typ.)— 48.0 [1.890] L x 22.0 [.866] W x 16.7 [.657] H

No. of Pos.	Housing Colors*	Part Numbers		
		Contact Finish		
		Pre-Tin	Selective Gold[1]	Selective Gold[2]
5	Natural	172040-1	1-172040-5	172040-8
	Green	172040-4	1-172040-8	1-172040-1
7	Natural	172039-1	2-172039-1	1-172039-1
	Green	172039-4	2-172039-4	1-172039-4
9	Natural	171894-1	2-171894-1	1-171894-1
	Green	171894-4	2-171894-4	1-171894-4
11	Natural	172038-1	2-172038-1	1-172038-1
	Green	172038-4	2-172038-4	1-172038-4
13	Natural	171882-1	2-171882-1	1-171882-1
	Green	171882-4	2-171882-4	1-171882-4
13 Without Ear	Natural	171819-1	—	—
	Green	171819-4	—	—
17	Natural	171366-1	2-171366-1	1-171366-1
	Green	171366-4	2-171366-4	1-171366-4
21	Natural	171367-1	3-171367-1	2-171367-5
	Green	171367-4	3-171367-4	2-171367-4

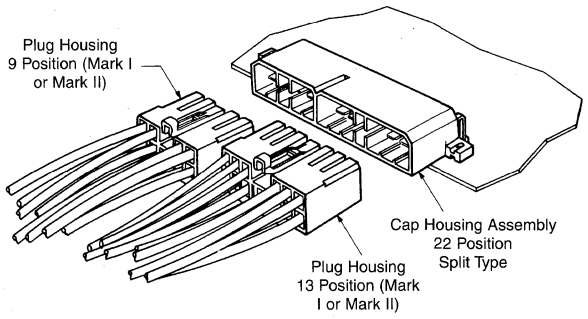
*Other housing colors than those listed above are also available, contact AMP.
Finish Code:
[1]0.38 µm selective gold in addition to overall gold flash over nickel.
[2]0.76 µm selective gold in addition to overall gold flash over nickel.
Note: Recommended Pc board thickness—1.6 [.062]

PC Board Horizontal Mount Cap Housings 22 Position Split Type
(Accepts both Mark I and Mark II)

Cap housing accepts 2 plugs—one 9 position plug and one 13 position plug.



Typical Application



Note: 22 Pos. Housing Dim. (Typ.)—89.5 [3.524] L x 21.4 [.843] W x 16.7 [.657] H

Finish	Part Numbers		Mating Plug Half
	Natural	Green	
Pre-Tin	1-171896-1	1-171896-4	13 Pos. (1 Ea.), 9 Pos. (1 Ea.)

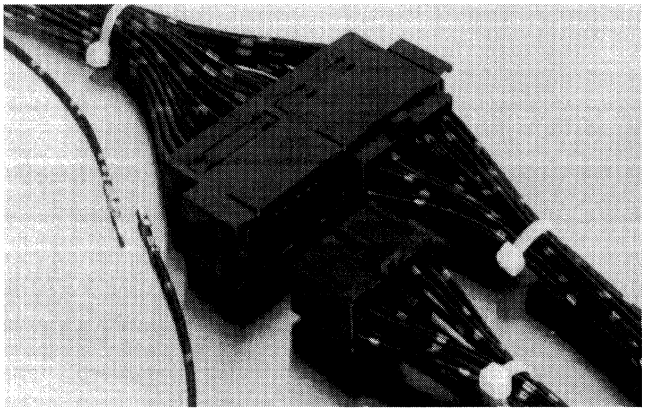
Note: Recommended Pc board thickness—1.6 [.062]

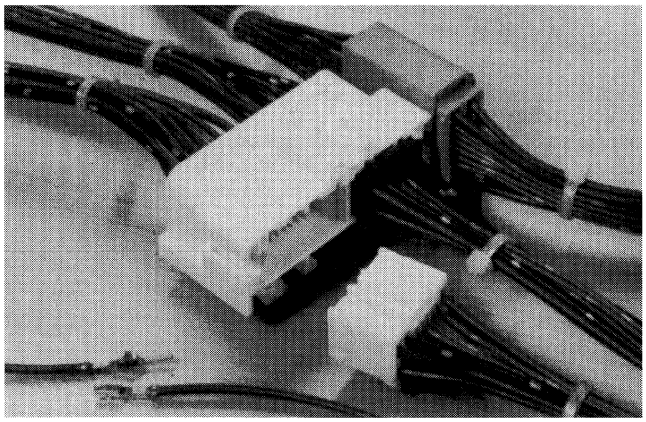
SOURCE: Catalog 124962

METRIC

AMP SCCS (Steering Column Combination Switch) Connectors

Wire-to Wire-Connectors





Product Facts

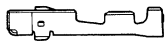
070 II Series
Mark II (34 Position)

- Double locking of side lock design prevents contacts from coming off or being mated halfway
- Cannot be mated unless double lock is applied
- No entanglements of contacts by housing lance design
- Cap housing can be secured onto bracket
- Uses low insertion force 070 II contacts

040 II/070 II Series
(50 Position)

- A hookup connector used on mixed signal and power circuits
- Can be used as either 18-, 32- or 50-position connector
- Double locking of side lock design prevents contacts from coming off or being mated halfway
- Cannot be mated unless double lock is applied
- Housing lance design
- Moving plates provide correct alignment of tab contacts
- Cap housing can be secured onto bracket

070 II Series Receptacle and Tab Contact

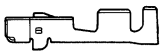


Receptacle

Tab

Wire Size Range		Wire Insulation Diameter	Material and Finish	Part Numbers
AWG	mm²			Strip
22-18	0.3-0.85	**1.1-1.8** [.043-.071]	Receptacle—Brass/Pre-Tin	175268-1
			Tab—Brass/Pre-Tin	175272-1
20-16	0.5-1.25	**1.8-2.5** [.071-.098]	Receptacle—Brass/Pre-Tin	175269-1
			Tab—Brass/Pre-Tin	175273-1
16-14	1.25-2.0	**1.8-2.9** [.071-.114]	Receptacle—KLF-5/Pre-Tin	175270-1
			Tab—Brass/Pre-Tin	175274-1

040 II Series Receptacle and Tab Contact



Receptacle

Tab

Wire Size Range		Wire Insulation Diameter	Material and Finish	Part Numbers
AWG	mm²			Strip
22-18	0.3-0.85	**1.1-1.8** [.043-.071]	Receptacle—Brass/Pre-Tin	175271-1
			Tab—KLF-5/Pre-Tin	175265-1

SOURCE: Catalog 124962

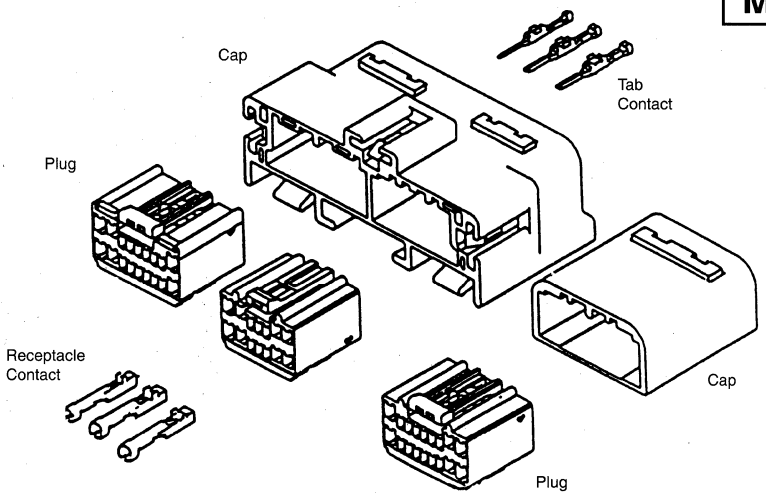
Specifications subject to change.

1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

METRIC

Typical Application



070 II

Cap and Plug Housing
34 Position Split Type

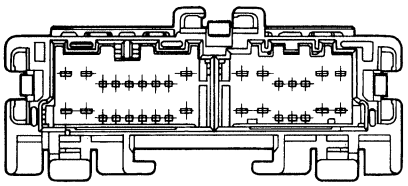
Cap housing accepts one 14-Position Plug and one 20-Position Plug

Color	Part Numbers	
	Cap Housing	Plug Housing
Black	177511-2	175368-2 (14 Pos.)
		175371-2 (20 Pos.)

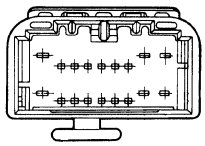
040 II and 070 II

Cap and Plug Housing
50 Position Split Type

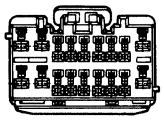
Can be used as either 18-, 32- or 50-Position Connector



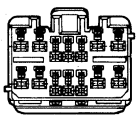
Cap Housing (32 Pos.)
Part Number 178688-1



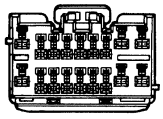
Cap Housing (18 Pos.)
Part Number 178691-6



Plug Housing (18 Pos.)
Part Number 178690-1



Plug Housing (14 Pos.)
Part Number 178689-2

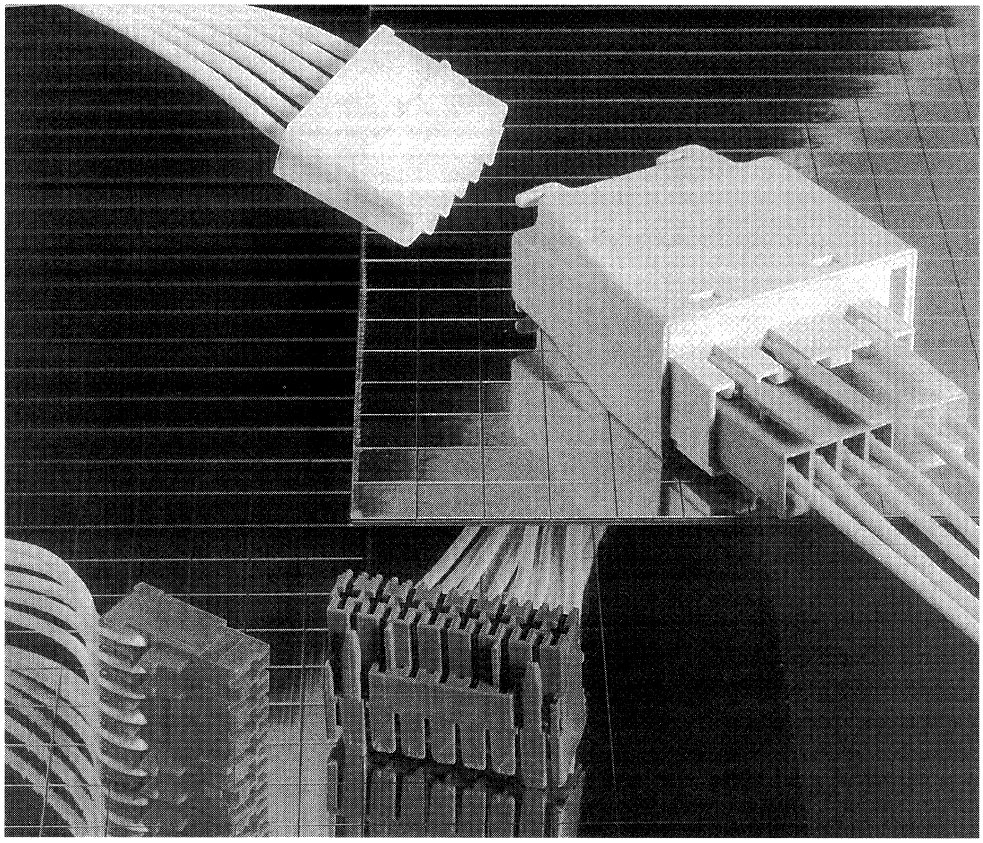


Plug Housing (18 Pos.)
Part Number 6-178692-6

SOURCE: Catalog 124962

METRIC

AMP Standard-Timer and AMP Multifitting Connectors in In-Line Mating Technology



Product Facts

- **Standard-Timer Housings and Contacts (crimp, snap-in)**
  - **Housings available in 2 to 12 positions**
  - **Wire size ranges: 0.5-1.0, 0.75-1.5, and 1.0-2.5 mm²**
  - **Wire insulation diameter range: 2.0-3.3 mm [.079-.130]**
  - **Current carrying capacity up to 16A**
  - **Keying, Locking Latch and Polarization available**
- **Multifitting Connectors (insulation displacement contacts)**
  - **2 to 12 positions**
  - **Wire size range: 0.5-0.75 mm²**
  - **Current carrying capacity up to 6A**
  - **Keying, Locking Latch and Polarization available**
  - **Wire insulation diameter range: 2.0-2.5 mm [.079 to .098]**

Approvals

- **Both Standard-Timer Connectors and AMP Multifitting Connectors are tested by VDE according to DIN VDE 0627/9.91, VDE-Reg.- No. 5129 and 3993, respectively**
- **Recognized under the Component Program of Underwriters Laboratories Inc., File No. E28476**

AMP Standard-Timer Connectors and AMP Multifitting Connectors represent modern interconnection technology with crimp snap-in or insulation displacement versions. They find applications in small motors, liquid pumps, automatic waterlevel regulators, relays or push-button switches. The selection of both connector systems allows you to find the optimal solution to your interconnection needs.

The AMP Standard Timer Connectors were designed for various applications in household appliances and automobiles.

They meet industry requirements, for example multiple position connectors, secure connection even at inclined mating, as well as a sturdy contact design.

AMP Standard-Power-Timer contacts, for use with Standard-Timer housings, are suitable for high density and high current carrying requirements.

The modular connector system incorporates modern in-line mating technology on a 5 mm [.197] centerline, 2- to 12 positions, rowable with no loss of spacing and a variety of keying possibilities.

The AMP Multifitting Connector System was developed by AMP for economic and efficient cable harness production using newly developed AMP application tooling. This connector system uses insulation displacement contacts: AMP Multifitting Connectors.

This system is suitable for termination of 0.5-0.75 mm² leads. The housing cover has two special functions providing reliable strain relief by independent locking in the housing, as well as allowing a 90° or 180° wire exit.

AMP Multifitting Connectors are fed into the machine from reels, saving time and money.

The new modular component connecting devices, 6.3 mm [.250 Series] or 4.8 mm [.187 Series] tabs are terminated quickly and easily.

SOURCE: Catalog 124799

Specifications subject to change.

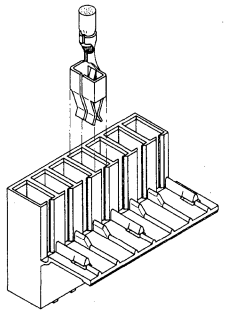
1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

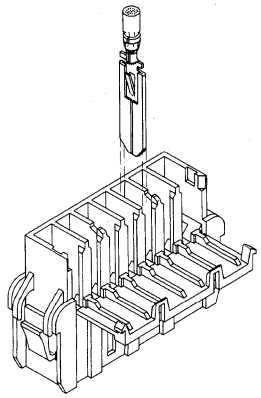
METRIC

Standard-Timer Housings
5.0 mm [.197] Centerline

Standard-Timer Housing (with Interior Locking Device)

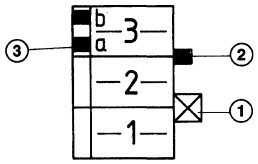


Tab Housing

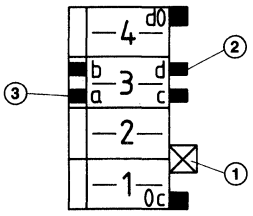


Mates with—Tab Housing

Keying Plan from Mating Direction of Standard-Timer Housing



Part No. 927740, 928343



Part No. 928151, 928344, 928423

No. of Positions	Color	Standard-TImer Housings: ① Locking Latch between Cavity No.	② Keying Ribs between or at Cavity No.	③ Polarization Ribs go through to Hinge at Cavity No.	Part Number	RAST 5 Version	Mates with Tab Housing Part Number
2	natural	1 + 2	—	2 b	927740-2	—	—
	black	1 + 2	—	—	2-927740-2	—	—
	grey	—	1 + 2	2 b	4-927740-2	—	927742-2
	natural	1 + 2	1 0c/2 d0	1 b/2 a	928151-2	02—A	—
	black	1 + 2	10 c	1 a/2 b	2-928151-2	02—B	—
	brown	1 + 2	2 d0	1 a/1 b/2 b	3-928151-2	02—H	—
	turquoise	1 + 2	10 c/2 d0	1 b	4-928151-2	02—Q	—
	violet	1 + 2	2 d0	1 b/2 a/2 b	5-928151-2	02—G	—
	green	1 + 2	2 d0	1 a/2 b	6-928151-2	02—E	—
	black	1 + 2	2 d0	1 b/2 a/2 b	7-928151-2	(02—G)	—
	grey	1 + 2	1 0c	1 a/2 b	8-928151-2	(02—B)	—
	red	1 + 2	1 0c	1 b/2 b	9-928151-2	(02—I)	—
	pink	1 + 2	1 0c	1 b/2 a	928423-2	02—O	—
	orange	1 + 2	1 0c	1 b/2 b	2-928423-2	02—I	—
3	natural	1 + 2	2 + 3	1 a	927740-3	—	927742-3
	black	1 + 2	2 + 3	2 b	2-927740-3	—	—
	grey	1 + 2	2 + 3	3 a	3-927740-3	—	—
4	natural	2 + 3	3 + 4	3 b	927740-4	—	927742-4
	black	2 + 3	3 + 4	4 a	2-927740-4	—	—
	natural	1 + 2/3+ 4	3 c/4 d0	1 b	928151-4	04—A	—
	grey	1 + 2/3 + 4	4 d0	1 a/4 b	3-928151-4	04—C	—
5	natural	2 + 3	3 + 4	1 a/5 b	928343-5	—	927742-5
	black	3 + 4	4 + 5	4 b	2-928343-5	—	—
6	natural	3 + 4	1 + 2/4 + 5	6 b	927740-6	—	927742-6
	black	1 + 2/4 + 5	2 + 3	1 b	2-927740-6	—	—
	natural	1 + 2/5 + 6	3 c/4 d	—	928151-6	06—A/S	—
7	black	1 + 2/5 + 6	2 + 3/4 + 5/6 + 7	—	9-927740-7	—	2-927742-7
	natural	1 + 2/5 + 6	3 c/4 d/7 c	—	928151-7	07—A/S	—
	natural	1 + 2/5 + 6	2 + 3/4 + 5/6 + 7	—	928343-7	—	928309-7
	black	1 + 2/5 + 6	2 + 3/6 + 7	1 b	2-928343-7	—	—
	natural	1 + 2/5 + 6	3 0 c/4 d0/7 0c	1 a/6 b	928344-7	—	928309-7
8	natural	1 + 2/5 + 6	2 + 3/4 + 5/6 + 7	—	927740-8	—	928309-8
	black	1 + 2/5 + 6	2 + 3/6 + 7	—	2-927740-8	—	928230-8
	grey	2 + 3/7 + 8	1 + 2/3 + 4/6 + 7	8 b	3-927740-8	—	—
9	natural	5 + 6	2 + 3	1 b	927740-9	—	—
	brown	1 + 2/8 + 9	3 c	1 b/9 b	928151-9	—	—
11	natural	5 + 6	2 + 3	1 b/11 b	1-927740-1	—	—
12	natural	1 + 2/10 + 11	8 + 9	8 b	1-927740-2	—	—

Note: Order crimp, snap-in contacts separately, see Page 6037.

METRIC

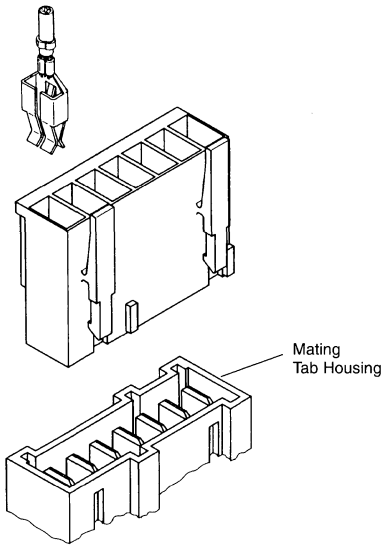
Standard-Timer Housings
(Continued)

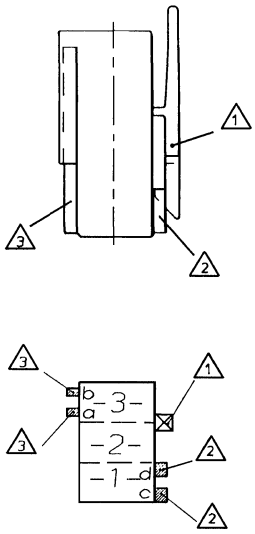
5.0 mm [.197] Centerline

Standard-Timer Housing (with Exterior Locking Device)

Keying Plan from Side-View and Mating Direction of Standard-Timer Housings

Mates with—Tab Housing





No of Positions	Color	Standard-Timer Housings			Part Number	RAST 5 Version
		1 Locking Latch between Cavity No.	2 Keying Ribs at Cavity No.	3 Polarization Ribs at Cavity No.		
2	black	1 + 2	1 c	1 a/2 b	928247-2	02—B
	pink	1 + 2	1 c	1 b/2 a	2-928247-2	02—O
	orange	1 + 2	1 c	1 b/2 b	3-928247-2	02—I
	yellow-green	1 + 2	1 c	1 a/2 a	4-928247-2	02—K
	green	1 + 2	2 d	1 a/2 b	5-928247-2	02—E
	natural	1 + 2	1 c/2 d	1 b/2 a	6-928247-2	02—A
	purple	1 + 2	1 c/2 d	2 b	7-928247-2	02—P
3	yellow	2 + 3	1 d/3 d	3 b	928247-3	—
4	grey	1 + 2/3 + 4	4 d	1 a/4 b	928247-4	04—C
	white	1 + 2/3 + 4	4 d	1 a/3 a	2-928247-4	04—F
	violet	1 + 2/3 + 4	2 d	2 a/4 b	3-928247-4	04—G
5	black	1 + 2/4 + 5	2 d	2 b	2-928247-5	05—B
	blue	1 + 2/4 + 5	3 d	1 a/4 a	3-928247-5	05—D
	yellow	1 + 2/3 + 4	5 c/5 d	3 b	4-928247-5	—
6	grey	1 + 2/5 + 6	4 c	1 b/6 a	928247-6	06—C
	blue	1 + 2/5 + 6	4 d	2 b/6 b	2-928247-6	06—D
	green	1 + 2/5 + 6	4 d	1 a/6 b	3-928247-6	06—E
	yellow	1 + 2/5 + 6	3 c	1 b/6 a	4-928247-6	—
	brown	1 + 2/5 + 6	3 c	—	5-928247-6	—
7	grey	1 + 2/6 + 7	3 d/7 d	5 b	928247-7	07—C
9	yellow	2 + 3/7 + 8	2 c/8 d	5 a	928247-9	—
	blue	1 + 2/6 + 7	3 d/7 d	5 b	2-928247-9	09—D
	brown	3 + 4/7 + 8	6 c	3 b/8 a	3-928247-9	—
10	brown	3 + 4/8 + 9	3 c/9 d	1 b	1-928247-0	—
11	yellow	3 + 4/8 + 9	3 c/9 d	1 b/11 b	1-928247-1	11—B
	blue	3 + 4/7 + 8	3 c/9 d	1 b/11 b	2-928247-1	—

SOURCE: Catalog 124799

Specifications subject to change.

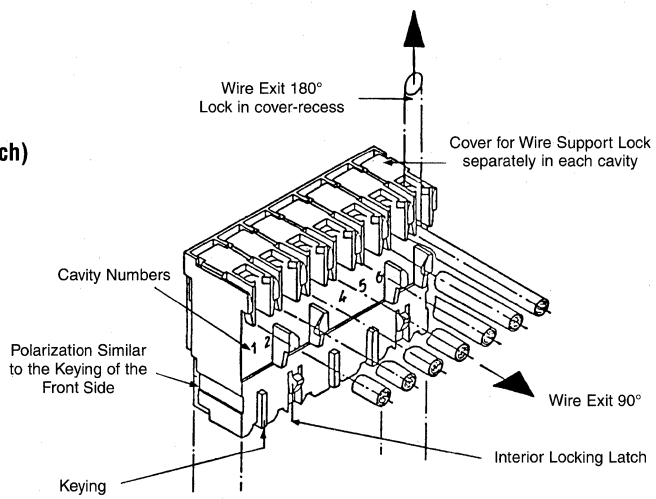
1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

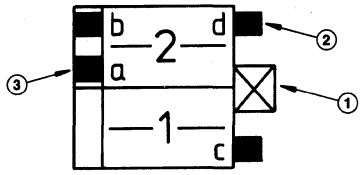
AMP Multifitting Connectors

5.0 mm [.197] Centerline (with Interior Locking Latch)

METRIC



Keying Plan from Mating Direction of Connector



No. of Positions	Color	Insulation Displacement Connectors: ① Locking Latch between Cavity No.	② Keying Ribs at Cavity No.	③ Polarization Ribs at Cavity No.	Part Number (for 6 A)	RAST 5 Version	Mates with Tab Housing Part Number
2	natural	1 + 2	1 c/2 d	1 b/2 a	828353-2	02—A	—
	black	1 + 2	1 c	1 a/2 b	2-828353-2	02—B	—
	grey	1 + 2	1 c/2 d	2 a	3-828353-2	02—C	—
	blue	1 + 2	1 c	1 a/1 b	4-828353-2	02—D	—
	green	1 + 2	2 d	1 a/2 b	5-828353-2	02—E	—
	yellow	1 + 2	—	2 b	6-828353-2	02—L	—
	violet	1 + 2	2 d	1 b/2 a/2 b	7-828353-2	02—G	—
	brown	1 + 2	2 d	1 a/1 b/2 b	8-828353-2	02—H	—
	orange	1 + 2	1 c	1 b/2 b	9-828353-2	02—I	—
	beige	1 + 2	2 d	1 a/1 b	829212-2	02—N	—
	pink	1 + 2	1 c	1 b/2 a	2-829212-2	02—O	—
	purple	1 + 2	1 c/2 d	2 b	3-829212-2	02—P	—
	turquoise	1 + 2	1 c/2 d	1 b	4-829212-2	02—Q	—
3	natural	1 + 2	1 c/2 d	1 b	828353-3	03—A	—
	black	2 + 3	1 d/2 c	2 b/3 b	2-828353-3	03—B	—
	grey	1 + 2	1 c	1 b/3 a	3-828353-3	03—C	—
	blue	1 + 2	3 c	1 a	4-828353-3	03—D	927742-3
	green	1 + 2	3 d	1 a/1 b	5-828353-3	03—E	—
	brown	1 + 2	2 d	2 b	6-828353-3	03—H	927742-3
	violet	1 + 2	1 c	1 a/3 a	7-828353-3	03—G	—
	orange	1 + 2	2d	1 a	8-828353-3	—	—
	natural	1 + 2	1 c	1 a	9-828353-3	—	—
4	natural	1 + 2/3 + 4	3 c/4 d	1 b	828353-4	04—A	—
	grey	1 + 2/3 + 4	4 d	1 a/4 b	2-828353-4	04—C	—
	blue	2 + 3	3 d	3 b	3-828353-4	04—D	927742-4
	green	1 + 2/3 + 4	2 d/3 c	1 a/3 a	5-828353-4	04—E	—
5	natural	2 + 3	1 c/3 d	1 a/5 b	828353-5	05—A	927742-5
	black	1 + 2/4 + 5	2 d	2 b	2-828353-5	05—B	—
	natural	1 + 2/4 + 5	2 d	2 b	9-828353-5	—	—
6	natural	1 + 2/4 + 5	3 c/6 d	1 b	828353-6	06—A	—
	black	1 + 2/4 + 5	3 c	1 b	2-828353-6	06—B	—
7	natural	1 + 2/5 + 6	3 c/4 d/7 c	—	828353-7	07—A	927742-7
	black	1 + 2/5 + 6	3 c/7 c	1 a/4 a	2-828353-7	—	—
8	grey	2 + 3/7 + 8	2 c/3 d/7 c	8 b	828353-8	08—C	—
	natural	1 + 2/7 + 8	2 d	—	2-828353-8	—	—
9	natural	5 + 6	3 c	1 b	828353-9	09—A	—
	black	4 + 5	3 c/6 d	1 b	2-828353-9	09—B	—
10	natural	5 + 6	3 c	1 b	1-828353-0	10—A	—
11	natural	5 + 6	3 c	1 b/11 b	1-828353-1	11—A	—

SOURCE: Catalog 124799

Specifications subject to change.

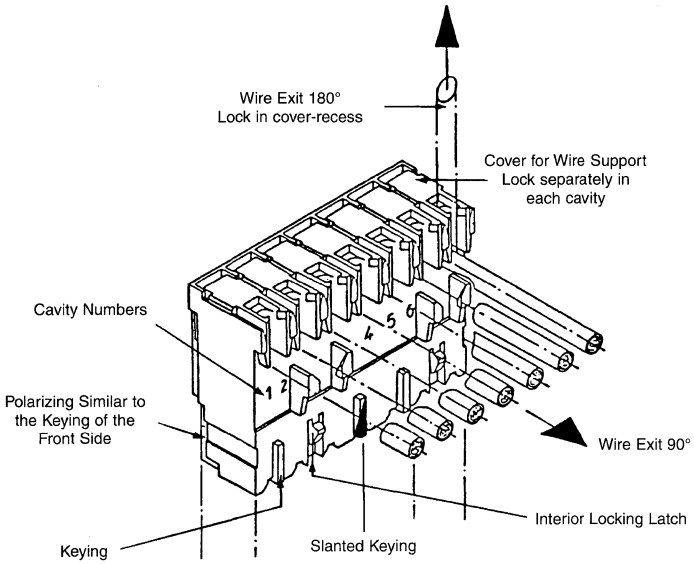
1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

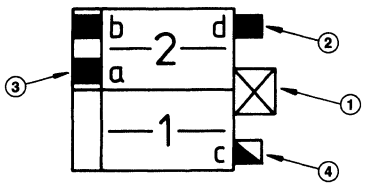
METRIC

AMP Multifitting Connectors
(Continued)

5.0 mm [.197] Centerline (Motor Connector)



Keying Plan from Mating Direction of Connector



No. of Positions	Color	Insulation Displacement Connectors				Part Number (for 6 A)	RAST 5 Version	Mates with Tab Housing Part Number
		① Locking Latch between Cavity No.	② Keying Ribs at Cavity No.	③ Polarization Ribs at Cavity No.	④ Slanted Keying			
2	natural	—	—	2 b	2 c	829343-2	02—L/S	927742-2
6	natural	1 + 2/5 + 6	3 c	1 a/6 b	4 d	829343-6	06—A/S	928309-7
	natural	1 + 2/5 + 6	—	6 b	4 d	2-829343-6	—	—
7	natural	1 + 2/5 + 6	3 c/7 c	—	4 d	829343-7	07—A/S	928309-7

SOURCE: Catalog 124799

Specifications subject to change.

1-800-522-6752
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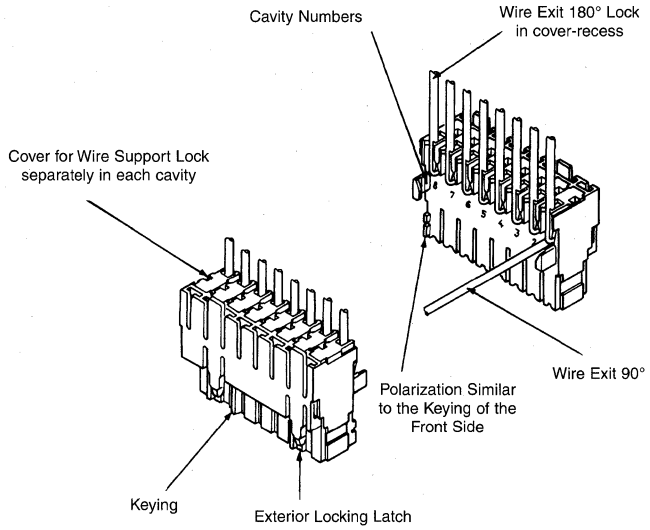
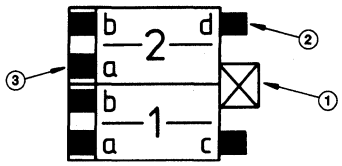
METRIC

AMP Multifitting Connectors
(Continued)

5.0 mm [.197] Centerline (with Exterior Locking)



Keying Plan from Mating Direction of Connector



No. of Positions	Color	Insulation Displacement Connectors ① Locking Latch between Cavity No.	② Keying Ribs at Cavity No.	③ Polarization Ribs at Cavity No.	Part Number	RAST 5 Version
2	natural	1 + 2	1 c	variable	828348-2	—
	blue	1 + 2	1 c/2 d	variable	2-828348-2	—
	grey	1 + 2	2 d	variable	3-828348-2	—
	violet	1 + 2	2 d	variable	8-828348-2	—
	black	1 + 2	1 c	1 a/2 b	2-829532-2	02—B
	blue	1 + 2	1 c	1 a/1 b	4-829532-2	02—D
	green	1 + 2	2 d	1 a/2 b	5-829532-2	02—E
	orange	1 + 2	1 c	1 b/2 b	9-829532-2	02—I
	beige	1 + 2	2 d	1 a/1 b	8-829532-2	02—N
3	natural	2 + 3	1 d/2 c	variable	828348-3	—
	blue	2 + 3	2 c	variable	2-828348-3	—
	grey	2 + 3	1 c/3 d	variable	3-828348-3	—
	green	1 + 2	3 d	variable	4-828348-3	—
	yellow	2 + 3	1 d/3 d	variable	5-828348-3	—
	brown	1 + 2	2 d	variable	9-828348-3	—
	natural	1 + 2	1 c/2 d	1 b	829532-3	03—A
	violet	1 + 2	1 c	1 a/3 a	7-829532-3	03—G
	natural	1 + 2	2 d	1 b	8-829532-3	—
4	natural	1 + 2/3 + 4	2 d	variable	828348-4	—
	blue	1 + 2/3 + 4	4 d	variable	2-828348-4	—
	grey	1 + 2/3 + 4	3 c	variable	3-828348-4	—
	yellow	1 + 2/3 + 4	2 d	variable	5-828348-4	—
	green	1 + 2	2 d	variable	6-828348-4	—
	violet	1 + 2/3 + 4	3 c	variable	8-828348-4	—
5	natural	1 + 2/4 + 5	2 d/3 d/4 c/5 d	variable	828348-5	—
	blue	1 + 2/4 + 5	3 c	variable	2-828348-5	—
	grey	1 + 2/4 + 5	3 d	variable	3-828348-5	—
	orange	1 + 2/4 + 5	3 c	variable	7-828348-5	—
6	natural	1 + 2/5 + 6	4 c/4 d	variable	828348-6	—
	blue	1 + 2/5 + 6	3 c/6 d	variable	2-828348-6	—
	grey	2 + 3/4 + 5	1 d/6 c	variable	3-828348-6	—
7	natural	1 + 2/5 + 6	2 d/6 d	variable	828348-7	—
	blue	2 + 3/6 + 7	5 c	variable	2-828348-7	—
	beige	1 + 2/5 + 6	2 d, 6 d	variable	5-828348-7	—
8	natural	1 + 2/7 + 8	2 d/3 c/6 d/7 c	variable	828348-8	—
	blue	1 + 2/7 + 8	3 c/6 d	variable	2-828348-8	—
11	natural	3 + 4/7 + 8	3 c/9 d	variable	1-828348-1	—

SOURCE: Catalog 124799

Specifications subject to change.

1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
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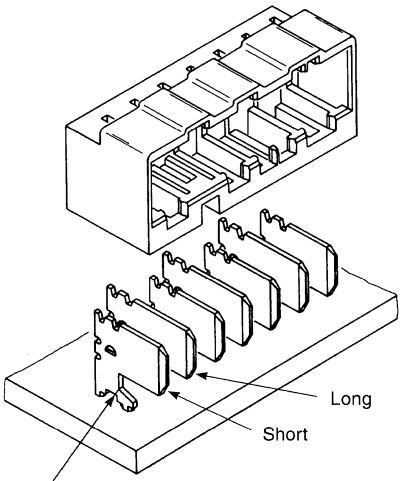
METRIC

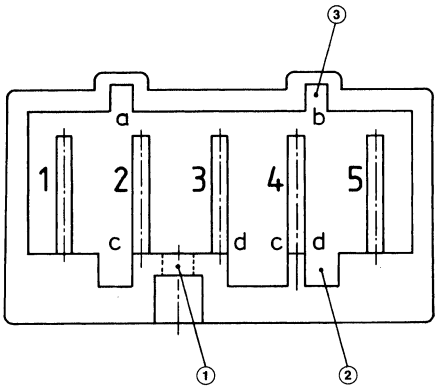
AMP Multifitting Connectors (Continued)

5.0 mm [.197] Centerline



Solder Tabs 6.3 x 0.8 mm [.250 Series]
Part No. 964016-2 (long)
Part No. 964017-2 (short)

Keying Plan from Mating Direction of Tab Header Housing



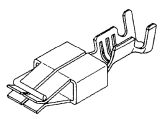
Tab Header Housings

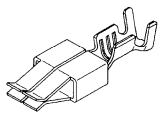
No. of Positions	Tab Header Housings ① Locking Window between Cavity No.	② Keying Slot at Cavity No.	③ Polarization Slot at Cavity No.	Part Number
2	1 + 2	1 c/2 d	2 a	928492-2
7	1 + 2/4 + 5/6 + 7	3 c/5 d/6 c	1 a/4 a/5 b/6 a/7b	928492-7
9	1 + 2/4 + 5/6 + 7/8 + 9	2 d/6 c/7 d/9 d	2 b/6 a/6 b/7 a/8 a/9 b	928492-9
12	1 + 2/4 + 5/8 + 9/11 + 12	1 c/5 d/ 9d	1 a/2 b/5 b/9 b	1-928492-2

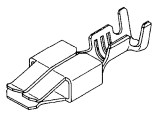
Note: Order Solder Tabs separately, see above.

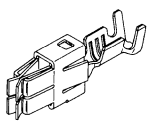
Pc Board Tabs 6.3 x 0.8 mm [.250 Series] Part No. 928814-4

Standard-Timer Contacts and Standard-Power-Timer Contacts


Style A


Style B

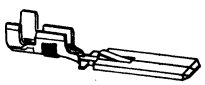

Style C


Style D

Description	Style	Wire Size Range (mm²)	Material	Finish	Part Number
Standard-Timer	A	0.5-1.5	Brass	tin plated	926005-1[1]
		1.0-2.5	Brass	tin plated	926006-1[1]
	B	0.5-1.0	Brass	tin plated	928820-1
	C	0.5-1.5	Brass	tin plated	926965-1[1]
		1.0-2.5	Brass	tin plated	926973-1[1]
Standard-Power-TImer	D	>1.0-2.5 (FLK Ins.)	Copper Iron	tin plated	927833-1
		>1.02.5 (FLR Ins.)	Copper Iron	tin plated	927837-1

[1]Strip Form

FASTIN-FASTON Tabs 6.3 mm [.250 Series]


Style E

Style F

Style	Wire Size Range (mm²)	Material	Finish	Part Number
E	0.3-0.8	Brass	tin plated	60294-2
F	0.1-0.6	Brass	tin plated	141051-2

Note: For Magnet Wire Diameter 0.36-0.87 mm

SOURCE: Catalog 124799

Specifications subject to change.

1-800-522-6752
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1-800-722-1111
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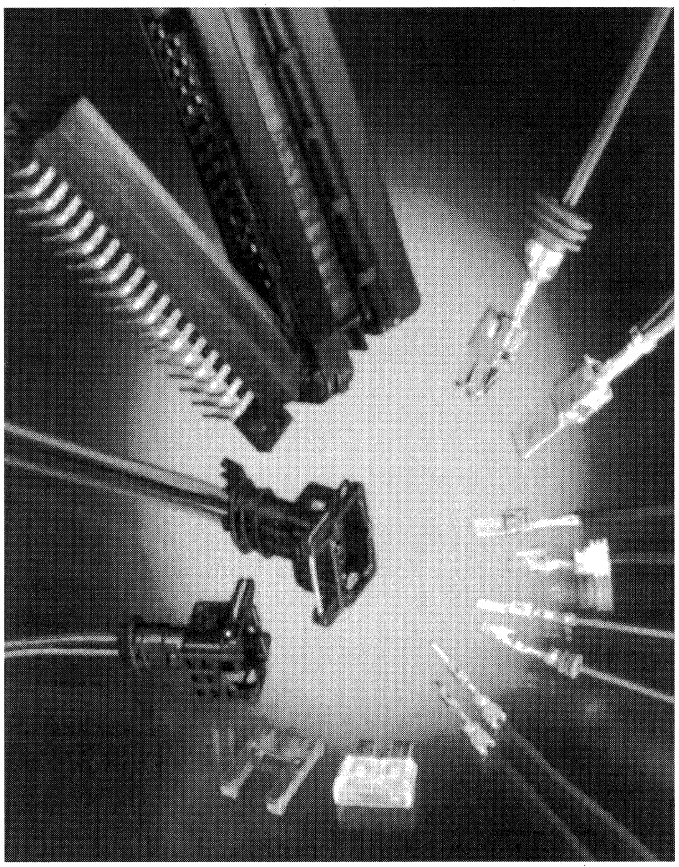
METRIC

AMP Timer Connectors



The comprehensive range of AMP Timer connectors are extensively used in the automotive and consumer appliance industries.

Each contact consists of a flat receptacle, which mates with a flat tab. The receptacle has two or four contact springs, which are independent of each other. Two-piece contacts with a steel top spring are predominant.

This two-piece contact design means that the electrical and mechanical properties are separated. One half of the contact body is either crimped to wire, or soldered to a printed circuit board. The other half of the contact body mates with the matching tab. The contact body is responsible for the electrical characteristics, while the top spring ensures that contact force is maintained under all circumstances.

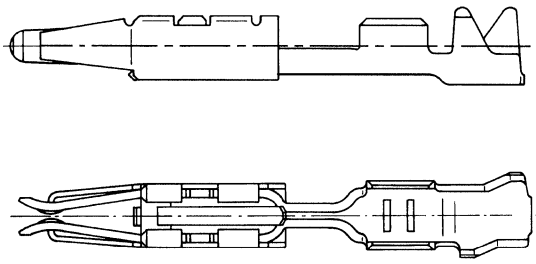
AMP Timer connectors are available as receptacle and tab housing (flying coupling in a wiring harness), or as receptacle housing and multiple tabs (group connection). With the flying coupling type the housings, with up to 100 contacts, are then secured by means of a separate locking device. With multiway connectors the single lever method is usually employed (sequential insertion distributed along an angled path). Using this method a single lever plug on the receptacle housing engages in one end of the multiple tab housing. The connector is then latched up to the final position. This system is relatively tolerant to the positioning of the contact tabs in the housing. An additional advantage is that the contact system is, to a large degree, insensitive to crooked insertion. Even when the tabs are not straight the contact geometry ensures firm contact.

In order that the flat contact system can be employed at interfaces with signal currents of medium strengths as well as with load currents more than 70 amps the contact system is divided into four sizes:

- Micro-Timer
- Junior-Timer and Junior Power-Timer
- Standard-Timer and Standard-Power-Timer
- Maxi-Power-Timer

METRIC

Micro-Timer I Contacts



Contact Material and Finish
CuSn[4], CuFe[2], cantilever spring stainless steel; pre-tin plated, pre-silver plated, selective gold plated

Performance Characteristics

Contact Resistance (New State)—
CuSn[4]: <5 mΩ
CuFe[2]: <4 mΩ

Total Temperature max.—
-40°C to 120°C (tin plated)
-40°C to 140°C (gold plated)

Mating Cycles—20 (tin plated); 100 (gold plated)

Insertion Force—max. 5 N (proof tab 0.8 [.031] thick)

Extraction Force—min. 2 N (proof tab 0.8 [.031] thick)

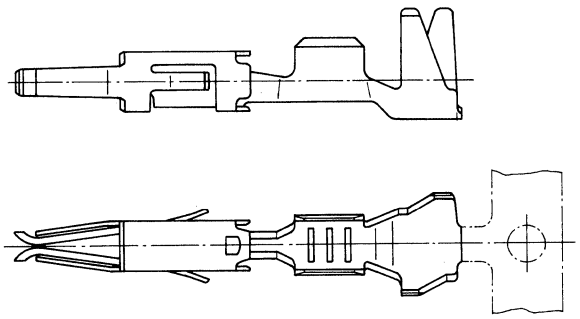
Retention Force
—from housings without second locking device min. 20 N

—from housings only second locking device min. 40 N

Wire Size Range (mm²)	Material and Finish Suffix*	Part Numbers			Hand Tool 169400 Die Set
		Strip Form	Loose Piece	Applicator	
0.20-0.50	-1/-2/-3/-4	929950	929951	878467-2	734290
0.50-1.00	-1/-2/-3/-4/-7/-8	929952	929953	878468-2	
1.00-1.50	-1/-2/-3/-4	929954	929955	878469-2	
0.35-0.75	-1/-2/-3/-4	928939	929927	878376-2	

*** Material and Finish Suffix**
-1 = CuSn[4], pre-tin plated
-2 = CuSn[4], selective 0.8 µm gold over 1.3 µm nickel/galv. tin, 2-5 µm
-3 = CuFe[2], pre-tin plated
-4 = Selective 0.8 µm gold over 1.3 µm nickel/galv. tin, 2-5 µm
-7 = CuSn[4], galv. 0.8 µm gold, selective 0.8 µm gold over 1.3 µm nickel, galv. 2-5 µm tin = short circuit version
-8 = CuFe[2], galv. 0.8 µm gold, selective 0.8 µm gold over 1.3 µm nickel, galv. 2-5 µm tin = short circuit version
Extraction Tool **Part No. 726510**

Micro-Timer II Contacts



Contact Material and Finish
Copper wrought alloy, cantilever spring stainless steel; tin plated (pre-tin plated)

Performance Characteristics

Contact Resistance (New State)—<4 mΩ

Total Temperature max.—
-40°C to 130°C (tin plated)

Mating Cycles—10 (tin plated); 100 (gold plated)

Insertion Force—max. 4 N (proof tab 0.6 [0.024] thick)

Extraction Force—min. 2 N (proof tab 0.6 [0.024] thick)

Retention Force (Contact Cavity)—min. 40 N (without second locking device)

Micro-Timer

Wire Size Range (mm²)	Material and Finish Suffix*	Part Numbers			Hand Tool 169400 Die Set	Single Seal
		Strip Form	Loose Piece	Applicator		
0.2-0.5	-1/-2	962942	962944	878607-2	734557-1	—
0.5-1.0	-1/-2	962943	962945	878608-2	734557-1	—

Single Sealing System

Wire Size Range (mm²)	Material and Finish Suffix*	Part Numbers			Hand Tool 169400 Die Set	Single Seal
		Strip Form	Loose Piece	Applicator		
0.35-0.50	-1/-2	962875	963710	878615-2	734560-1	963530-1
0.50-1.00	-1/-2/-5	962876	963711	878616-2		

*** Material and Finish Suffix**
-1 = CuSn[4], pre-tin plated
-2 = CuFe[2], pre-tin plated
-5 = CuFe[2], gold plated
Other finishes available, consult AMP.
Extraction Tool **Part No. 726534**
Cavity Plug **Part No. 963531-1**

SOURCE: Catalog 124799

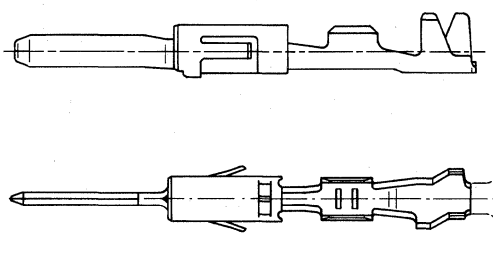
Specifications subject to change.

1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

METRIC

Mating Tabs, 1.5 x 0.6 [.059 x .023], with Symmetric Cantilever Steel Spring

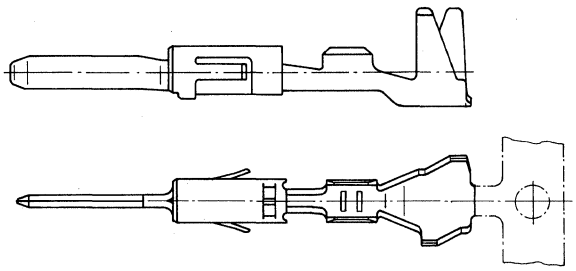


Tab

Wire Size Range (mm^2)	Material and Finish Suffix*	Part Numbers			
		Strip Form	Loose Piece	Applicator	Hand Tool 169400 Die Set
0.20-0.35	-1/-2	963898	963899	878607-2	—
0.50-1.00	-1/-2	963900	963901	878608-2	—

*** Material and Finish Suffix**
-1 = $CuSn^4$, pre-tin plated
-2 = $CuFe^2$, pre-tin plated

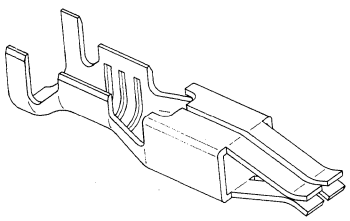
Single Sealing System



Wire Size Range (mm^2)	Material and Finish Suffix*	Part Numbers			
		Strip Form	Loose Piece	Applicator	Hand Tool 169400 Die Set
0.20-0.35	-1/-2	963902	963903	878615-2	—
0.50-1.00	-1/-2	963904	963905	878616-2	—

*** Material and Finish Suffix**
-1 = $CuSn^4$, pre-tin plated
-2 = $CuFe^2$, pre-tin plated
Single Seal **Part No. 963530-1**
Cavity Plug **Part No. 963531-1**

Junior-Timer Contacts



Wire Size Range—
0.12-2.50 mm^2

(suitable for insulation-reduced stranded wires)

Contact Material and Finish
Brass or phosphor bronze; plain, tin plated, silver plated, gold plated for harsh environment.

Special material and finishes available. Consult AMP.

Performance Characteristics

Current Carrying Capacity—
up to approx. 20 A

Insertion Force—
approx. 8 N

Extraction Force—
approx. 6 N

Modified
■ Chamfered cantilever springs

Special Version
■ Gap Size = 0.3 [.012] or 0.5 [.020]

SOURCE: Catalog 124799

Specifications subject to change.

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1-800-722-1111
Tooling/Technical Assistance Center

METRIC

Junior-Timer Contacts
(Continued)

Wire Size Range (mm^2)	Material	Finish	Part Numbers		
			Strip Form	Loose Piece	Hand Tool
0.12-0.25	CuSn	pre-tin plated	926755-1	926756-1	—
0.20-0.50	CuZn	pre-tin plated	927871-1	927872-1	—
	CuSn	pre-tin plated	927871-2	927872-2	
	CuZn	pre-silver plated	927871-4	927872-4	
>0.50-1.00 for Single and Double Feed	CuZn	pre-tin plated	927845-1	927846-1	825590-1
	CuSn	pre-tin plated	927845-2	927846-2	
	CuZn	pre-silver plated	927845-4	927846-4	
	CuZn	pre-tin plated	927863-1	927864-1	
	CuSn	pre-tin plated	927863-2	927864-2	
	CuZn	pre-silver plated	927863-4	927864-4	
0.50-1.50	CuZn	pre-tin plated	925590-1	925596-1	825590-1
	CuSn	pre-tin plated	925590-2	925596-2	
	CuSn	plain	925590-5	—	
	CuNiZn	plain	1-925590-0	—	
1.00-2.50	CuZn	pre-tin plated	925595-1	925597-1	825590-1
	CuSn	pre-tin plated	925595-2	925597-2	
>1.00-2.50 for Single and Double Feed	CuZn	pre-tin plated	927856-1	927857-1	825590-1
	CuSn	pre-tin plated	927856-2	927857-2	
	CuZn	pre-silver plated	927856-4	927857-4	
	CuZn	pre-tin plated	927877-1	927878-1	
	CuSn	pre-tin plated	927877-2	927878-2	
	CuZn	pre-silver plated	927877-4	927878-4	—

Modified Cantilever Springs (Chamfered)

Wire Size Range (mm^2)	Material	Finish	Part Numbers	
			Strip Form	Hand Tool
.050-1.50	CuZn	pre-tin plated	927966-1	825590-1

Special Version/Gap Size 0.3 [.012]

Wire Size Range (mm^2)	Material	Finish	Part Numbers		
			Strip Form	Loose Piece	Hand Tool
0.12-0.25	CuSn	selective gold plated	926755-2	926756-2	—
	CuSn	plain	926755-3	—	
0.50-1.50	CuSn	pre-tin plated	925871-1	925871-2	825590-1
	CuSn	nickel plated/selective gold plated	925871-3	925871-4	
	CuSn	plain	925871-5	—	
	CuSn	nickel plated/selective gold plated	925871-6	925871-7	
	CuSn	pre-tin plated	927973-1	927973-2	825590-1
	CuSn	pre-tin plated, with lubricant	927973-3	927973-4	

Special Version/Gap Size 0.5 mm [.020]

Wire Size Range (mm^2)	Material	Finish	Part Numbers		
			Strip Form	Loose Piece	Hand Tool
0.50-1.50	CuSn	plain	925620-1	—	825590-1
	CuSn	nickel plated/selective gold plated	925620-2	925622-2	
1.00-2.50	CuSn	plain	925621-1	—	825590-1
	CuSn	nickel plated/selective gold plated	925621-2	925623-2	

Note: Other finishes available, consult AMP.
Extraction Tool **Part No. 725864-1**

SOURCE: Catalog 124799

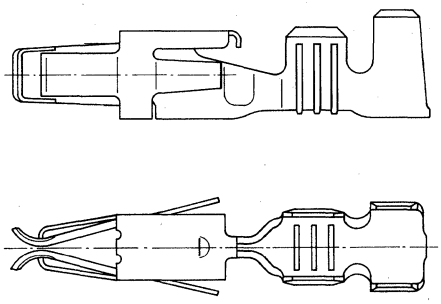
Specifications subject to change.

1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

METRIC

Junior-Power-Timer Contacts



Contact Material and Finish
CuSn[4], CuFe[2], cantilever spring stainless steel; tin plated, silver plated, selective gold plated

Performance Characteristics

Contact Resistance (New State)—
CuFe[2]: <2 mΩ
CuSn[4]: <3 mΩ

Total Temperature max.—

-40°C to 130°C (tin plated)
-40°C to 140°C (silver plated)
-40°C to 150°C (gold plated)

Mating Cycles—
10 (tin plated)
50 (silver plated)
100 (gold plated)

Insertion Force—max. 18 N (proof tab 0.8 [.031] thick)

Extraction Force—min. 5 N (proof tab 0.8 [.031] thick)

Retention Force
—from housings without second locking device min. 100 N
—from housings only second locking device min. 60 N

Wire Size Range (mm²)	Material and Finish Suffix*	Part Numbers			
		Strip Form	Loose Piece	Applicator	Hand Tool 169400 Die Set
0.35	-1/-3/1-1	927778	927780	878331-2	734470
0.50-1.00	-1/-3/-5/-6/-7/1-1/2-1	927775	927783	878191-2	169917
0.50-1.00	CuSn, plain	928876**	—	878191-2	169917
1.50-2.50	-1/-3/-5/-6	927773	927781	878190-2	169917
0.08-0.20	-1/-3/-4/-5/-6/1-1/2-1	963708	—	878599-2	—
0.35	-1/-3/-4/-5/-6/1-1/2-1	927774	927776	878332-2	734253
0.50-1.00	-1/-3/-4/-5/-6/1-1/2-1	927771	927779	878181-2	169917
0.50-1.00	CuSn[4], pre-tin plated and lubr.	928810***	928810***	878181-2	169917
1.50-2.50	-1/-3/-4/-5/-6/1-1	927768	927777	878180-2	169917
1.50-2.50	CuSn[4], pre-tin plated and lubr.	963884***	963885***	878180-2	169917

** Cap Size: 0.15 [.006]
*** Cap Size: 0.30 [.012]

Single Sealing System (Length 18.8 [.740])

Wire Size Range (mm²)	Material and Finish Suffix*	Part Numbers				
		Strip Form	Loose Piece	Applicator	Hand Tool 169400 Die Set	Single Seal
0.35	-1/-3/1-1	927772	929931	878334-1	734253	828904-1
0.5-1.0	-1/-3/-4/-5/-6/1-1/2-1	927770	929930	878335-1	734253	828905-1
1.5-2.5	-1/-3/1-1/2-1	927766	929929	878336-1	734253	828905-1
0.35	-1/-3/1-1	927772	929931	878334-1	734253	828904-1
0.5-1.0	-1/-3/-4/-5/-6/1-1/2-1	927770	929930	878335-1	734253	828904-1
1.5-2.5	-1/-3/1-1/2-1	927766	929929	878336-1	734253	828905-1

*** Material and Finish Suffix**
-1 = CuFe[2], pre-tin plated
-3 = CuSn[4], pre-tin plated
-4 = CuFe[2], contact body pre-nickel plated min. 0.75 µm, contact area pre-gold plated min. 0.75 µm, crimp area pre-tin plated min. 1.0 µm
-5 = CuSn[4], contact body pre-nickel plated min. 0.75 µm, contact area pre-gold plated min. 0.75 µm, crimp area pre-tin plated min. 1.0 µm
-6 = CuSn[4], contact body pre-silver plated min. 0.75 µm, contact area pre-silver plated min. 3.0 µm
-7 = CuNi1[2] Zn24, pre-tin plated
1-1 = CuFe[2], contact area gold plated
2-1 = CuSn, contact area gold plated
Extraction Tool **Part No. 726503** or **726519**
Replacement Blade **Part No. 726506**
Cavity Plug **Part No. 828922**

SOURCE: Catalog 124799

METRIC

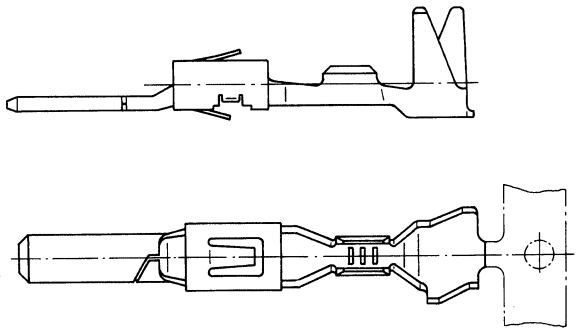
Junior-Power-Timer Contacts
(Continued)

Single Sealing System and Secondary Locking (Length 21.0 [.827])

Wire Size Range (mm^2)	Material and Finish Suffix*	Part Numbers				
		Strip Form	Loose Piece	Applicator	Hand Tool 169400 Die Set	Single Seal
0.35	-1/-3/-6/1-1/2-1	929941	929942	878334-1	734253	828904-1
0.5-1.0	-1/-3/-6/1-1/2-1	929939	929940	878335-1	734253	828905-1
1.5-2.5	-1/-3/-6/1-1/2-1	929937	929938	878336-1	734253	828905-1
0.35	-1/-3/-6/1-1/2-1	929941	929942	878334-1	734253	828904-1
0.5-1.0	-1/-3/-6/1-1/2-1	929939	929940	878335-1	734253	828904-1
1.5-2.5	-1/-3/-6/1-1/2-1	929937	929938	878336-1	734253	828905-1

*** Material and Finish Suffix**
-1 = $CuFe^2$, pre-tin plated
-3 = $CuSn^4$, pre-tin plated
-6 = $CuSn^4$, contact body pre-silver plated min. 0.75 µm, contact area pre-silver plated min. 3.0 µm
1-1 = $CuFe^2$, contact area gold plated
2-1 = CuSn, contact area gold plated
Extraction Tool **Part No. 726503** or **726519**
Replacement Blade **Part No. 726506**
Cavity Plug **Part No. 828922**

Mating Tabs, 2.8 x 0.8 [.110 x .031], with Asymmetric Cantilever Steel Spring



Tab

Wire Size Range (mm^2)	Material and Finish Suffix*	Part Numbers			
		Strip Form	Loose Piece	Applicator	Hand Tool 169400 Die Set
0.20-0.35	-1/-2	962882	963813	878609-2	—
0.50-1.00	-1/-2	962883	963814	878610-2	—
1.50-2.50	-1/-2	962884	963815	2-878611-2	—

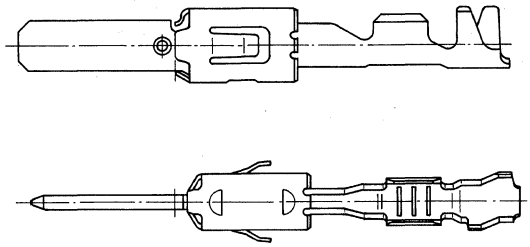
Single Sealing System

Wire Size Range (mm^2)	Material and Finish Suffix*	Part Numbers			
		Strip Form	Loose Piece	Applicator	Hand Tool 169400 Die Set
0.20-0.35	-1/-2	962879	963810	878617-2	—
0.50-1.00	-1/-2	962880	963811	878618-2	—
1.50-2.50	-1/-2	962881	963812	2-878619-2	—

*** Material and Finish Suffix**
-1 = $CuSn^4$, pre-tin plated
-2 = $CuFe^2$, pre-tin plated
Extraction Tool **Part No. 726519**

METRIC

Mating Tabs, 2.8 x 0.8 [.110 x .031], with Symmetric Cantilever Steel Spring



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Wire Size Range (mm^2)	Material and Finish	Part Numbers			
		Strip Form	Loose Piece	Applicator	Hand Tool
0.2-0.5	CuSn, contact body pre-gold plated over nickel, contact area pre-gold plated min. 0.6 µm	1-963860-3	1-963861-3	2-878549-2	734538-1
0.2-0.5	CuSn, silver plated	1-963860-2	1-963861-2	2-878549-2	734538-1
0.2-0.5	CuSn, pre-tin plated	1-963860-1	1-963861-1	2-878549-2	734538-1
0.2-0.5	CuFe, contact body pre-gold plated over nickel, contact area pre-gold plated min. 0.6 µm	2-963860-3	2-963861-3	2-878549-2	734538-1
0.2-0.5	CuFe, silver plated	2-963860-2	2-963861-2	2-878549-2	734538-1
0.2-0.5	CuFe, pre-tin plated	2-963860-1	2-963861-1	2-878549-2	734538-1

Extraction Tool **Part No. 726548-1**

Tab

Wire Size Range (mm^2)	Material and Finish	Part Numbers			
		Strip Form	Loose Piece	Applicator	Hand Tool
0.5-1.0	CuFe, contact body pre-gold plated over nickel, contact area pre-gold plated min. 0.6 µm	2-962841-3	2-963745-3	2-878550-2	734417-1
0.5-1.0	CuFe, silver plated	2-962841-2	2-963745-2	2-878550-2	734417-1
0.5-1.0	CuFe, pre-tin plated	2-962841-1	2-963745-1	2-878550-2	734417-1
0.5-1.0	CuSn, contact body pre-gold plated over nickel, contact area pre-gold plated min. 0.6 µm	1-962841-3	1-963745-3	2-878550-2	734417-1
0.5-1.0	CuSn, silver plated	1-962841-2	1-963745-2	2-878550-2	734417-1
0.5-1.0	CuSn, pre-tin plated	1-962841-1	1-963745-1	2-878550-2	734417-1

Extraction Tool **Part No. 726548-1**

Single Sealing System

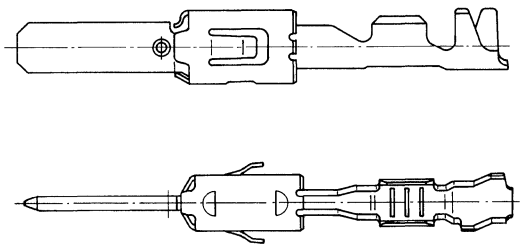
Wire Size Range (mm^2)	Material and Finish*	Part Numbers			
		Strip Form	Loose Piece	Applicator	Hand Tool
0.5-1.0	CuFe, contact body pre-gold plated over nickel, contact area pre-gold plated min. 0.6 µm	2-962915-3	2-963748-3	2-878559-2	734438-1
0.5-1.0	CuFe, silver plated	2-962915-2	2-963748-2	2-878559-2	734438-1
0.5-1.0	CuFe, pre-tin plated	2-962915-1	2-963748-1	2-878559-2	734438-1
0.5-1.0	CuSn, contact body pre-gold plated over nickel, contact area pre-gold plated min. 0.6 µm	1-962915-3	1-963748-3	2-878559-2	734438-1
0.5-1.0	CuSn, silver plated	1-962915-2	1-963748-2	2-878559-2	734438-1
0.5-1.0	CuSn, pre-tin plated	1-962915-1	1-963748-1	2-878559-2	734438-1

*Other finishes available, consult AMP.
Single Seal: **Part No. 828904** (0.5-1.0 mm^2);
Part No. 828905 (1.5-2.5 mm^2)
Cavity Plug **Part No. 828922**

SOURCE: Catalog 124799

METRIC

Mating Tabs, 2.8 x 0.8 [.110 x .031], with Symmetric Cantilever Steel Spring
(Continued)



Tab

Wire Size Range (mm^2)	Material and Finish	Part Numbers			
		Strip Form	Loose Piece	Applicator	Hand Tool
1.5-2.5	CuFe, contact body pre-gold plated over nickel, contact area pre-gold plated min. 0.6 µm	2-962843-3	2-963747-3	2-878552-2	734417-3
1.5-2.5	CuFe, silver plated	2-962843-2	2-963747-2	2-878552-2	734417-3
1.5-2.5	CuFe, pre-tin plated	2-962843-1	2-963747-1	2-878552-2	734417-3
1.5-2.5	CuSn, contact body pre-gold plated over nickel, contact area pre-gold plated min. 0.6 µm	1-962843-3	1-963747-3	2-878552-2	734417-3
1.5-2.5	CuSn, silver plated	1-962843-2	1-963747-2	2-878552-2	734417-3
1.5-2.5	CuSn, pre-tin plated	1-962843-1	1-963747-1	2-878552-2	734417-3
1.5-2.5	CuFe, contact body pre-gold plated over nickel, contact area pre-gold plated min. 0.6 µm	2-962842-3	2-963746-3	2-878551-2	734417-2
1.5-2.5	CuFe, silver plated	2-962842-2	2-963746-2	2-878551-2	734417-2
1.5-2.5	CuFe, pre-tin plated	2-962842-1	2-963746-1	2-878551-2	734417-2
1.5-2.5	CuSn, contact body pre-gold plated over nickel, contact area pre-gold plated min. 0.6 µm	1-962842-3	1-963746-3	2-878551-2	734417-2
1.5-2.5	CuSn, silver plated	1-962842-2	1-963746-2	2-878551-2	734417-2
1.5-2.5	CuSn, pre-tin plated	1-962842-1	1-963746-1	2-878551-2	734417-2

Extraction Tool **Part No. 726548-1**

Single Sealing System

Wire Size Range (mm^2)	Material and Finish*	Part Numbers			
		Strip Form	Loose Piece	Applicator	Hand Tool
1.5-2.5	CuFe, contact body pre-gold plated over nickel, contact area pre-gold plated min. 0.6 µm	2-962916-3	2-963749-3	2-878560-2	734440-1
1.5-2.5	CuFe, silver plated	2-962916-2	2-963749-2	2-878560-2	734440-1
1.5-2.5	CuFe, pre-tin plated	2-962916-1	2-963749-1	2-878560-2	734440-1
1.5-2.5	CuSn, contact body pre-gold plated over nickel, contact area pre-gold plated min. 0.6 µm	1-962916-3	1-963749-3	2-878560-2	734440-1
1.5-2.5	CuSn, silver plated	1-962916-2	1-963749-2	2-878560-2	734440-1
1.5-2.5	CuSn, pre-tin plated	1-962916-1	1-963749-1	2-878560-2	734440-1

*Additional finishes available, consult AMP.
Single Seal: **Part No. 828904** (0.5-1.0 mm^2);
Part No. 828905 (1.5-2.5 mm^2)

SOURCE: Catalog 124799

Specifications subject to change.

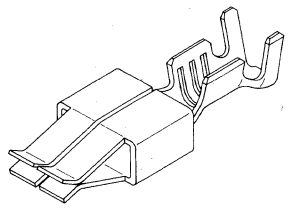
1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

METRIC

Standard-Timer Contacts

Contacts fits tab 6.3 x 0.8 [.248 x .031], 5.8 x 0.8 [.228 x .031], and 4.8 x 0.8 [.189 x .031]



Wire Size Range — .0.2-2.5 mm² (Suitable for insulation-reduced stranded wire)

Insulation Diameter— 0.9-5.0 [.035-.197]

Contact Material— Brass, phosphor bronze and CuFe

Performance Characteristics

Temperature Range— -40°C to +110°C

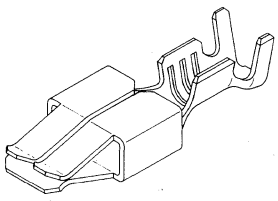
Insertion Force— ≤ 15 N

Extraction Force— ≤ 8 N

Standard Version

Wire Size Range (mm²)	Material	Finish	Part Numbers		
			Strip Form	Loose Piece	Hand Tool
0.2-0.5	CuZn	pre-tin plated	926984-1	926985-1	—
	CuSn		926984-2	926985-2	
0.5-1.0	CuZn	pre-tin plated	927847-1	927848-1	825590
	CuSn		927847-2	927848-2	
	CuFe		927847-3	927848-3	
	CuZn	pre-tin plated	927865-1	927866-1	
	CuSn		927865-2	927866-2	
	CuFe		927865-3	927866-3	
0.5-1.0	CuZn	pre-tin plated	925575-1	925598-1	
	CuSn		925575-2	925598-2	
	CuFe		925575-3	925598-3	
1.0-2.5	CuZn	pre-tin plated	925612-1	925613-1	
	CuSn		925612-2	925613-2	
	CuFe		925612-3	925613-3	
>1.0-2.5	CuZn	pre-tin plated	927849-1	927850-1	
	CuSn		927849-2	927850-2	
	CuFe		927849-3	927850-3	
	CuZn	pre-tin plated	927879-1	927880-1	
	CuSn		927879-2	927880-2	
	CuFe		927879-3	927880-3	
2 x 0.75	CuZn	pre-tin plated	926940-1	—	—
	CuSn		926940-2	—	
	CuFe		926940-3	—	

Modified Contacts (Chamfered Cantilever Springs)



Wire Size Range (mm²)	Material	Finish	Part Numbers		
			Strip Form	Loose Piece	Hand Tool
0.5-1.5	CuZn	pre-tin plated	926965-1	927936-1	825590
	CuSn		926965-2	927936-2	
	CuFe		926965-3	927936-3	
1.0-2.5	CuZn	pre-tin plated	926973-1	927937-1	
	CuSn		926973-2	927937-2	
	CuFe		926973-3	927937-3	

SOURCE: Catalog 124799

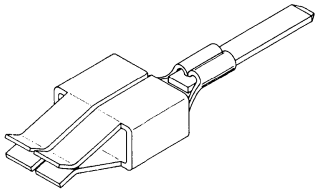
Specifications subject to change.

1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

METRIC

Standard-Timer Contacts
(Continued)



Special Versions

with Post
1.6 x 0.8 [.063 x .031]

Post Length (mm)	Material	Finish	Part Numbers		
			Strip Form	Loose Piece	Hand Tool
16.2	CuSn	pre-tin plated	826990-1	—	—
19.7			826990-4	—	
25.7			826990-3	—	
38.7			826990-2	—	

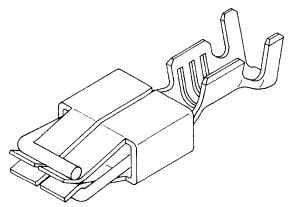
with Post
2.8 x 0.8 [.110 x .031]

Post Length (mm)	Material	Finish	Part Numbers		
			Strip Form	Loose Piece	Hand Tool
—	CuSn	pre-tin plated	826991-1	—	—

with Wire Spring

Wire Size Range (mm^2)	Material	Finish	Part Numbers		
			Strip Form	Loose Piece	Hand Tool
1.0-2.5	CuFe	pre-tin plated	826042-1	827808-1	825590/825582
	CuZn		826042-2	827808-2	
	CuFe		826042-3	827808-3	
	CuZn		826042-4	827808-4	

Special Versions
(with Modified Locking Lance)



Wire Size Range (mm^2)	Material	Finish	Part Numbers		
			Strip Form	Loose Piece	Hand Tool
0.5-1.5	CuZn	pre-tin plated	926005-1	926007-1	825590
	CuSn		926005-2	926007-2	
	CuFe		926005-3	926007-3	
1.0-2.5	CuZn	pre-tin plated	926006-1	926008-1	
	CuSn		926006-2	926008-2	
	CuFe		926006-3	926008-3	

SOURCE: Catalog 124799

Specifications subject to change.

1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

METRIC

Standard-Power-Timer Contacts

Contact Material and Finish—
$CuSn^4$, $CuFe^2$, cantilever spring stainless steel; tin plated, silver plated, selective gold plated

Performance Characteristics

Contact Resistance (New State)—

$CuFe^2$: <1.8 mΩ
$CuSn^4$: <2.2 mΩ

Total Temperature max.—
-40°C to 130°C (tin plated)
-40°C to 140°C (silver plated)
-40°C to 150°C (gold plated)

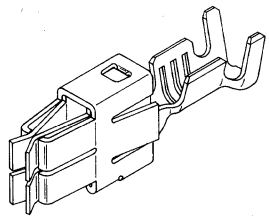
Mating Cycles—
10 (tin plated);
50 (silver plated);
100 (gold plated)

Insertion Force— max. 15 N (proof tab 0.8 [.031] thick)

Extraction Force— min. 2 N (proof tab 0.8 [.031] thick)

Retention Force
—from housings without second locking device min. 120 N

—from housings only second locking device min. 60 N



Standard-Power-Timer

Wire Size Range (mm^2)	Material and Finish Suffix*	Part Numbers			
		Strip Form	Loose Piece	Applicator	Hand Tool 169400 Die Set
0.35	-1/-2/-3/-4/-5	927839	928989	878426-2	734249
0.5-1.0	-1/-2	927827	927828	878329-2	734249
1.0-2.5	-1/-2/-5	927833	927834	878367-2	734249
>2.5-4.0	-1/-2	927824	927825	2-878314-2	734250
0.35	-1/-2/-3/-4/-5/-7	927840	928990	878427-2	—
0.5-1.0	-1/-2/-3/-4/-5/-7	927831	927832	878328-2	734251
1.5-2.5	-1/-2/-3/-4/-5	927837	927838	878356-2	734251
>2.5-4.0	-1/-2/-5	927829	927830	2-878384-2	734251
>4.0-6.0	-1/-2/-3/-4/-5	963709	963714	2-878738-2	—

***Material and Finish Suffix**
-1 = $CuFe^2$, pre-tin plated
-2 = $CuSn^4$, pre-tin plated
-3 = $CuSn^4$, pre-silver plated (3.0 µm)
-4 = $CuSn^4$, pre-silver plated (0.8 µm)
-5 = $CuFe^2$, pre-silver plated (0.8 µm)
-7 = $CuFe^2$, contact area gold plated
Extraction Tool **Part Nos. 726503** or **726519**
Replacement Blade **Part No. 726506**

Single Sealing System

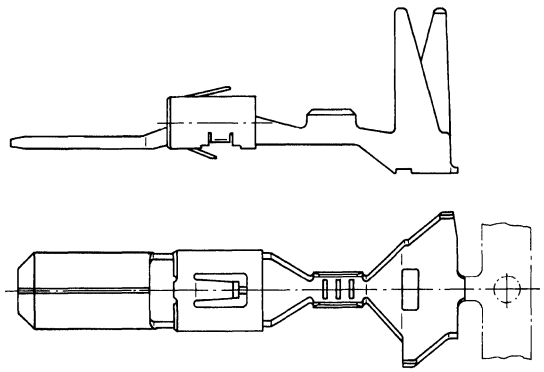
Wire Size Range (mm^2)	Material and Finish Suffix*	Part Numbers				
		Strip Form	Loose Piece	Applicator	Hand Tool 169400 Die Set	Single Seal
0.35	-1/-2/-7	927826	929921	878425-1	—	963243
0.5-1.0	-1/-2/-7	927836	929922	878337-1	734252	963244
1.50	-1/-2	927835	929923	878338-1	734252	963244
2.50	-1/-2	927835	929923	878338-1	734252	963245
0.35	-1/-2/-7	927826	929921	878425-1	—	963243
0.5-1.0	-1/-2/-7	927836	929922	878337-1	734252	963243
1.5-2.5	-1/-2	927835	929923	878338-1	734252	963244
>2.5-4.0	-1/-2	928966	929924	878441-1	734252	963245

*** Material and Finish Suffix**
-1 = $CuFe^2$, pre-tin plated
-2 = $CuSn^4$, pre-tin plated
-7 = $CuFe^2$, contact area gold plated
Extraction Tool **Part Nos. 726503** or **726519**
Replacement Blade **Part No. 726506**
Cavity Plug **Part No. 100132**

SOURCE: Catalog 124799

METRIC

Mating Tabs, 4.8 [.189], with Asymmetric Cantilever Steel Spring



Tab

Wire Size Range (mm^2)	Material and Finish Suffix*	Part Numbers			Hand Tool 169400 Die Set
		Strip Form	Loose Piece	Applicator	
0.35	-1/-2	963824	963825	878609-2	—
0.5-1.0	-1/-2	962903	—	878610-2	—
0.5-1.0	-1/-2	962908	—	878612-2	—
1.5-2.5	-1/-2	962904	—	2-878611-2	—
1.5-2.5	-1/-2	962909	—	2-878613-2	—
>2.5-4.0	-1/-2	962910	—	2-878614-2	—

***Material and Finish Suuffix**
-1 = CuSn[4], pre-tin plated
-2 = CuFe[2], pre-tin plated
Extraction Tool **Part No. 726519**

Single Sealing System

Wire Size Range (mm^2)	Material and Finish Suffix*	Part Numbers			Hand Tool 169400 Die Set
		Strip Form	Loose Piece	Applicator	
0.35	-1/-2	963808	963809	878729-2	—
0.5-1.0	-1/-2	962905	—	878620-2	—
1.5-2.5	-1/-2	962906	—	2-878621-2	—
>2.5-4.0	-1/-2	962907	—	2-878622-2	—

*** Material and Finish Suffix**
-1 = CuSn[4], pre-tin plated
-2 = CuFe[2], pre-tin plated
Extraction Tool **Part No. 726519**

SOURCE: Catalog 124799

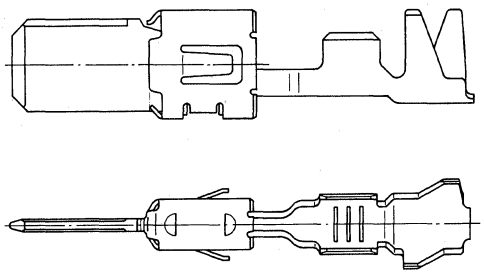
Specifications subject to change.

1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

METRIC

Mating Tabs, 5.8 x 0.8 [.228 x .031], with Symmetric Cantilever Steel Spring



Tab

Wire Size Range (mm^2)	Material and Finish	Part Numbers			
		Strip Form	Loose Piece	Applicator	Hand Tool
0.5-1.0	CuSn, pre-tin plated	1-963734-1	1-963737-1	2-878654-2	—
	CuSn, silver plated	1-963734-2	1-963737-2	2-878654-2	—
	CuFe, pre-tin plated	2-963734-1	2-963737-1	2-878654-2	—
	CuFe, silver plated	2-963734-2	2-963737-2	2-878654-2	—
1.5-2.5	CuSn, pre-tin plated	1-963735-1	1-963738-1	2-878561-2	—
	CuSn, silver plated	1-963735-2	1-963738-2	2-878561-2	—
	CuFe, pre-tin plated	2-963735-1	2-963738-1	2-878561-2	—
	CuFe, silver plated	2-963735-2	2-963738-2	2-878561-2	—
1.5-2.5	CuSn, pre-tin plated	1-962845-1	1-963740-1	2-878563-2	734418-1
	CuSn, silver plated	1-962845-2	1-963740-2	2-878563-2	734418-1
	CuFe, pre-tin plated	2-962845-1	2-963740-1	2-878563-2	734418-1
	CuFe, silver plated	2-962845-2	2-963740-2	2-878563-2	734418-1
>2.5-4.0	CuSn, pre-tin plated	1-963736-1	1-963739-1	2-878562-2	—
	CuSn, silver plated	1-963736-2	1-963739-2	2-878562-2	—
	CuFe, pre-tin plated	2-963736-1	2-963739-1	2-878562-2	—
	CuFe, silver plated	2-963736-2	2-963739-2	2-878562-2	—
>2.5-4.0	CuSn, pre-tin plated	1-962846-1	1-963741-1	2-878564-2	734418-2
	CuSn, silver plated	1-962846-2	1-963741-2	2-878564-2	734418-2
	CuFe, pre-tin plated	2-962846-1	2-963741-1	2-878564-2	734418-2
	CuFe, silver plated	2-962846-2	2-963741-2	2-878564-2	734418-2

Extraction Tool **Part No. 726548-1**

Single Sealing System

Wire Size Range (mm^2)	Material and Finish	Part Numbers			
		Strip Form	Loose Piece	Applicator	Hand Tool
0.5-1.0	CuSn, pre-tin plated	1-962917-1	1-963742-1	2-878565-2	734442-1*
	CuSn, silver plated	1-962917-2	1-963742-2	2-878565-2	734442-1*
	CuFe, pre-tin plated	2-962917-1	2-963742-1	2-878565-2	734442-1*
	CuFe, silver plated	2-962917-2	2-963742-2	2-878565-2	734442-1*
1.5-2.5	CuSn, pre-tin plated	1-962918-1	1-963743-1	2-878566-2	734444-1
	CuSn, silver plated	1-962918-2	1-963743-2	2-878566-2	734444-1
	CuFe, pre-tin plated	2-962918-1	2-963743-1	2-878566-2	734444-1
	CuFe, silver plated	2-962918-2	2-963743-2	2-878566-2	734444-1
>2.5-4.0	CuSn pre-tin plated	1-962919-1	1-963744-1	2-878567-2	734446-1
	CuSn, silver plated	1-962919-2	1-963744-2	2-878567-2	734446-1
	CuFe, pre-tin plated	2-962919-1	2-963744-1	2-878567-2	734446-1
	CuFe, silver plated	2-962919-2	2-963744-2	2-878567-2	734446-1

*Hand Tool **Part No. 169400** and Die Set

SOURCE: Catalog 124799

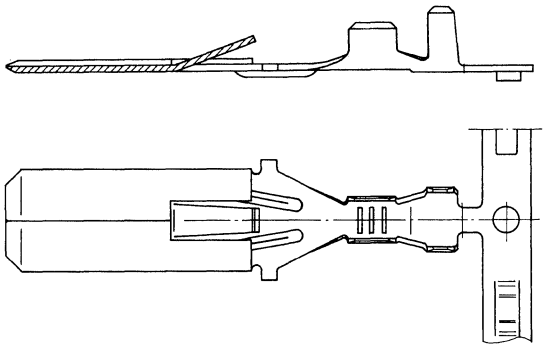
Specifications subject to change.

1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

METRIC

Mating Tabs, 6.3 x 0.8 [.248 x .031], according to DIN 46 343



Tab

Wire Size Range (mm²)	Material and Finish Suffix*	Part Numbers			
		Strip Form	Loose Piece	Applicator	Hand Tool
0.5-1.0	-1/-2	963951	963952	—	—
>1.0-2.5	-1/-2	963953	963954	—	—
>2.5-4.0	-1/-2	963955	963956	—	—
0.5-1.0	-1/-2	963957	963958	—	—
>1.0-2.5	-1/-2	963959	963960	—	—

*** Material and Finish Suffix**
-1 = CuSn⁴, plain
-2 = CuSn⁴, pre-tin plated
Extraction Tool **Part No. 725864-1**

Maxi-Power-Timer Contacts

Contact Material and Finish
CuNiSi, cantilever spring stainless steel; pre-tin plated

Performance Characteristics

Contact Resistance (New State)— <0.3 mΩ

Total Temperature max.— -40°C to 130°C (tin plated)

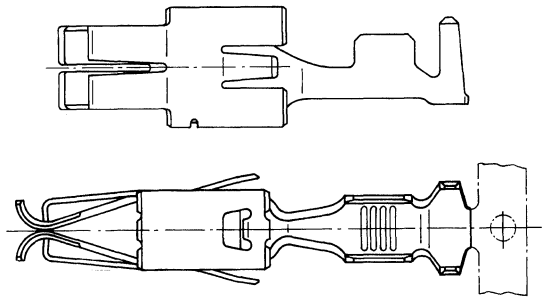
Mating Cycles— 10 (tin plated)

Insertion Force— Tab 9.5 x 1.2 [.374 x .047], max. 20 N (tin plated), proof tab 1.2 [.047] thick

Extraction Force— Tab 9.5 x 1.2 [.374 x .047], min. 4 N (tin plated), proof tab 1.2 [.047] thick

Retention Force
—from housings without second locking device min. 150 N

—from housings only second locking device min. 100 N



Wire Size Range (mm²)	Material and FInish Suffix*	Part Numbers			
		Strip Form	Loose Piece	Applicator	Hand Tool
>2.5-4.0	-1	962928	962929	2-878592-2	734531-1
4.0-6.0	-1	962930	962931	2-878593-2	734532-1
6.0-10.0	-1	962932	962933	2-878659-2	734533-1

*** Material and Finish Suffix**
-1 = CuNiSi, pre-tin pated 1-3 µm
Extraction Tool **Part No. 726552**

Wire Size Range (mm²)	Material and Finish Suffix*	Part Numbers		
		Strip Form	Loose Piece	Applicator
>2.5-4.0	-1	962934	962935	2-878594-2
4.0-6.0	-1	962936	962937	2-878595-2
6.0-10.0	-1	962938	962939	2-878660-2

*** Material and Finish Suffix**
-1 = CuNiSi, pre-tin pated 1-3 µm
Extraction Tool **Part No. 726552**

SOURCE: Catalog 124799

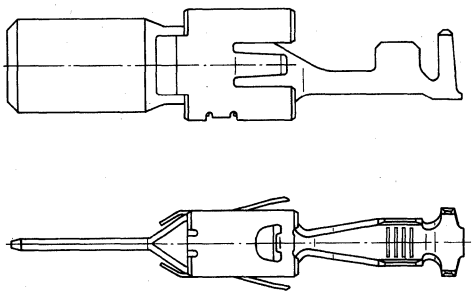
Specifications subject to change.

1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

METRIC

Mating Tabs, 9.5 x 1.2 [.374 x .047], with Symmetric Cantilever Steel Spring



Tab

Wire Size Range (mm^2)	Material and Finish Suffix*	Part Numbers			
		Strip Form	Loose Piece	Applicator	Hand Tool
>2.5-4.0	-1/-2	963764	963765	2-878592-2	734531-1
4.0-6.0	-1/-2	963766	963767	2-878593-2	734532-1
6.0-10.0	-1/-2	963768	963769	2-878659-2	734533-1

*** Material and Finish Suffix**
-1 = CuSn, pre-tin plated
-2 = CuFe, pre-tin plated

Single Sealing System

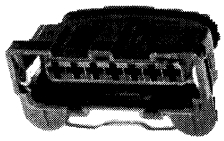
Wire Size Range (mm^2)	Material and Finish Suffix*	Part Numbers		
		Strip Form	Loose Piece	Applicator
>2.5-4.0	-1/-2	963770	963771	2-878594-2
4.0-6.0	-1/-2	963772	963773	2-878595-2
6.0-10.0	-1/-2	963774	963775	2-878660-2

*** Material and Finish Suffix**
-1 = CuSn, pre-tin plated
-2 = CuFe, pre-tin plated

SOURCE: Catalog 124799

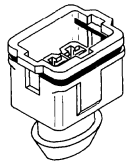
Timer Housings, Loaded, with Locking Spring and Seal

METRIC

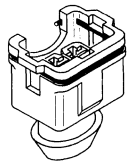


Product Facts

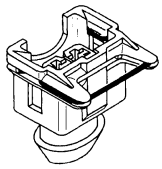
- Housing of flame-retardant polyamide
- Unmistakable keying
- Additional contact locking device
- Temperature Range—-40°C to +110°C
- Creepage distance and air gap according to requirements
- Track resistance KC 250



Type A



Type B



Type C

No. of Positions	Color	Material	Part Numbers Type A	Type B	Type C
2	natural	glass-filled 13%	—	825414	—
		glass-filled 30%	—	1-825414-0	—
	light grey	glass-filled 30%	—	—	827551-1
	grey	glass-filled 13%	826008-1	825414-1	—
		glass-filled 30%	1-826008-1	1-825414-1	827551-2
	green	glass-filled 13%	826008-2	825414-2	—
		glass-filled 30%	1-826008-2	1-825414-2	827551-6
	blue	glass-filled 13%	826008-3	825414-3	—
		glass-filled 30%	1-826008-3	1-825414-3	827551-5
	black	glass-filled 13%	826008-5	825414-5	—
		glass-filled 30%	1-826008-5	1-825414-5	827551-3
	brown	glass-filled 13%	826008-6	825414-6	—
		glass-filled 30%	1-826008-6	1-825414-6	827551-4
	white	glass-filled 13%	826008-7	—	—
	yellow	glass-filled 13%	826008-8	—	—
		glass-filled 30%	—	—	827551-8
	red	glass-filled 30%	—	—	827551-7
	black	—	—	828739-1[1]	828657-3[2]
	natural	—	—	828739-2[1]	828657-1[2]
	red	—	—	828739-3[1]	828657-7[2]
	grey	—	—	—	828657-2[2]
	brown	—	—	—	828657-4[2]
	blue	—	—	—	828657-5[2]
	green	—	—	—	828657-6[2]
	yellow	—	—	—	828748-3[2]
					828657-8[2]
	—	—	—	—	827546-3[2]
3	black	glass-filled 30%	—	—	1-827578-1
	grey	—	—	—	828748-2[2]
		glass-filled 30%	—	—	1-827578-2
	white	—	—	—	828748-1[2]
					1-827578-3[3]
	green	—	—	—	828748-6[2]
					1-827578-4[3]
	black	—	—	—	828748-3[2]
	brown	—	—	—	828748-4[2]
	blue	—	—	—	828748-5[2]
	red	—	—	—	828748-7[2]
	yellow	—	—	—	828748-8[2]
4	—	—	215897-1	—	—
5	black	glass-filled 30%	—	—	827579-1
		glass-filled 13%	827656-1	—	—
	grey	glass-filled 30%	—	—	827579-2
	—	—	—	—	963013-1[2]
7	black	glass-filled 13%	827216-1	—	—
		glass-filled 13%	—	—	827572-1
		glass-filled 30%	—	—	827580-1
	grey	glass-filled 30%	—	—	827580-2
	—	—	—	—	828893-1
15	—	—	144410-1	—	—
		—	142172-1	—	—

[1]For Standard-Power-Timer [2]For Junior-Power-Timer [3]For Junior-Timer

SOURCE: Catalog 124799

Specifications subject to change.

1-800-522-6752
Product Information Center/ AMP FAX Service

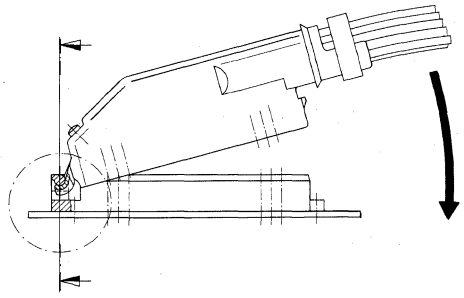
1-800-722-1111
Tooling/Technical Assistance Center

METRIC

Additional Timer Housings

Pivot Principle

In order to connect high position connectors, there are two methods: pivot principle (sequential connection spread over an angle) or through the use of a insertion/extraction tool which allows parallel connection of male and female connectors.



12, 15, and 16 Position Housings

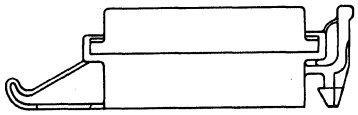
12 Position
Part No. 827603-1

Mates with—
Part No. 827229

Note: 16 Pos. Housing Dim. (Typ.)—64.5 [2.54] L x 16.5 [0.65] W x 22.0 [0.87] H

15 Position
Part No. 926171-1 (black)
Part No. 926171-2 (yellow)

Mates with—
Part No. 826703
Part No. 827467



16 Position
Part No. 827584-1 (black)
Part No. 827584-2 (yellow)

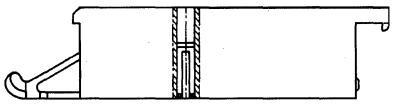
Mates with—
Part No. 827539
Part No. 828662

25 Position Housings

25 Position
Part No. 925470-1 (black)
Part No. 925470-2 (yellow)

Mates with—
Part No. 826140

Note: Housing Dim. (Typ.)—79.6 [3.13] L x 11.7 [0.46] W x 22.0 [0.87] H



25 Position
Part No. 925471-1 (black)
Part No. 925471-2 (yellow)

Mates with—
Part No. 826141
Part No. 826195

SOURCE: Catalog 124799

METRIC

Additional Timer Housings
(Continued)

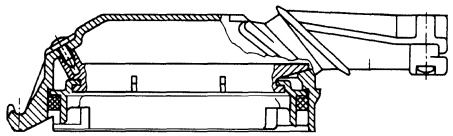
25 Position Housings
(Continued)

Note: Housing Dim. (Typ.)—150.3 [5.92] L x 28.5 [1.12] W x 41.0 [1.61] H

25 Position
Part Numbers:
827249-1 without Strain Relief
827249-2 with Strain Relief
827249-3 with Strain Relief
827249-4 with Strain Relief
827047-1

For Junior-Power-Timer Contacts
Part No. 963317-1

Mates with—
Part No. 827050
Part No. 827019



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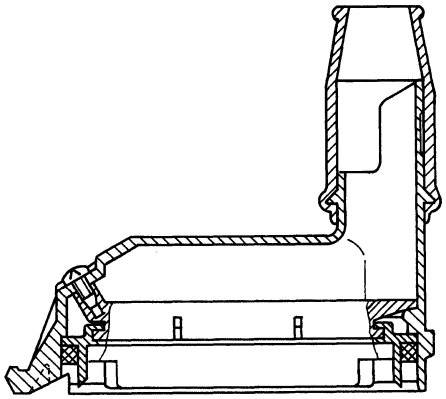
25 Position
Part No. 963325-1

Mates with—
Part No. 827050
Part No. 827019



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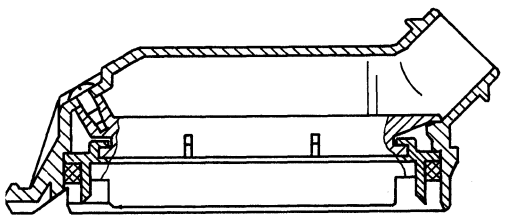
25 Position
Part No. 827591-1

Mates with—
Part No. 827050
Part No. 827019



SOURCE: Catalog 124799

Specifications subject to change.

1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

METRIC

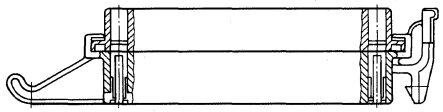
Additional Timer Housings
(Continued)

25 Position Housings
(Continued)

25 Position
Part No. 827534-1

Mates with—
Part No. 827535

Note: Housing Dim. (Typ.)—88.0 [3.46] L x 16.2 [0.64] W x 22.0 [0.87] H



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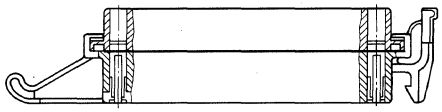
25 Position
Part No. 827553-1

Mates with—
Part No. 342651

Additional Coding
Part No. 828923

Mates with—
Part No. 344529

Note: Housing Dim. (Typ.)—88.0 [3.46] L x 16.2 [0.64] W x 22.0 [0.87] H



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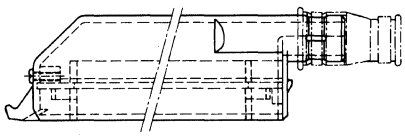
35 Position Housings

35 Position
Part No. 826000-1
Part No. 826000-2
Part No. 826000-3
Part No. 826000-4
Part No. 826000-5
Part No. 826000-6

For Junior-Power-Timer Contacts
Part No. 963318-1
Part No. 963318-2
Part No. 963318-3
Part No 963318-4

Mates with—
Part No. 825213
Part No. 828822
Part No. 827408
Part No. 827398
Part No. 826115
Part No. 827399

Note: Housing Dim. (Typ.)—149.5 [5.89] L x 29.0 [1.14] W x 39.0 [1.54] H



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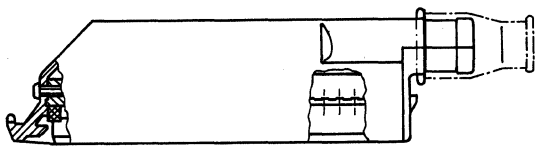
35 Position
Part No. 827663

Mates with—
Part No. 825213
Part No. 828822
Part No. 827408
Part No. 827398
Part No. 826115
Part No. 827399

Note: Housing Dim. (Typ.)—151.1 [5.94] L x 25.0 [0.98] W x 39.0 [1.54] H



Color	Part Numbers	
	Assembly	Connector Housing
Red	827663-1	927555-1
White	827663-2	927556-1
Blue	827663-3	927557-1
Red	827663-4	927558-1
Natural	827663-5	928556-1
Black	827663-6	928557-1
Black	827663-7	929556-1

Note: For more information on coding, consult AMP.

Additional Timer Housings
(Continued)

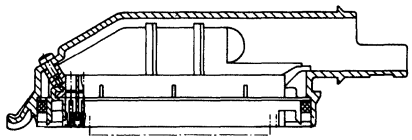
METRIC

35 Position Housings
(Continued)

35 Position Housing with Round Cable Exit

Mates with—
Part No. 825213
Part No. 828822
Part No. 827408
Part No. 827398
Part No. 826115
Part No. 827399

Note: Housing Dim. (Typ.)—168.0 [6.61] L x 25.0 [0.98] W x 47.0 [1.85] H



Part Numbers	
Assembly	Connector Housing
963061-1	962075-1
963062-1	962076-1
828860-1	929565-1
3-827257-0	927122-1
963060-1	962074-1
963059-1	962073-1
963043-1	962072-1
828880-1	929644-1
828826-1	929536-1
1-827257-4	928688-1
1-827257-3	928612-1
1-827257-2	928611-1
1-827257-1	927539-1
1-827257-0	927538-1

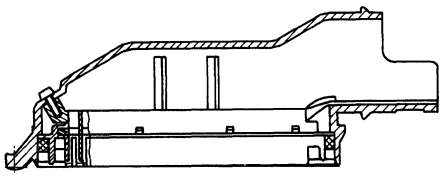
Part Numbers	
Assembly	Connector Housing
827257-9	927434-1
1-827257-8	927391-1
827257-8	927391-1
1-827257-7	927391-1
827257-7	927391-1
1-827257-6	927370-1
827257-6	927370-1
827257-5	927229-1
827257-4	927127-1
827257-3	927120-1
827257-2	927118-1
827257-1	927060-1

Rubber Boot **Part No. 826779**

35 Position Housing with Oval Cable Exit

Mates with—
Part No. 825213
Part No. 828822
Part No. 827408
Part No. 827398
Part No. 826115
Part No. 827399

Note: Housing Dim. (Typ.)—163.0 [6.42] L x 25.0 [0.98] W x 58.0 [2.28] H



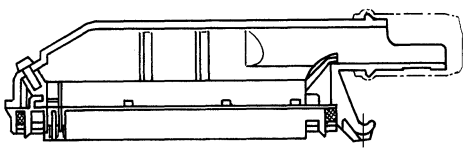
Part Numbers	
Assembly	Connector Housing
828536-1	928165-1
828459-1	928165-1
828534-1	928136-1
828397-1	928136-1
828396-1	928137-1
828535-1	928137-1

Note: For more information on coding, consult AMP.

35 Position Housing
Part No. 828632-1
Part No. 828632-3
Part No. 828633-1
Part No. 828633-3

Mates with—
Part No. 825213
Part No. 828822
Part No. 827408
Part No. 827398
Part No. 826115
Part No. 827399

Note: Housing Dim. (Typ.)—158.0 [6.22] L x 25.0 [0.98] W x 40.0 [1.57] H



SOURCE: Catalog 124799

Specifications subject to change.

1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

METRIC

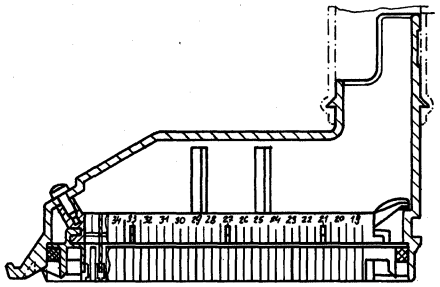
Additional Timer Housings
(Continued)

35 Position Housings
(Continued)

35 Position Housing
Part No. 828699

Mates with—
Part No. 825213
Part No 828822
Part No. 827408
Part No. 827398
Part No. 826115
Part No. 827399

Note: Housing Dim. (Typ.)—125.0 [4.92] L x 25.0 [0.98] W x 85.0 [3.35] H

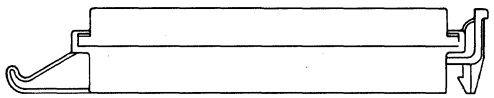


Part Numbers	
Assembly	**Connector Housing**
828699-1	928615-1
828699-2	928615-2
828699-3	928615-3
828699-4	928615-4
828699-5	928615-5
828699-6	928615-6
828699-7	928681-1

35 Position Housing
Part No. 827667-1

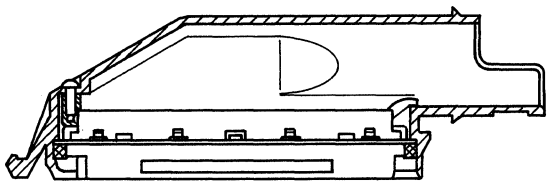
Mates with—
Part No. 827137

Note: Housing Dim. (Typ.)—113.0 [4.45] L x 16.2 [0.67] W x 22.0 [0.87] H



38 Position Housing
Part No. 828808-1
Part No. 828808-2
Part No. 828808-3

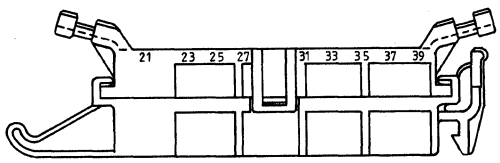
Mates with—
Part No. 827698
Part No. 828989



39 Position Housing
Part No. 828771-1

Mates with—
Part No. 828772
Part No. 828773
Part No. 963578
Part No. 963574

Note: Housing Dim. (Typ.)—88.0 [3.46] L x 11.4 [0.45] W x 22.0 [0.87] H



SOURCE: Catalog 124799

METRIC

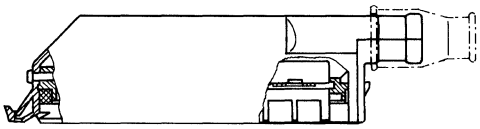
Additional Timer Housings
(Continued)

55 Position Housings

55 Position Housing
Part No. 828761-1
(8 x Junior-Power-Timer, 47 x Micro-Timer I)

Mates with—
Part No. 828763

Note: Housing Dim. (Typ.)—149.5 [5.89] L x 25.0 [0.98] W x 39.0 [1.54] H



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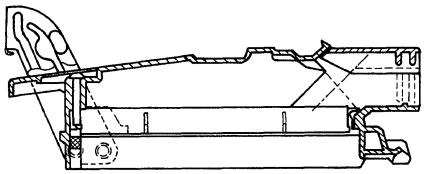
55 Position Housing
Part No. 963534

Coding 8:
Part No. 963534-1

Coding 12:
Part No. 1-963534-1

Note: For more information on codings, consult AMP.

Mates with—
Part No. 142723-2 with
Part No. 142719-2
Part No. 963063

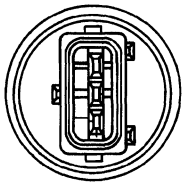


Male Connectors, Single Row and Double Row

3 Position
Part No. 827404-1

Mates with—
Part No. 827578
Part No. 282191

Note: Housing Dim. (Typ.)—30.4 [1.20] Dia. x 32.0 [1.26] L



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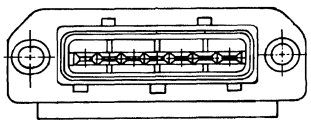
7 Position
Part No. 827405-1
(90° Solder Leg Exit)
Part No. 827405-2
(180° Solder Leg Exit)

Mates with—
Part No. 827216
Part No. 827572
Part No. 827580
Part No. 828918
Part No. 282194

Note: Housing Dim. (Typ.)—65.0 [2.56] L x 26.0 [1.02] W x 19.0 [0.75] H



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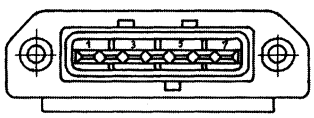
7 Position
Part No. 828945-1

Mates with—
Part No. 828919

Note: Housing Dim. (Typ.)—65.0 [2.56] L x 26.0 [1.02] W x 19.0 [0.75] H



SOURCE: Catalog 124799

Specifications subject to change.

1-800-522-6752
Product Information Center/ AMP FAX Service

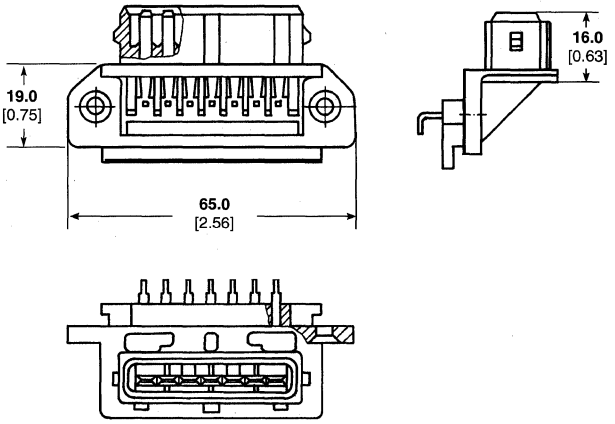
1-800-722-1111
Tooling/Technical Assistance Center

METRIC

Male Connectors, Single Row and Double Row
(Continued)

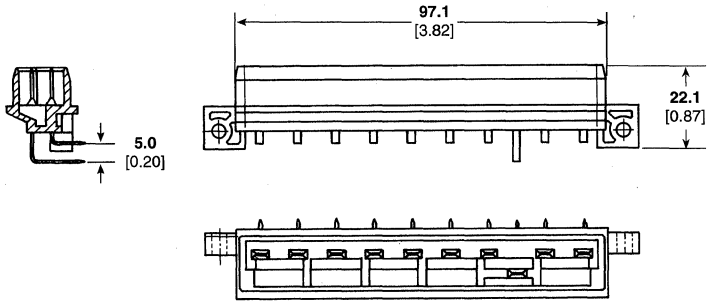
7 Position
Part No. 827658-1

Mates with—
Part No. 827216
Part No. 827572
Part No. 827580
Part No. 828918
Part No. 282194



10 Position
Part No. 827398-1

Mates with—
Part No. 826000
Part No. 963318
Part No. 827663
Part No. 827257
Part No. 828632
Part No. 828633
Part No. 828699
Part No. 282195
Part No. 282197



12 Position
Part No. 827229-1 (black)
Brass, tin plated

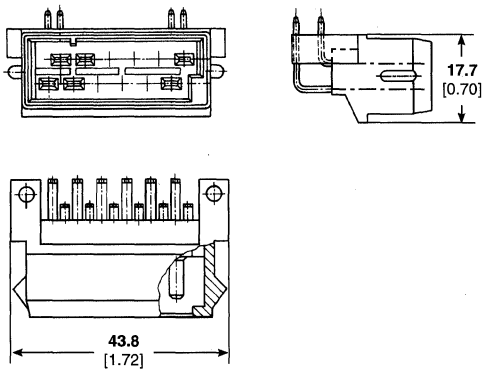
Part No. 827229-2 (black)
Brass, silver plated

Part No. 827229-3 (black)
Brass, gold plated

Part No. 827229-4 (brown)
Brass, tin plated

Part No. 827229-5 (black)
Brass, pre-tin plated

Mates with—
Part No. 827603



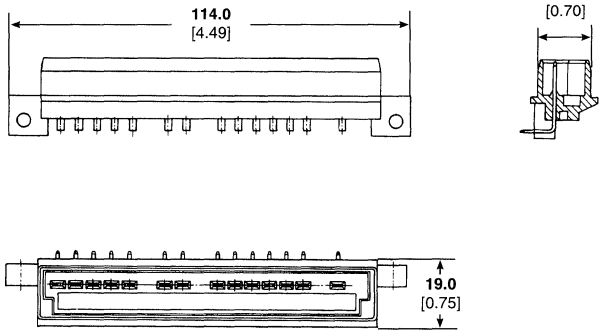
SOURCE: Catalog 124799

METRIC

Male Connectors, Single Row and Double Row
(Continued)

14 Position
Part No. 826115-1
(Selective Loading, Single Row)
Brass, tin plated

Mates with—
Part No. 826000
Part No. 963318
Part No. 827663
Part No. 827257
Part No. 828632
Part No. 828633
Part No. 828699
Part No. 282195
Part No. 282197



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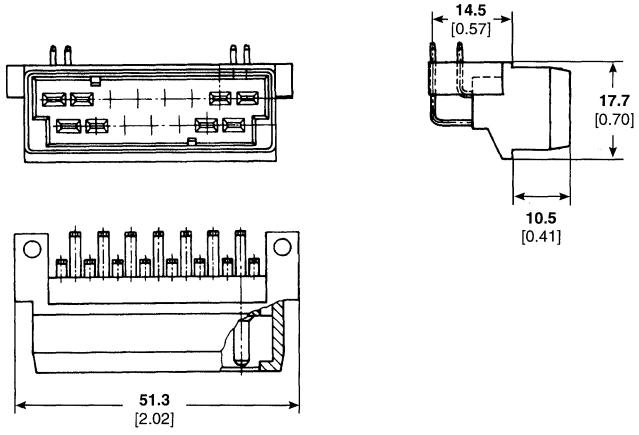
15 Position
Part No. 826703-1 (black)
Brass, tin plated
Part No. 826703-2 (black)
Brass, silver plated
Part No. 826703-3 (blue)
Part No. 826703-4 (yellow)
Part No. 2-826703-1 (black)

Mates with—
Part No. 926171
Part No. 282199



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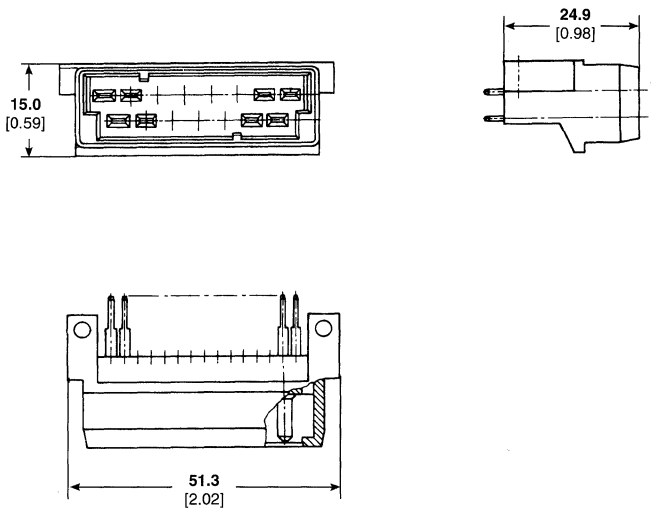
15 Position
Part No. 827467-1 (black)
Part No. 827467-2 (yellow)

Mates with—
Part No. 926171
Part No. 282199



SOURCE: Catalog 124799

Specifications subject to change.

1-800-522-6752
Product Information Center/ AMP FAX Service

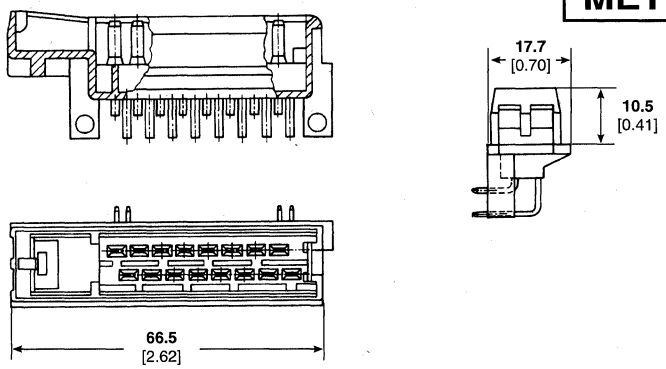
1-800-722-1111
Tooling/Technical Assistance Center

METRIC

Male Connectors, Single Row and Double Row
(Continued)

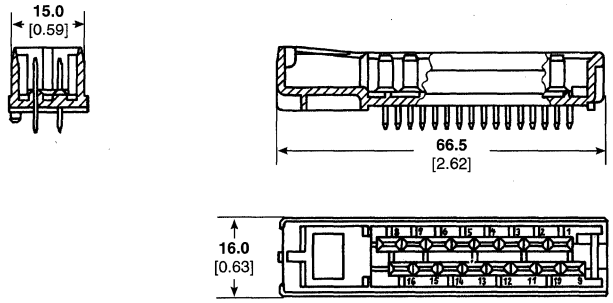
16 Position
Part No. 827539-1 (black)
Brass, tin plated

Mates with—
Part No. 827584



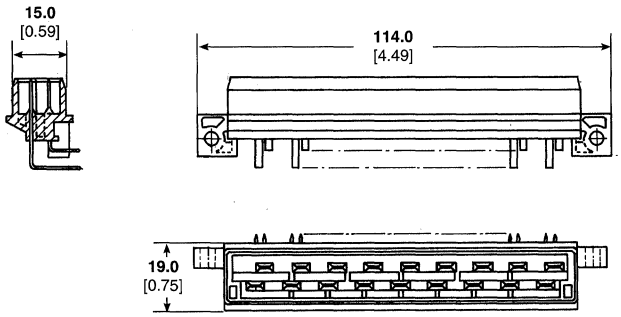
16 Position
Part No. 828662-1

Mates with—
Part No. 827584



18 Position
Part No. 827399-1

Mates with—
Part No. 826000
Part No. 963318
Part No. 827663
Part No. 827257
Part No. 828632
Part No. 828633
Part No. 828699
Part No. 282195
Part No. 282197



25 Position
3.1 [.122] Mounting Hole Dia.
Part No. 826140-1 (black)
Brass, tin plated

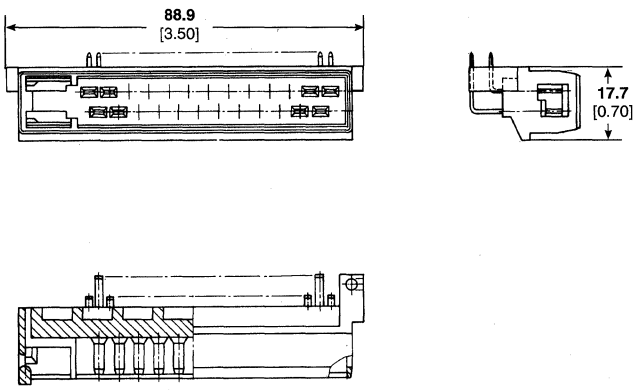
Part No. 826140-2 (yellow)
Brass, tin plated

Part No. 826140-3 (green)
Brass, tin plated

Part No. 826140-4 (brown)
Brass, tin plated

Part No. 826140-5 (black)
Brass, silver plated

Mates with—
Part No. 925470



SOURCE: Catalog 124799

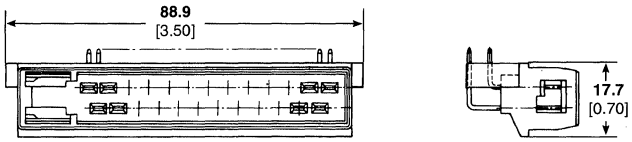
Specifications subject to change.

1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

Male Connectors, Single Row and Double Row
(Continued)

METRIC



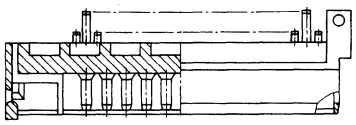
25 Position
4.1 [.161] Mounting Hole Dia.
Part No. 826141-1 (black)
Brass, tin plated

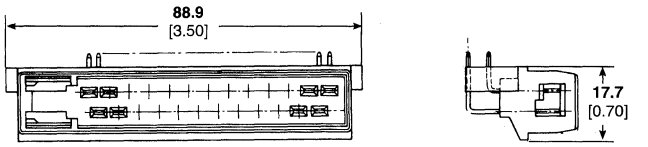
Part No. 826141-2 (yellow)
Brass, tin plated

Part No. 826141-3 (black)
Brass, silver plated

Part No. 826141-4 (yellow)
Brass, silver plated

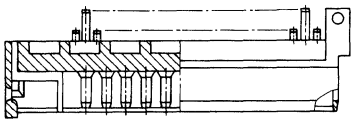
Mates with—
Part No. 925471

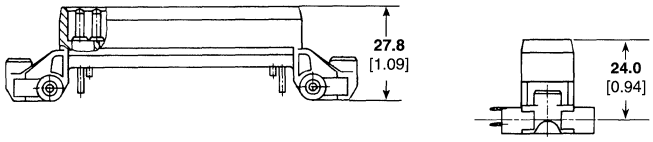




25 Position
Part No. 826195-1 (black)
Brass, tin plated
Part No. 826195-2 (yellow)
(Same as **Part No. 826140** but different keying)

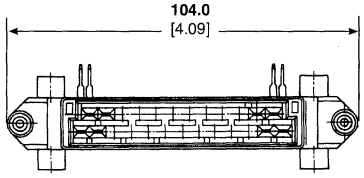
Mates with—
Part No. 925471

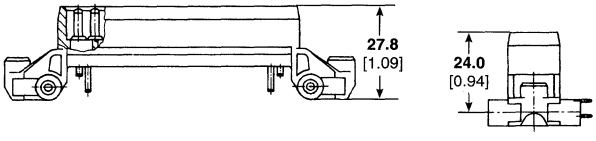




25 Position
Part No. 827050-1 (black)
Brass, tin plated
Part No. 827050-2 (black)
Brass, gold plated
Part No. 2-827050-1 (black)
(with center plate)

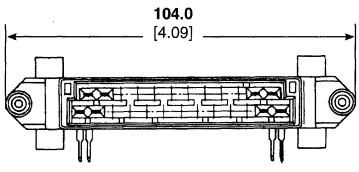
Mates with—
Part No. 827249
Part No. 827047
Part No. 963317
Part No. 963325
Part No. 827591
Part No. 281810





25 Position
Part No. 827019-1
Brass, tin plated

Mates with—
Part No. 827249
Part No. 827047
Part No. 963317
Part No. 963325
Part No. 827591
Part No. 281810



SOURCE: Catalog 124799

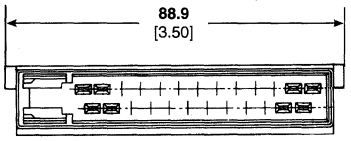
Specifications subject to change.

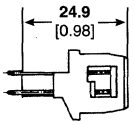
1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

METRIC

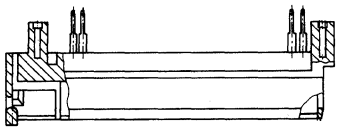
Male Connectors, Single Row and Double Row
(Continued)





25 Position
Part No. 827468-1 (black)
Brass, tin plated

Mates with—
Part No. 925470



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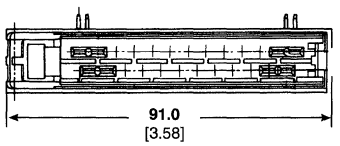
25 Position
Part No. 827535-1 (black)
Brass, tin plated
Part No. 827535-2 (yellow)
Part No. 827535-3 (black)
Part No. 827535-4 (black)
Part No. 1-827535-2 (black)
Part No. 2-827535-2 (black)

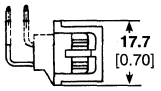
Part No. 342650-1
Brass, tin plated
Part No. 342650-2
Brass, pre-tin plated

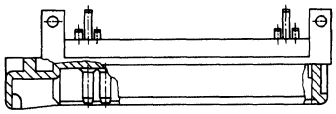
Mates with—
Part No. 827534

Additional Coding
(yellow)
Part No. 342651-1

Mates with—
Part No. 827553
Part No. 344529-1
Part No. 828923







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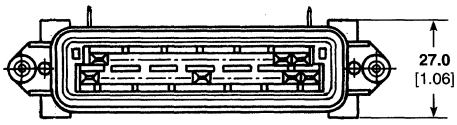
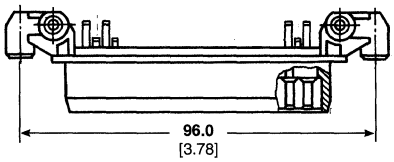
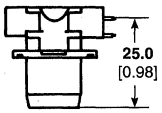
25 Position
Part No. 828661-1

Mates with—
Part No. 827249
Part No. 827047
Part No. 963317
Part No. 963325
Part No. 827591
Part No. 281810







SOURCE: Catalog 124799

METRIC

Male Connectors, Single Row and Double Row
(Continued)

35 Position
Part No. 828822-1 (black)
Brass, tin plated

Part No. 828822-2 (black)
Brass, silver plated

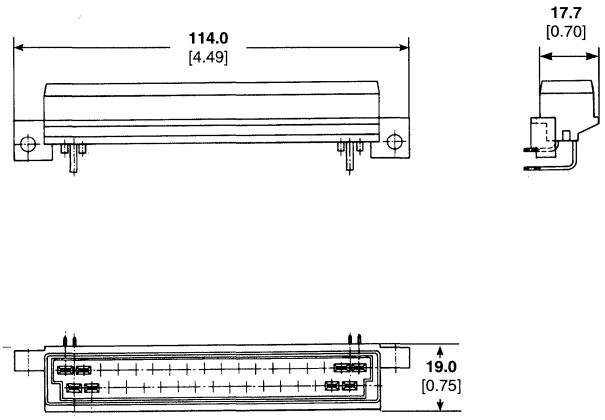
Part No. 828822-3 (black)
Brass, gold plated

Part No. 828822-5 (black)
Brass, tin plated

Part No. 828822-6 (blue)
Brass, silver plated

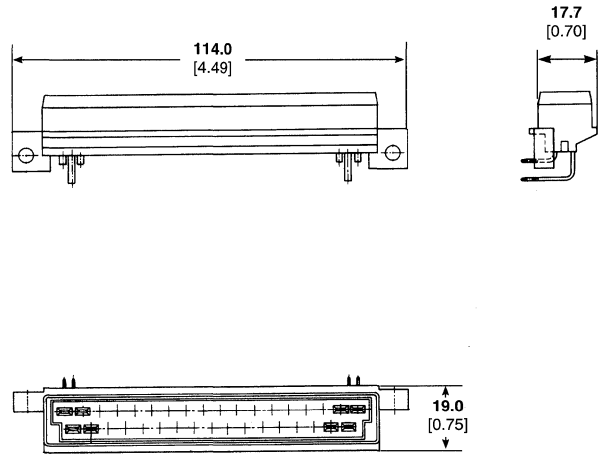
Stitched Version of
Part No. 825213

Mates with—
Part No. 826000
Part No. 963318
Part No. 827663
Part No. 827257
Part No. 828632
Part No. 828633
Part No. 828699
Part No. 282195
Part No. 282197



35 Position
Part No. 825213-1 (black)
Part No. 825213-2 (black)
Part No. 825213-3 (black)
Part No. 1-825213-5 (black)
Part No. 2-825213-1 (black)
Brass, tin plated
Part No. 2-825213-2 (black)
Brass, silver plated
Part No. 2-825213-3 (black)
Brass, gold plated
Part No. 2-825213-5 (black)
Brass, tin plated
Part No. 2-825213-6 (blue)
Part No. 3-825213-1 (black)

Mates with—
Part No. 826000
Part No. 963318
Part No. 827663
Part No. 827257
Part No. 828632
Part No. 828633
Part No. 828699
Part No. 282195
Part No. 282197



SOURCE: Catalog 124799

Specifications subject to change.

1-800-522-6752
Product Information Center/ AMP FAX Service

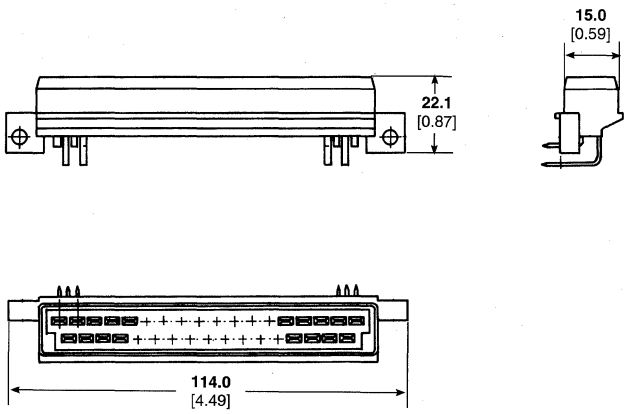
1-800-722-1111
Tooling/Technical Assistance Center

Male Connectors, Single Row and Double Row
(Continued)

METRIC

35 Position
Part No 827408-1
(Same as Part No. 825213, but with 4.2 [.165] Mounting Hole Diameter)

Mates with—
Part No. 826000
Part No. 963318
Part No. 827663
Part No. 827257
Part No. 828632
Part No. 828633
Part No. 828699
Part No. 282195
Part No. 282197



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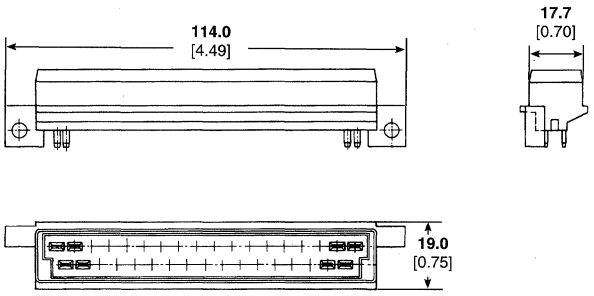
35 Position
Part No. 827254-1 (black)
Brass, tin plated



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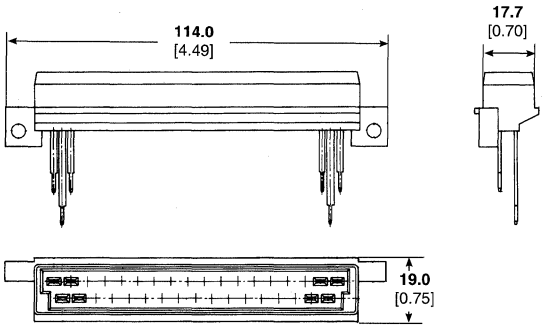
35 Position
Part No. 826822-1 (black)
Brass, tin plated



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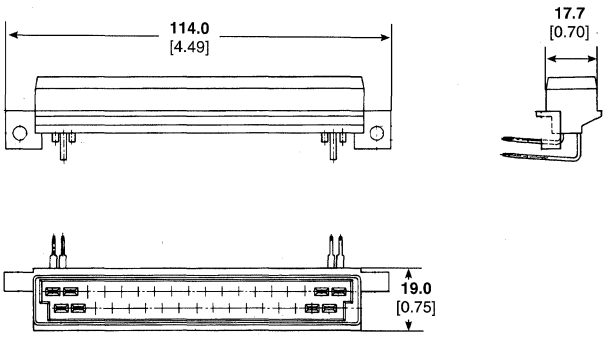
35 Position
Part No. 826611-1 (black)
Brass, tin plated



Specifications subject to change.

1-800-522-6752
Product Information Center/ AMP FAX Service

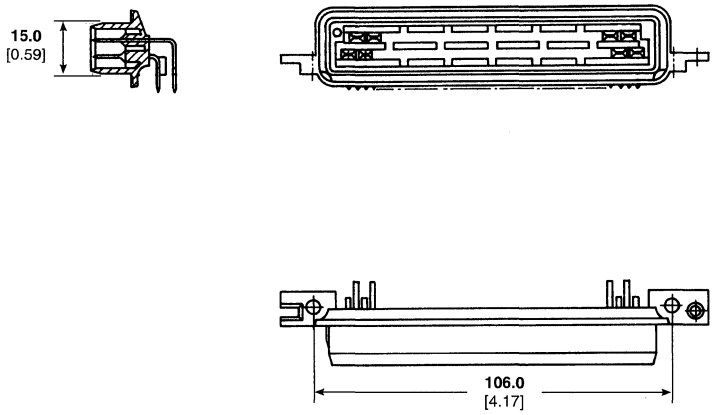
1-800-722-1111
Tooling/Technical Assistance Center

Male Connectors, Single Row and Double Row
(Continued)

METRIC

35 Position
Part No. 827657-1

Mates with—
Part No. 826000
Part No. 963318
Part No. 827663
Part No. 827257
Part No. 828632
Part No. 828633
Part No. 828699
Part No. 282195
Part No. 282197



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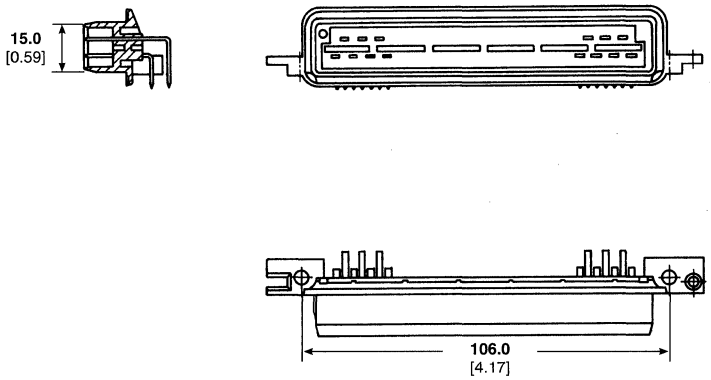
35 Position
Part No. 828823-1

Stitched Version of
Part No. 827657

Mates with—
Part No. 826000
Part No. 963318
Part No. 827663
Part No. 827257
Part No. 828632
Part No. 828633
Part No. 828699
Part No. 282195
Part No. 282197



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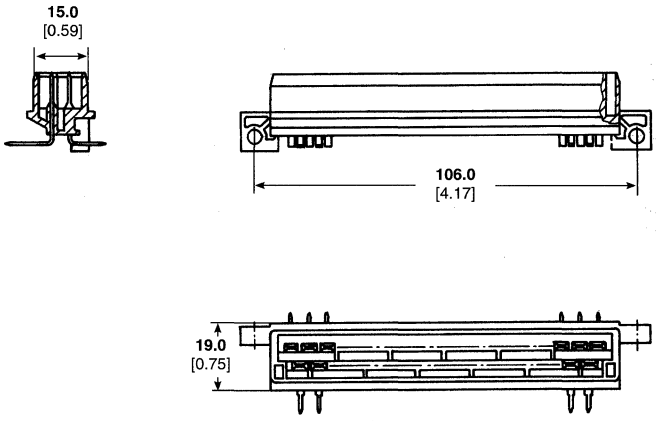
35 Position
Part No. 963183-1

Mates with—
Part No. 826000
Part No. 963318
Part No. 827663
Part No. 827257
Part No. 828632
Part No. 828633
Part No. 828699
Part No. 282195
Part No. 282197



SOURCE: Catalog 124799

Specifications subject to change.

1-800-522-6752
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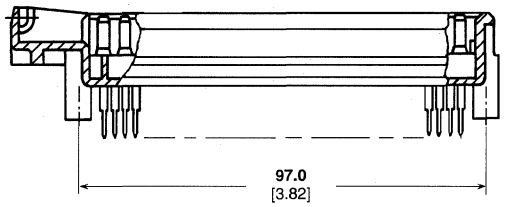
Tooling/Technical Assistance Center

METRIC

Male Connectors, Single Row and Double Row
(Continued)

35 Position
Part No. 827439-1

Mates with—
Part No. 827667



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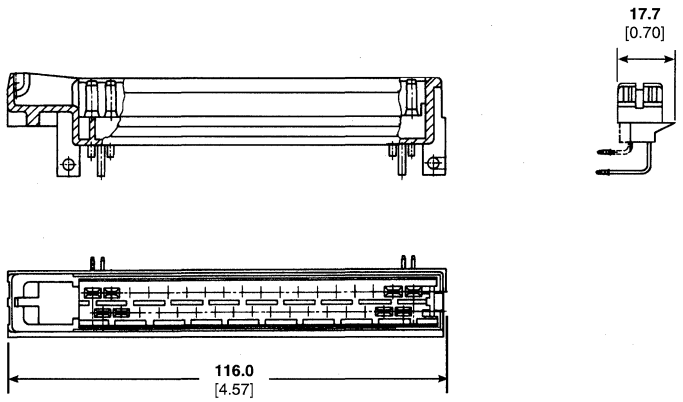
35 Position
Part No. 827137-1 (black)
Brass, tin plated

Part No. 827137-2 (grey)
Brass, tin plated

Part No. 827137-3 (grey)
Brass, silver plated

Mates with—
Part No. 827667



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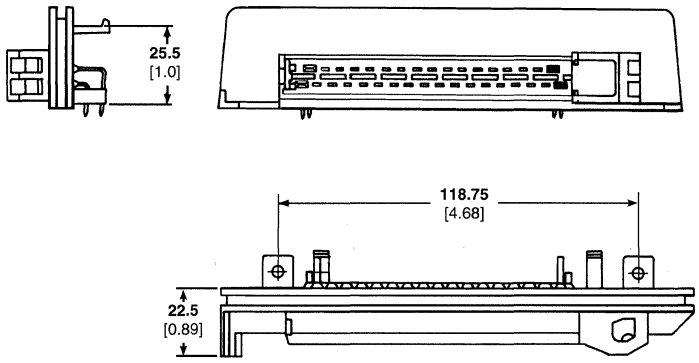
35 Position with Flange
Part No. 827360-1

Mates with—
Part No. 827667



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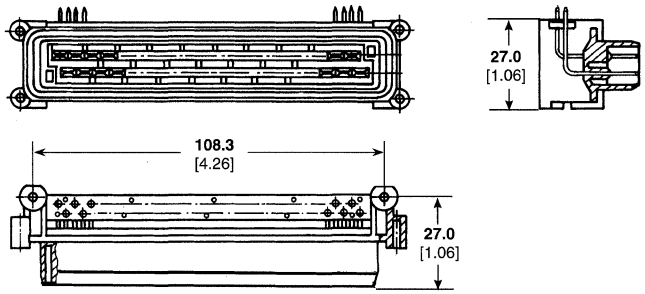
38 Position
Part No. 827698-1

Mates with—
Part No. 828808



SOURCE: Catalog 124799

Specifications subject to change.

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1-800-722-1111
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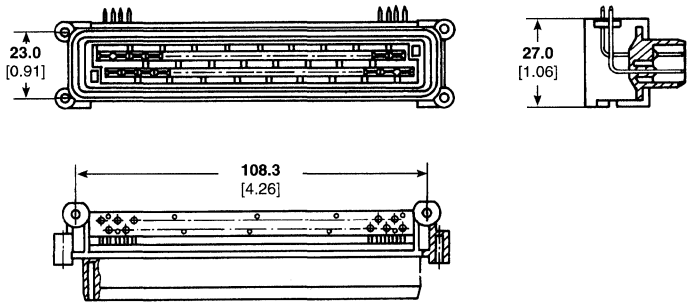
Male Connectors, Single Row and Double Row
(Continued)

METRIC

38 Position
Part No. 828989-1 (black)
Part No. 828989-2 (black)
(Same as Part No. 827698 except for mounting holes)

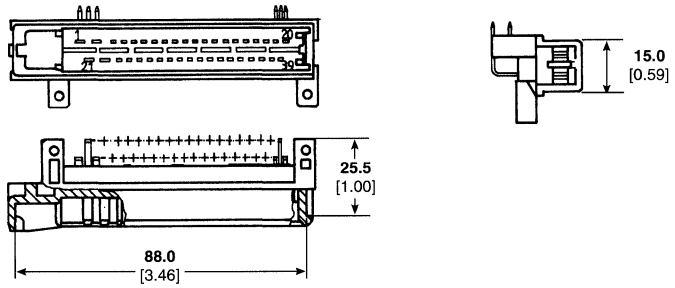
Mates with—
Part No. 828808



39 Position
(90° Solder leg exit)
Part No. 828773-1
Brass, tin plated

Part No. 828773-2
Phosphor bronze, tin plated

Mates with—
Part No. 828771

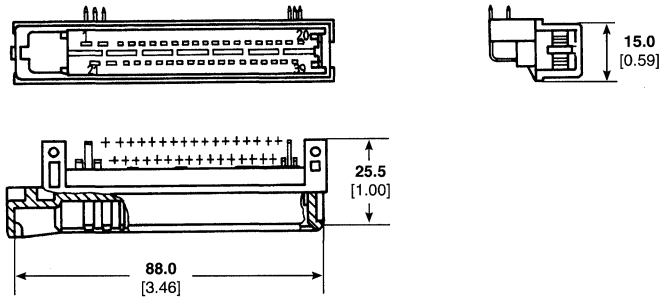


39 Position
(90° Solder leg exit)

Part No. 963578-1
Brass, tin plated

Part No. 963578-2
Phosphor bronze, tin plated

Mates with—
Part No. 828771



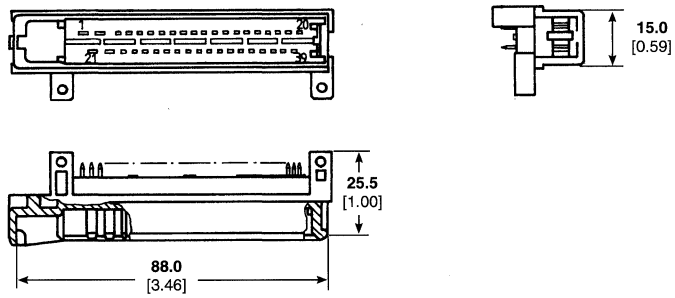
39 Position
(180° Solder leg exit)

Part No. 828772-1
Brass, tin plated

Part No. 828772-2
Phosphor bronze, tin plated

Part No. 828772-3
Brass, tin-gold plated

Mates with—
Part No. 828771



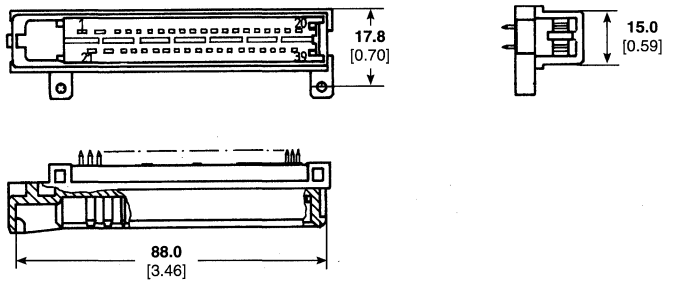
39 Position
(180° Solder leg exit)

Part No. 963574-1
Brass, tin plated

Part No. 963574-2
Phosphor bronze, tin plated

Part No. 963574-3
Brass, tin-gold plated

Mates with—
Part No. 828771



SOURCE: Catalog 124799

Specifications subject to change.

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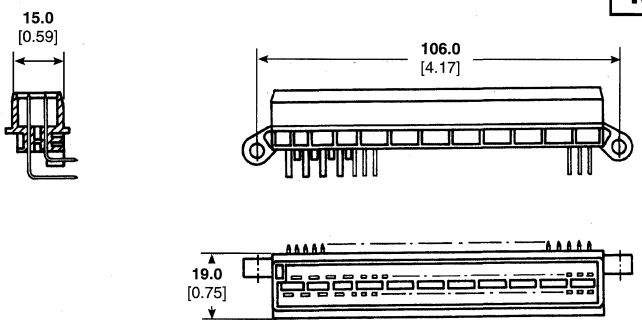
METRIC

Male Connectors, Double Row and Triple Row

55 Position
Part No. 828763-1

Mates with—
Part No. 828761



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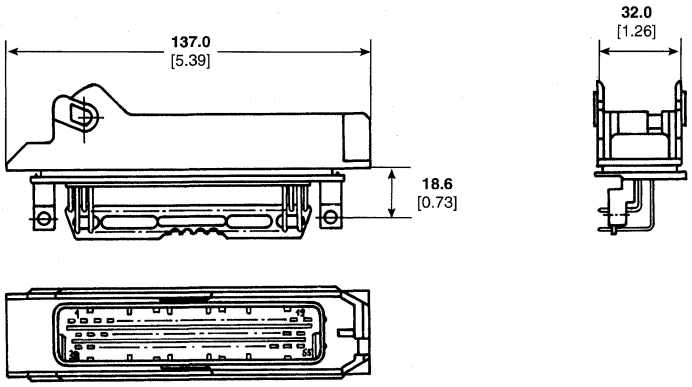
55 Position
Coding 8:
Part No. 963063-1

Coding 7:
Part No. 963063-2

Mates with—
Part No. 963534



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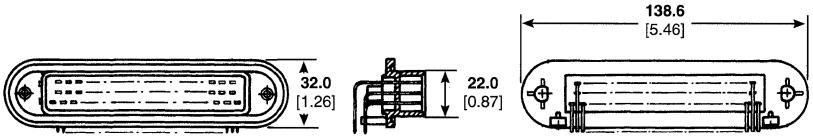
55 Position
Part No. 142723-2

Frame
Part No. 142719-2

Mates with—
Part No. 963534



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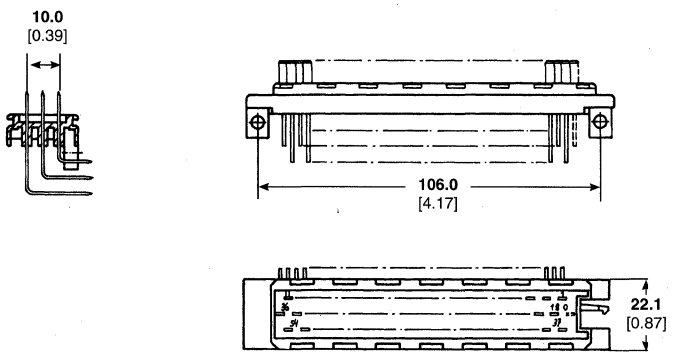
55 Position
Part No. 963042

See Drawing 87-9435-16

Mates with—
Part No. 963041

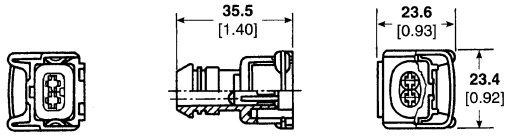


SOURCE: Catalog 124799

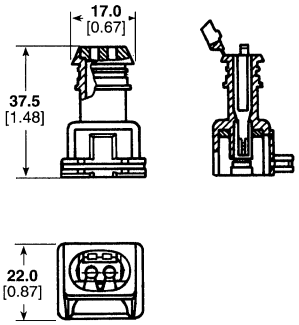
METRIC

Housings for Junior-Power-Timer Contacts Based on Single Wire Sealing System

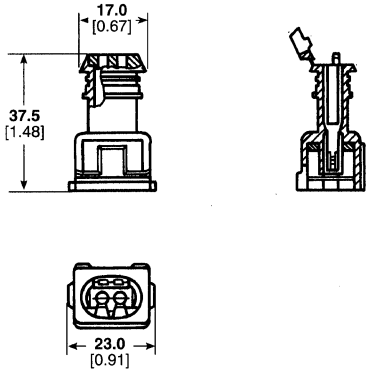
2 Position
Part No. 963040-1 (blue)
Part No. 963040-2 (grey)
Part No. 963040-3 (black)
Part No. 963040-4 (brown)
Part No. 346305-1 (natural)
Part No. 346305-2 (grey)
Part No. 346305-3 (black)
Part No. 346305-4 (brown)
Part No. 346305-5 (blue)
Part No. 346305-6 (green)
Part No. 346305-7 (red)
Part No. 346305-8 (yellow)



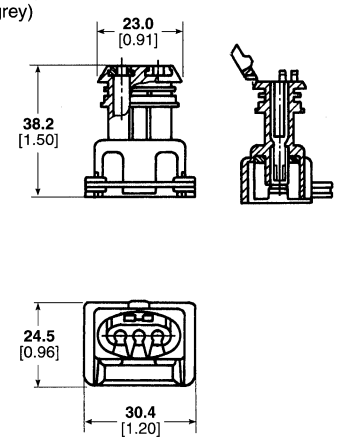
2 Position
Part No. 282189-1 (black)
Part No. 282189-2 (grey)
Part No. 282189-3 (natural)
Part No. 282189-4 (green)
Part No. 282189-5 (blue)
Part No. 282189-6 (brown)
Part No. 282189-7 (yellow)
Part No. 282189-8 (red)



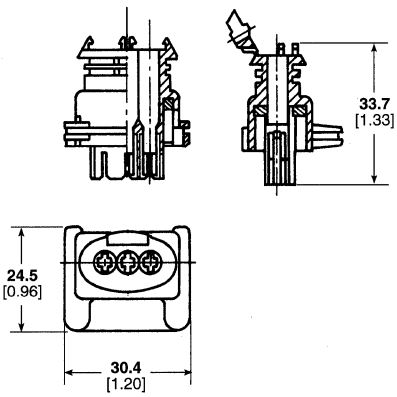
2 Position
Part No. 282190-1 (black)
Part No. 282190-2 (grey)
Part No. 282190-3 (natural)
Part No. 282190-4 (green)
Part No. 282190-5 (blue)
Part No. 282190-6 (brown)
Part No. 282190-7 (yellow)
Part No. 282190-8 (red)



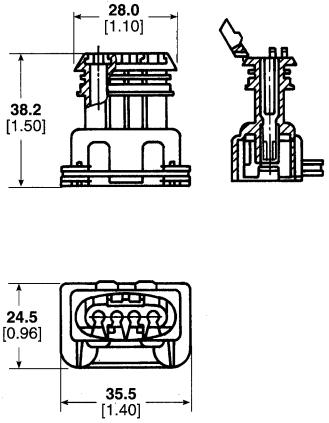
3 Position
Part No. 282191-1 (black)
Part No. 282191-2 (grey)



3 Position
(Special Version)
Part No. 282246-1



4 Position
Part No. 282192-1 (black)
Part No. 282192-2 (grey)



SOURCE: Catalog 124799

Specifications subject to change.

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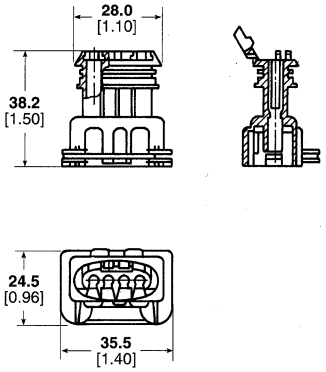
Tooling/Technical Assistance Center

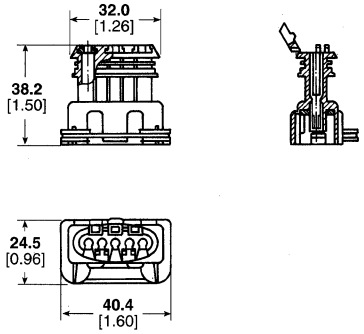
METRIC

Housings for Junior-Power-Timer Contacts Based on Single Wire Sealing System
(Continued)

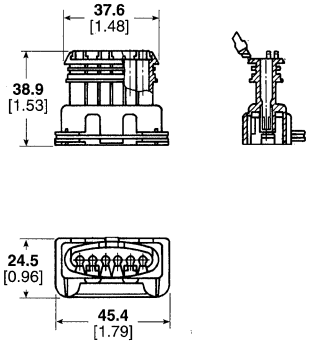
4 Position
Part No. 282342-1



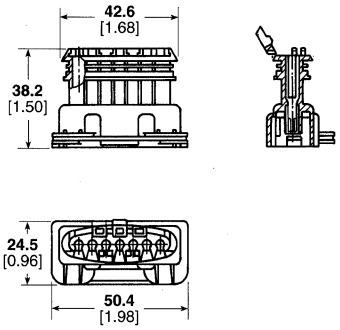
5 Position
Part No. 282193-1 (black)
Part No. 282193-2 (grey)



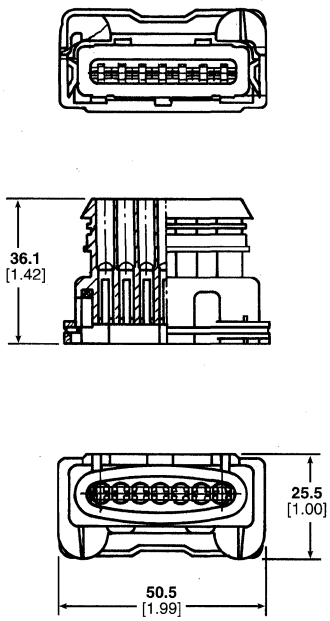
6 Position
Part No. 282236-1



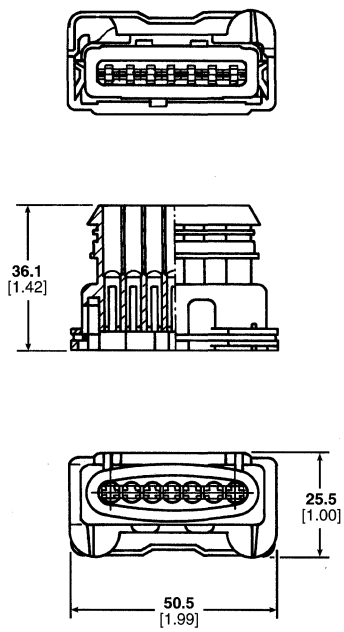
7 Position
Part No. 282194-1 (black)
Part No. 282194-2 (grey)



7 Position
Part No. 828918-1 (grey)
Part No. 828918-2 (black)
Part No. 828918-3 (brown)
Part No. 828918-4 (blue)
Part No. 828918-5 (green)



7 Position
Part No. 828919-1 (grey)
Part No. 828919-2 (black)
Part No. 828919-3 (brown)
Part No. 828919-4 (blue)
Part No. 828919-5 (green)



SOURCE: Catalog 124799

Specifications subject to change.

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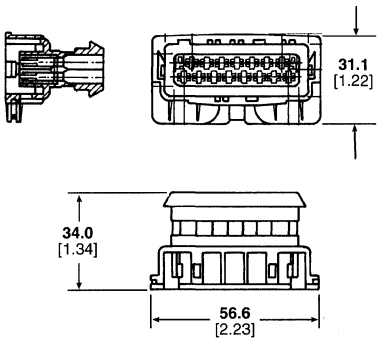
METRIC

Housings for Junior-Power-Timer Contacts Based on Single Wire Sealing System
(Continued)

15 Position
Part No. 963039-1 (grey)
Part No. 963039-2 (black)

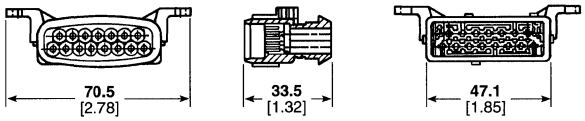
Additional Coding
Part No. 963036-1



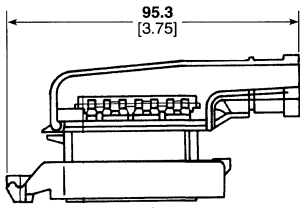
15 Position Tab Housing
Part No. 963035-1 (grey)
Part No. 963035-2 (grey)
Part No. 963035-3 (black)

Proper Contacts:
Part No. 929949-2
(1.25-2.50 mm²)

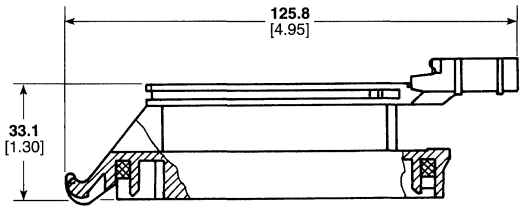
Part No. 929948-2
(0.5-1.0 mm²)



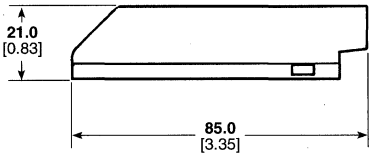
15 Position
Part No. 282199-1



25 Position
Part No. 281810-1

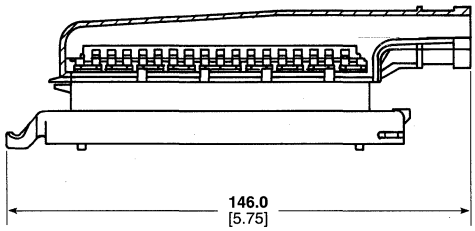


25 Position (Cover)
Part No. 281812-1



35 Position
Part No. 282195-1

Standard Version



SOURCE: Catalog 124799

Specifications subject to change.

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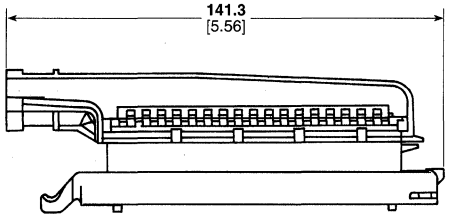
Tooling/Technical Assistance Center

METRIC

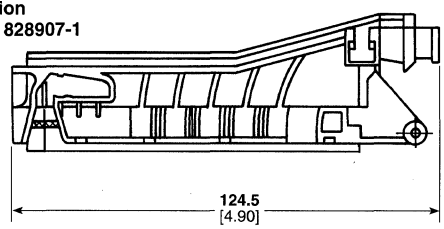
Housings for Junior-Power-Timer Contacts Based on Single Wire Sealing System
(Continued)

35 Position
Part No. 282197-1

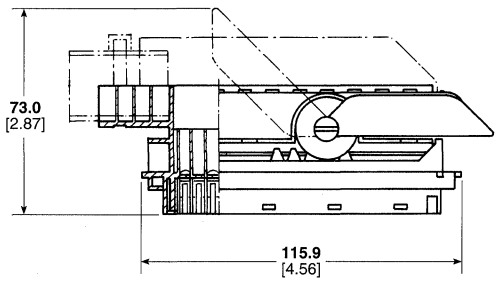
Opposite Cable Exit



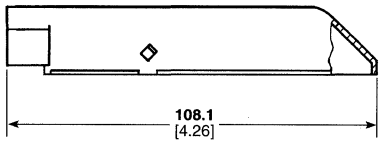
55 Position
Part No. 828907-1



55 Position
Part No. 963041-1

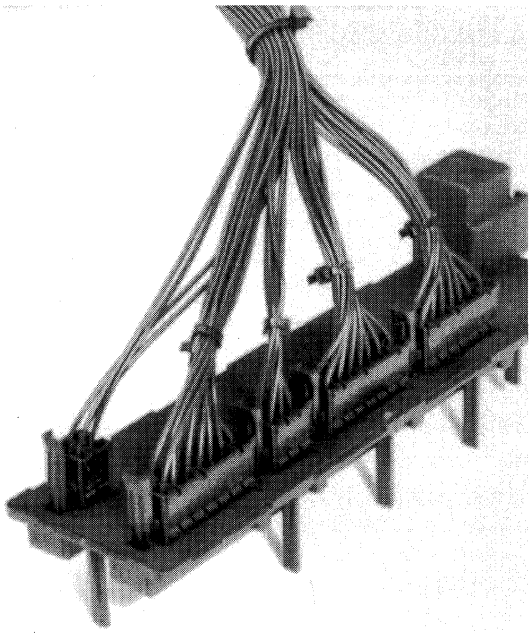


55 Position Cover
Part No. 962071-1



Junior-Timer and Junior-Power-Timer Housings, 4 – 22 Positions

These Timer housings are a complete family group. They are available in wire-to-wire as well as wire-to-pc board, right-angle and vertical applications. The tab housings are designed to lock into mounting collar.



No. of Positions	Part Numbers: Junior-Timer and Junior-Power-Timer Housings	Tab Housing	Right-Angle Male Connector	Horizontal Male Connector
4	929504-1	929505-1	828801-1	963357-6
6	929504-2	929505-2	828801-2	963357-5
8	929504-3	929505-3	828801-3	—
10	929504-4	929505-4	828801-4	963357-4
14	929504-5	929505-5	828801-5	963357-3
18	929504-6	929505-6	828801-6	963357-2
22	929504-7	929505-7	828801-7	963357-1

SOURCE: Catalog 124799

Specifications subject to change.

1-800-522-6752
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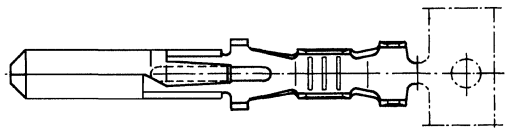
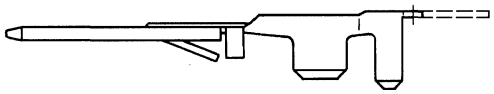
Junior-Timer and Junior-Power-Timer Housings, 4 - 22 Positions (Continued)

METRIC



Mating Tab Contacts

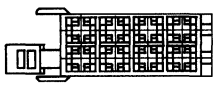


Wire Size Range (mm^2)	Wire Insulation Diameter (max.)	Material and Finish	Part Numbers		
			Strip Form	Loose Piece	Hand Tool 169400 Die Set
0.5-1.0	**1.4-2.3** [.055-.091]	Brass, silver plated	928930-1	928931-1	734262
		Brass, tin plated	928930-2	928931-2	734262
1.5-2.5	**1.8-2.9** [.071-.114]	Brass, silver plated	928781-1	928794-1	734262
		Brass, tin plated	928781-2	928794-2	734262

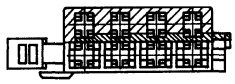
Junior-Timer and Junior-Power-Timer Housings for Car Radio Application according to ISO-TC 22/WG 5

Type A

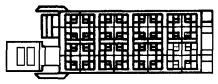
8 Position
Part No. 962189-1



8 Position
Part No. 963120-1
(with second Locking Feature)

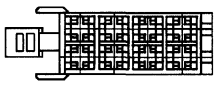


8 Position
Part No. 964408-1
(Different Clips)

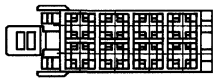


Type B

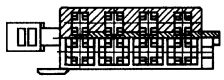
8 Position
Part No. 962191-1



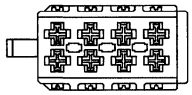
8 Position
Part No. 963121-1
(with second Locking Feature)



8 Position
Part No. 964409-1
(Different Clips)

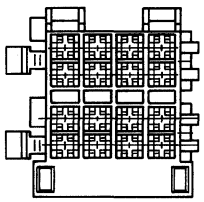


Screwing Type
8 Position
Part No. 829516-1



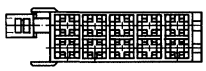
Type A + B

16 Position
(Contact AMP for availability)



Type C

10 Position
Part No. 962190-1

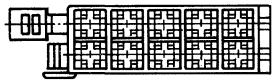


Type C

10 Position
Part No. 963122-1
(with second Locking Feature)

Type C

10 Position
Part No. 964410-1
(Different Clips)



SOURCE: Catalog 124799

Specifications subject to change.

1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

METRIC

Junior-Timer and Junior-Power-Timer Housings, for Wire-to-Wire Application

2 Position

Color	Part Numbers	
	Junior-Timer Housing	Tab Housing
Natural	365057-1	365058-1
Grey	365057-2	365058-2
Black	365057-3	365058-3
Yellow	365057-4	365058-4

4 Position

Color	Part Numbers	
	Junior-Timer Housing	Tab Housing
Natural	365060-1	365059-1
Grey	365060-2	365059-2
Black	365060-3	365059-3
Yellow	365060-4	365059-4

6 Position

Color	Part Numbers	
	Junior-Timer Housing	Tab Housing
Natural	365062-1	365061-1
Grey	365062-2	365061-2
Black	365062-3	365061-3
Yellow	365062-4	365061-4

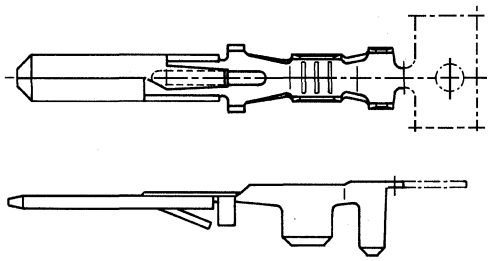
8 Position

Color	Part Numbers	
	Junior-Timer Housing	Tab Housing
Natural	365064-1	365063-1
Grey	365064-2	365063-2
Black	365064-3	365063-3
Yellow	365064-4	365063-4

14 Position

Color	Part Numbers	
	Junior-Timer Housing	Tab Housing
Natural	365066-1	365065-1
Grey	365066-2	365065-2
Black	365066-3	365065-3
Yellow	365066-4	365065-4

Mating Tab Contacts, 2.8 x 0.8 [.110 x .031]



Wire Size Range (mm^2)	Material and Finish Suffix*	Part Numbers			
		Strip Form	Loose Piece	Applicator	Hand Tool 169400 Die Set
0.5-1.0	-1/-2/-3/-4	927892	928923	—	—
1.5-3.0	-1/-2/-3/-4/-5	927893	928924	—	—

***Material and Finish Suffix**
-1 = CuZn30, tin plated
-2 = $CuSn^4$, gold plated
-3 = $CuSn^4$, plain
-4 = $CuSn^4$, silver plated
-5 = $CuSn^4$, tin plated
Extraction Tool **Part No. 725864**

Wire Size Range (mm^2)	Material and Finish Suffix*	Part Numbers			
		Strip Form	Loose Piece	Applicator	Hand Tool 169400 Die Set
0.50-1.00	-1/-2/-3/-4/-5	928930	928931	—	734262
1.25-2.50	-1/-2/-3/-4/-5	928781	928794	—	734262

*** Material and Finish Suffix**
-1 = CuZn30, silver plated
-2 = CuZn30, pre-tin plated
-3 = CuZn30, plain
-4 = CuZn30, gold plated
-5 = $CuSn^4$, pre-tin plated
Extraction Tool **Part No. 725864**

SOURCE: Catalog 124799

Specifications subject to change.

1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

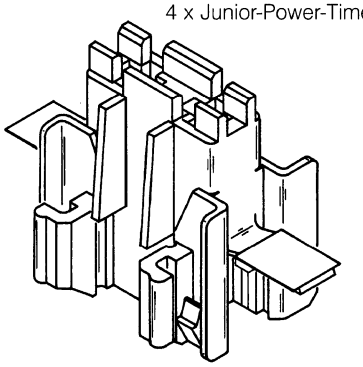
METRIC

Additional Housings for Timer Contacts

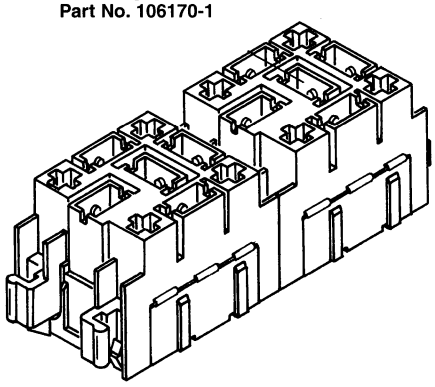
Fuse Holder with Secondary Locking Feature

Part No. 100198-1

For Standard-Power-Timer Contacts could be rowed with:
9 position Relay Housing with Secondary Locking Feature
Part No. 215754
(5 x Positive Lock Contacts, 4 x Junior-Power-Timer Contacts)

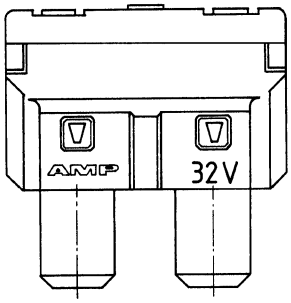


Mounting Plate
Part No. 106170-1



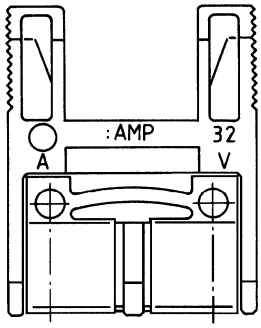
Fuse (used with Part No. 100198-1)

Part No. 688670-1 = 3.0 A
Part No. 688670-2 = 4.0 A
Part No. 688670-3 = 5.0 A
Part No. 688670-4 = 7.5 A
Part No. 688670-5 = 10.0 A
Part No. 688670-6 = 15.0 A
Part No. 688670-7 = 20.0 A
Part No. 688670-8 = 25.0 A
Part No. 688670-9 = 30.0 A



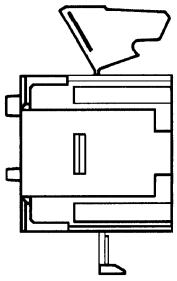
Fuse (used with Part No. 282159-1)

Part No. 827402-1 = 3.0 A
Part No. 827402-2 = 4.0 A
Part No. 827402-3 = 5.0 A
Part No. 827402-4 = 7.5 A
Part No. 827402-5 = 10.0 A
Part No. 827402-6 = 15.0 A
Part No. 827402-7 = 20.0 A
Part No. 827402-8 = 25.0 A
Part No. 827402-9 = 30.0 A



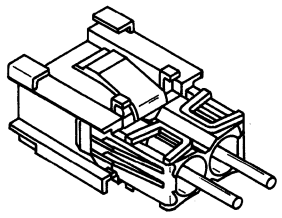
Fuse Holder with Secondary Locking Feature for Standard-Power-Timer Contacts

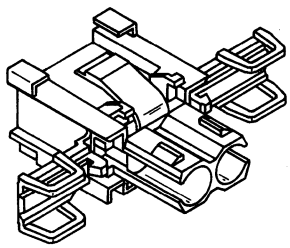
Part No. 282159-1



Could be rowed with:

5 position Micro Relay Housing with Secondary Locking Feature
Part No. 281988
(2 x Positive Lock Contacts, 3 x Junior-Power-Timer Contacts)





SOURCE: Catalog 124799

Specifications subject to change.

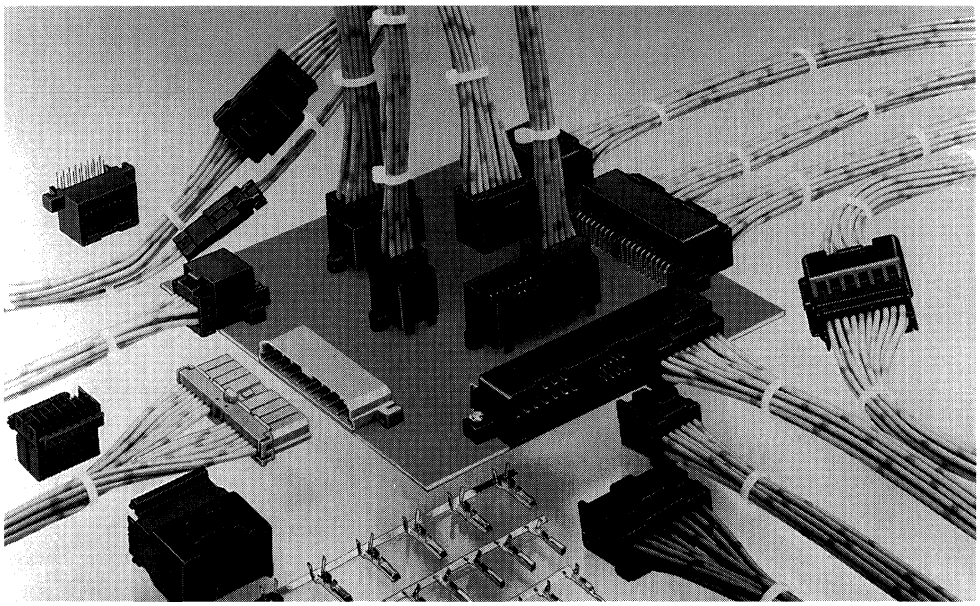
1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

METRIC

MULTILOCK Connectors

040 Series (Standard)



Product Facts

- Small yet durable wire-to-wire and wire-to-board connectors
- High-density wiring connectors with contacts on 2.5 [.098] centers
- Housing lance design; contacts have no lance to tangle with one another
- Easy to handle
- Consist of plug and cap housings for wire termination, cap housing assemblies for horizontal and vertical pc board mounting
- Receptacle contact for wire termination has a spring encased in a box-shaped receptacle for protection against damage
- Both plug and cap housings for wire termination have an integral double-lock mechanism to provide positive contact retention
- Cap housing assembly for board mount is available in two styles: horizontal and vertical, both preloaded with tab contacts with solder post

AMP 040 Series MULTILOCK Connectors are a miniature high-density connector used as an I/O connector for automotive applications. With contacts on 2.5 [.098] centers, these connectors comprise both wire-to-wire and wire-to-board connectors.

The plug and cap housings for wire termination are of housing lance design. The receptacle and tab contacts used in these housings have no lance and, consequently, there is no possibility of contact lances tangling with one another or of contact lances being deformed. The contacts are of crimp, snap-in type. The receptacle contact, made of highly resilient and conductive KLF-5 material, provides a high contacting force due to its double-spring construction.

This spring is encased in a box-shaped receptacle and is highly resistant to damage. Both plug and wire-to-wire cap housings have an integral double-lock mechanism for positive contact loading.

Despite their small size, these housings are durable and dependable, and protect contacts against possible damage by rocking action at mating/unmating. The pc board cap housing assembly is preloaded with tabs with solder posts.

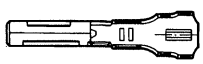
Some cap housing assemblies for horizontal board mounting can accept two split-type assemblies, a 040 Series assembly for signal circuits and a 070 Series assembly for power circuits.

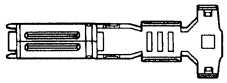
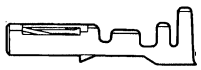
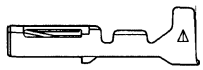
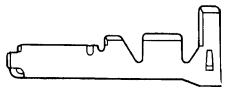
SOURCE: Catalog 65839

040 Series (Standard)
(Continued)

METRIC

Receptacle Contacts (For Plug Housing)



Part No. 175180
040 Series

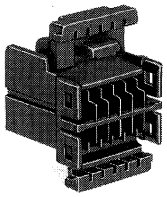
Part No. 173681
040 Series

Part No. 173708
070 Series

Wire Range AWG	Wire Range mm²	Wire Ins. Diameter	Finish	Part No. of Receptacle Contact: Strip Form	Part No. of Receptacle Contact: Loose Piece	Hand Tool Part No.
24-20*	0.2~0.56	**1.1~1.4** .043~.055	Pre-Tinned	175180-1	—	—
			Sel. Gold	175180-2	—	
		1.4~2.0 .055~.079	Pre-Tinned	173681-1[1]	175062-1	911738-1
			Sel. Gold	173681-2	175062-2	58522-1
20-14**	0.56~2.09	**2.0~2.9** .079~.114	Pre-Tinned	173708-1	175081-1	911771-1
			Sel. Gold	173708-2	—	

*040 Series for signal circuit. (Extraction Tool **Part No. 755430-1**)
070 Series for signal circuit. (Extraction Tool **Part No. 755430-2)
[1]US produced product, available upon request.

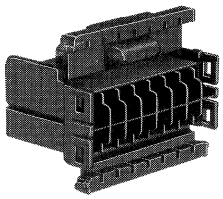
Plug Housings



Note: 12 Pos. Housing Dim. (Typ.)—18.10 [.713] L x 18.50 [.728] W x 14.80 [.583] H

No. of Positions	Housing Color	Plug Housing Part No.	Applicable Contact Part No.
2	Black	174056-2	173681
4	Black	174966-2	
8	Black	174044-2	
12	Black	174045-2	
16	Black	174046-2	
20	Black	174047-2	

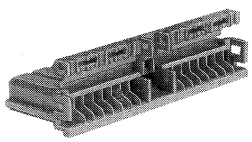
Plug Housings For Power Circuit (070 Series)



Note: Housing Dim. (Typ.)—32.70 [1.29] L x 21.00 [.827] W x 14.90 [.587] H

No. of Positions	Housing Color	Plug Housing Part No.	Applicable Contact Part No.	Mating Cap Housing Part No.
16	Black	174147-2	173708	174149/174151

Plug Housings For Signal Circuit (040 Series) —Single Row Type



Note: Housing Dim. (Typ.)—54.40 [2.02] L x 18.50 [.728] W x 6.50 [.256] H

No. of Positions	Housing Color	Plug Housing Part No.	Applicable Contact Part No.	Mating Cap Housing Part No.
16	Blue	174060-5	173681	174062

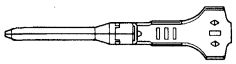
SOURCE: Catalog 65839

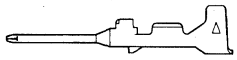
Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

METRIC

040 Series (Standard)
(Continued)

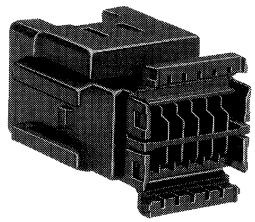
Tab Contacts (For Cap Housing)





Wire Range AWG	Wire Range mm²	Wire Ins. Diameter	Finish	Part No. of Tab Contact Strip Form	Part No. of Tab Contact Loose Piece	Hand Tool Part No.
24-20	0.2-0.56	**1.4~2.0** .055~.079	Pre-Tinned	173682-1	175063-1	911738-2 58522-1

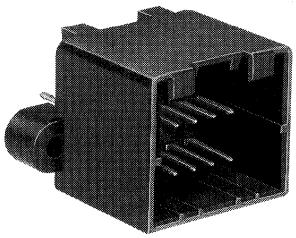
Cap Housings (For Wire-to-Wire)



Note: 12 Pos. Housing Dim. (Typ.)—21.30 [.837] L x 32.80 [1.89] W x 17.00 [.669] H

No. of Positions	Housing Color	Cap Housing Part No.	Applicable Contact Part No.
2	Black	174057-2	173682-1
4	Black	174967-2	
12	Black	174058-2	
20	Black	175652-2	

Cap Housing Assemblies Vertical Mount Type (For Pc Board Application)

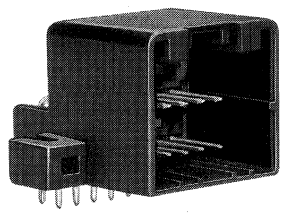


Note: 12 Pos. Housing Dim. (Typ.)—27.50 [1.08] L x 16.90 [.665] W x 19.20 [.756] H

No. of Positions	Housing Color	Cap Housing Assembly Part No.[1]	Mating Plug Housing No. of Pos.
8	Black	174971-2	8
12	Black	174973-2	12
16	Black	174975-2	16
20	Black	174977-2	20
28	Black	174979-2	12, 16

Notes: 1. For possible additional plating and housing color variations, please check customer drawing.
2. Selectively loaded gold/tin caps available upon request.
[1]US produced product, available upon request.

Cap Housing Assemblies Horizontal Mount Type (For Pc Board Application)



Note: 12 Pos. Housing Dim. (Typ.)—30.00 [1.18] L x 21.10 [.830] W x 16.70 [.658] H

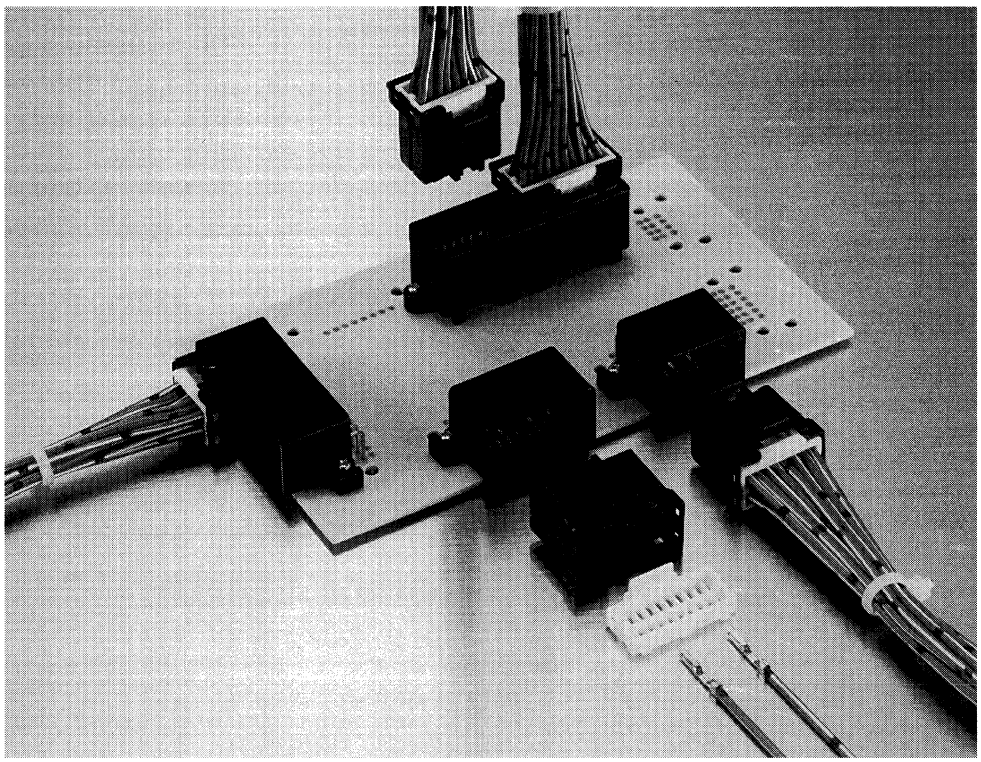
No. of Positions	Housing Color	Cap Housing Assembly Part No.	Contact Plating	Mating Plug Housing No. of Pos.
8	Black	174049-2	Pre-Tinned	8
12	Black	174051-2[1]	Pre-Tinned	12
12	Black	2-174051-2[1]	Tin-Lead	12
16	Black	174053-2[1]	Pre-Tinned	16
16	Black	2-174053-2[1]	Tin-Lead	16
20	Black	174055-2[1]	Pre-Tinned	20
36	Black	174146-2 / 178460-2†	Pre-Tinned	16, 20
48	Black	174149-2	*	12, 20 / 16 (070)
64	Black	174151-2 / 1-174151-2	* / **	12, 16, 20 / 16 (070)
16	Blue	174062-5	Pre-Tinned	16 (Single Row Type)

*040 Series—Selective Gold; 070 Series—Pre-Tinned.
**040 Series—Selective Gold; 070 Series—Selective Gold at circuit no. 9 only, others are Pre-Tinned.
†070/040 Mixed Split Type
[1]US produced product, available upon request
Notes: 1. For possible additonal plating and housing color variations, please check customer drawing.
2. Selectively loaded gold/tin caps available upon request.

SOURCE: Catalog 65839

METRIC

040 Series (Mark II)



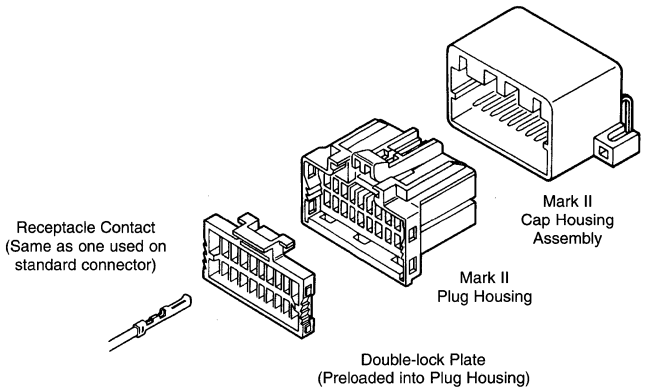
Product Facts

- Small yet durable wire-to-wire and wire-to-board connectors
- High-density wiring connectors with contacts on 2.5 [.098] centers
- Contacts have no lance to tangle with one another
- Easy to handle
- Consist of plug housing, receptacle contacts and board-mount cap housing (vertical mounting or horizontal mounting)
- Receptacle contacts for wire termination have a spring encased in a box-shaped enclosure for protection against damage
- Plug housing is loaded with a two-piece double-lock plate to facilitate the loading of contacts; the plate helps prevent contacts from being loaded halfway
- Board-mount cap housing assembly is available in two styles: horizontal and vertical, both preloaded with posted tab contacts

AMP 040 Series MULTILOCK Connectors (Mark II) are small yet durable, easy-to-handle wire-to-board connectors.

The plug housing for wire termination has an integral two-piece type double-lock plate which helps prevent contacts from being loaded halfway and provides post-loading connector stability. As with the standard type, these connectors are of housing lance design and consequently, there is no possibility of contact lances becoming tangled with one another.

Connector Components



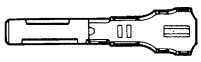
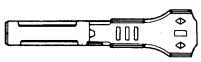
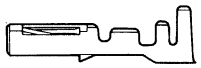
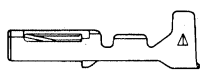
SOURCE: Catalog 65839

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

METRIC

040 Series (Mark II)
(Continued)

Receptacle Contacts (For Plug Housing)

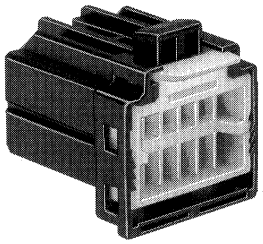
Part No. 175180

Part No. 173681 (Strip)
Part No. 175062 (LP)

Wire Range AWG	Wire Range mm²	Wire Ins. Diameter	Finish	Part No. of Receptacle Contact Strip Form	Part No. of Receptacle Contact Loose Piece	Hand Tool Part No.
24-20	0.2-0.56	1.1~1.4 .043~.055	Pre-Tinned	175180-1	—	—
			Sel. Gold	175180-2	—	
		1.4~2.0 .055~.079	Pre-Tnned	173681-1[1]	175062-1	911738-1
			Sel. Gold	173681-2	175062-2	58522-1

Extraction Tool **Part No. 755430-1**
[1]US produced product, available upon request.

Plug Housings (Wire-to-Wire)

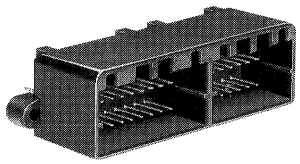


Note: 12 Pos. Housing Dim. (Typ.)—18.10 [.713] L x 23.00 [.906] W x 18.00 [.709] H

No. of Positions	Housing Color	Plug Housing Part No.
8	Black	175964-2
12	Black	175965-2
16	Black	175966-2
20	Black	175967-2

Note: For possible additional housing color variations, please check customer drawing.

Cap Housing Assemblies Vertical Mount Type (For Pc Board Applications)

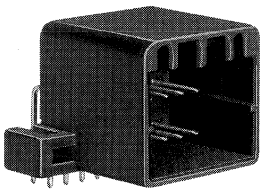


Note: 36 Housing Dim. (Typ.)—61.00 [2.40] L x 16.90 [.665] W x 20.70 [.815] H

No. of Positions	Housing Color	Cap Housing Assembly Part No.	Mating Plug Housing No. of Pos.
36	Black	175977-2	16, 20

Note: For possible additional plating and housing color variations, please check customer drawing.

Cap Housing Assemblies Horizontal Mount Type (For Pc Board Applications)



Note: 12 Pos. Housing Dim. (Typ.)—30.00 [1.18] L x 22.50 [.886] W x 16.90 [.665] H

No. of Positions	Housing Color	Cap Housing Assembly Part No.	Mating Housing No. of Pos.
8	Black	175973-2[1]	8
12	Black	175974-2	12
16	Black	175615-2	16
20	Black	175975-2	20
28	Black	175976-2[1]	12, 16
36	Black	174912-2[1]	16, 20

[1]US produced product, available upon request.
Notes: 1. For possible additional plating and housing color variations, please check customer drawing.
2. Selectively loaded gold/tin caps available upon request.

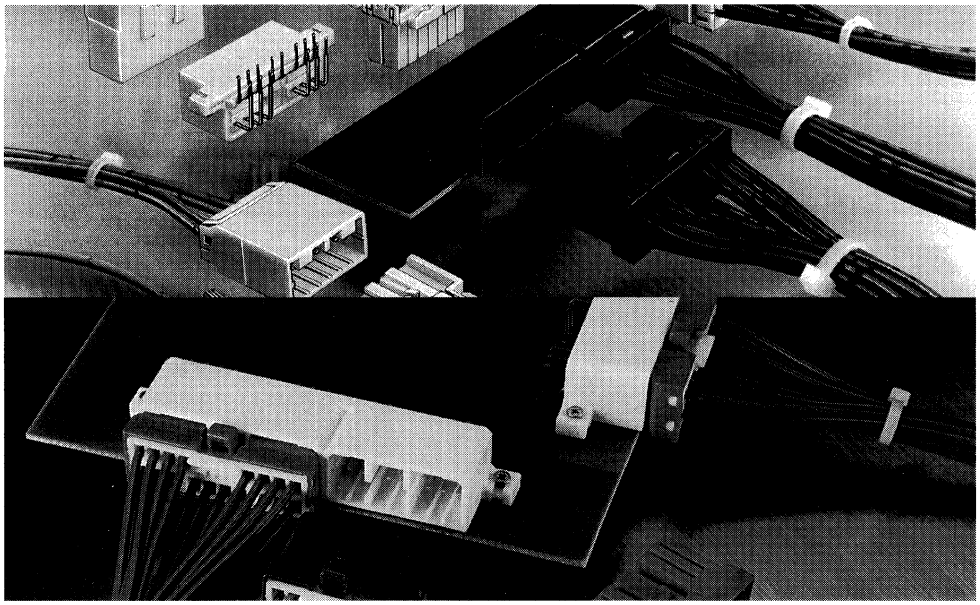
SOURCE: Catalog 65839

070 Series

METRIC

Product Facts

- **Small yet durable wire-to-wire and wire-to-board connectors**
- **Housing lance design**
- **Contacts have no lance to tangle with one another, making handling easier**
- **Consist of plug and cap connectors for wire termination and cap housing assembly for horizontal and vertical mounting on the printed circuit board**
- **Receptacle contact has a leaf with contacting points protected by a box-shaped shroud; highly resistant to damage from outside**
- **Both plug and cap housings have an integral double-lock mechanism, on the wire side**
- **Board-mount cap housing assembly available in two types: vertical mount and horizontal mount, preloaded with posted tab contacts**
- **Mark II plug connector is also available which has a double-lock plate assembled into the body**
- **Hybrid type connector (wire-to-wire) is also available with signal and power circuits mixed within one housing**



AMP 070 Series MULTILOCK Connectors are a miniaturized high-density wire-to-wire and wire-to-board connector.

The connectors consist of a plug housing with receptacle contacts and a cap housing with tab contacts for wire termination, and a cap housing assembly which can be mounted onto the printed circuit board either vertically or horizontally.

The plug and cap connectors for wire termination are of housing lance design. The receptacle and tab contacts used in these connectors have no lance and therefore there is no possibility of contact lances tangling with one another or of contact lances being deformed.

Contacts are of crimp, snap-in type. The receptacle contact has a leaf with contacting points protected by a box-shaped shroud. It is strong and highly resistant to damage from outside.

Both the plug and cap housings have an integral double-lock mechanism for positive contact loading. Despite their small size, the housings are durable and dependable, and prevent contacts from being damaged by rocking at mating/unmating.

For the plug housing, there is a MARK II version which has a two-piece type double-lock plate embedded into the body.

This Mark II plug housing uses the same receptacle contacts, and same mating cap housing, as the conventional standard plug housing.

The cap housing assembly for board mounting is available in two types, vertical mount and horizontal mount. To this 070 Series MULTILOCK Connectors a hybrid type wire-to-wire connector containing a mixture of signal circuits (070 Series) and power circuits in one housing has now been added. Standard 070 Series contacts are used for signal circuits, while 250 Series contacts without latch are used for power circuits.

SOURCE: Catalog 65839

Specifications subject to change.

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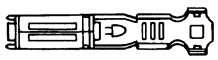
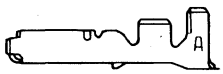
METRIC

070 Series
(Continued)

Receptacle Contacts (For Plug Housing)

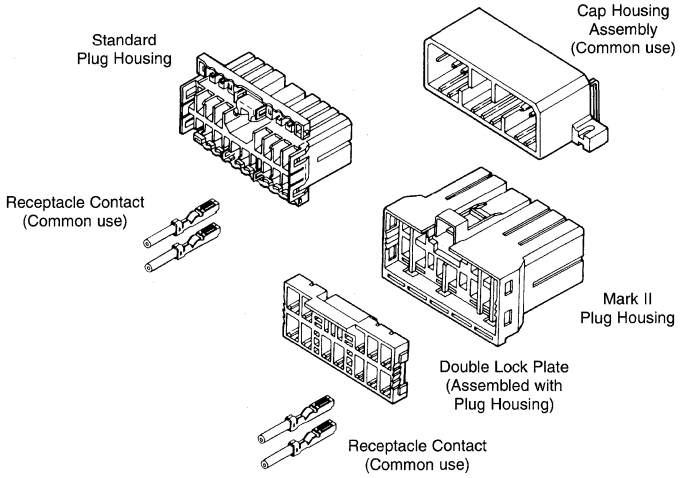




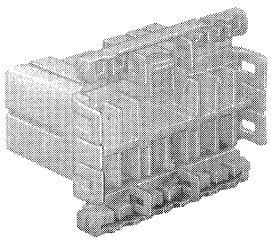
Wire Range AWG	Wire Range mm²	Wire Ins. Diameter	Finish	Part No. of Receptacle Contact: Strip Form Brass	Strip Form Phos. Brz.	Loose Piece Brass	Loose Piece Phos. Brz.	Hand Tool Part No.
24-22	0.2~0.35	**1.2~2.0** .047~.079	Pre-Tinned	173630-1[1]	173630-6	175026-1	175026-6	911799-2
			Sel. Gold	173630-2	173630-7	175026-2	175026-7	58528-1
20-16	0.5~1.25	**2.0~2.6** .079~.102	Pre-Tinned	173631-1[1]	173631-6[1]	175027-1	175027-6	911788-2
			Sel. Gold	173631-2	173631-7	175027-2	175027-7	58521-1

[1]US produced product, available upon request.

Connector Components



Standard Plug Housings (Wire-to-Wire)

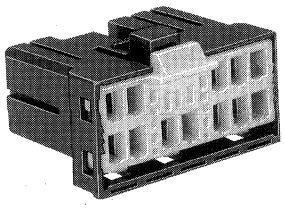


Note: 12 Pos. Housing Dim. (Typ.)—31.90 [1.26] L x 21.60 [.850] W x 25.00 [.984] H

No. of Pos.	Housing Color	Row	Plug Housing Part No.
2	White	1	174463-1
3	White	1	174921-1
4	White	1	174922-1
6	White	1	174923-1
	White	2	174468-1
8	White	2	173850-1
	Green		173850-4
10	White	1	174464-1
		2	174465-1
12	White	2	173851-1
14	White	2	173852-1
18	White	2	173853-1
20	White	2	174952-1

Note: For possible additional housing color variations, please check customer drawings.

Mark II Plug Housings (Wire-to-Wire)



Note: 12 Pos. Housing Dim. (Typ.)— 31.90 [1.26] L x 24.40 [.960] W x 16.50 [.650] H

No. of Pos.	Housing Color	Row	Plug Housing Part No.
8	Gray	2	176113-6
10	Gray	1	176115-6
		2	176114-6
12	Gray	2	176116-6
14	Gray	2	176117-6
18	Gray	2	176118-6
20	Gray	2	176119-6

Note: For possible additional housing color variations, please check customer drawing.

SOURCE: Catalog 65839

Specifications subject to change.
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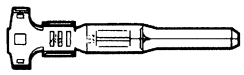
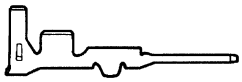
METRIC

070 Series
(Continued)

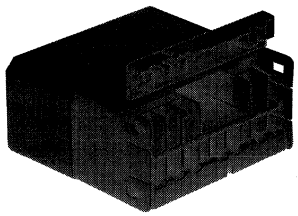
Tab Contacts
(For Cap Housings)





Wire Range AWG	Wire Range mm²	Wire Ins. Diameter	Finish	Part No. of Tab Contact: Strip Form Brass	Strip Form Phos. Brz.	Loose Piece Brass	Loose Piece Phos. Brz.	Hand Tool Part No.
24-22	0.2~0.35	**1.2~2.0** .047~.079	Pre-Tinned	173633-1	173633-2	175029-1	175029-2	911799-2
			Sel. Gold	—	173633-3	—	175029-3	
20-16	0.5~1.25	**2.0~2.6** .079~.102	Pre-Tinned	173645-1	173645-2	175030-1	175030-2	911788-2
			Sel. Gold	—	173645-3	—	175030-3	58521-1

Cap Housings
(Wire-to-Wire)

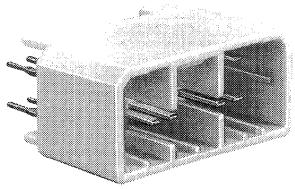


Note: 12 Pos. Housing Dim. (Typ.)—31.70 [1.25] L x 31.40 [1.24] W x 18.20 [.717] H

No. of Positions	Housing Color	Row	Cap Housing Part No. Standard	Cap Housing Part No. Panel Mount
2	White	1	174460-1	1-178602-1
3	White	1	174928-1	—
4	White	1	174929-1	—
6	White	1	174930-1	—
		2	175657-1	—
8	White	2	174931-1	1-174937-1
10	White	2	174932-1	—
12	White	2	174933-1	—
14	White	2	174934-1	—
18	White	2	174935-1	—
20	White	2	174936-1	1-174938-1
30†	White	2	—	1-174939-1

†Mating Plug: 12 and 18 positions, (Split type)
Note: For possible additional housing color variations, please check customer drawing.

Cap Housing Assemblies
Vertical Mount Type
(For Pc Board Applications)

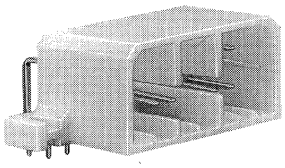


Note: 12 Pos. Housing Dim. (Typ.)—32.70 [1.29] L x 12.80 [.504] W x 23.50 [.925] H

No. of Positions	Housing Color	Row	Cap Housing Assembly Part Number
13	White	1	1-174953-1
16	White	1	1-174954-1
18	White	2	1-174955-1
12	White	2	1-174957-1
20	White	2	1-174960-1
30†	White	2	1-174961-1

†Mating Plug: 12 and 18 positions, (Split type)
Notes: 1. For possible additional plating and housing color variations, please check customer drawing.
2. Selectively loaded gold/tin caps available upon request.

Cap Housing Assemblies
Horizontal Mount Type
(For Pc Board Applications)



Note: 12 Pos. Housing Dim. (Typ.)—46.30 [1.82] L x 25.50 [.984] W x 15.80 [.622] H

No. of Positions	Housing Color	Row	Cap Housing Assembly Part No.	Mating Plug Positions
3	White	1	175781-1	3
6	White	1	175783-1	6
8	Gray	2	173856-6[1]	8
10	White	1	174467-1	10
12	White	2	173858-1[1]	12
14	White	2	173860-1[1]	14
	Gray		173860-6[1]	
18	White	2	173862-1	18
	Gray		173862-6[1]	
20	White	2	175785-1	20
24	White	2	173864-1[1]	10 and 14
30	White	2	173866-1	12 and 18
	Gray		173866-6[1]	

[1]US produced product, available upon request.
Notes: 1. For possible additional plating and housing color variations, please check customer drawing.
2. Selectively loaded gold/tin caps available upon request.

SOURCE: Catalog 65839

Specifications subject to change.
1-800-522-6752
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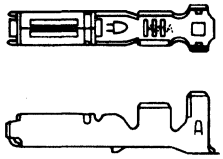
METRIC

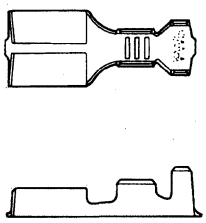
070 Series
(Continued)

070/250 Series
Hybrid I/O

Receptacle Contact
(For Plug Housing)



070 Series

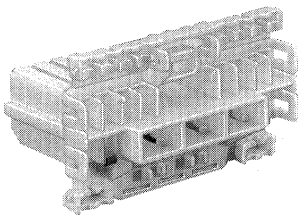


250 Series

Wire Range AWG	Wire Range mm²	Wire Ins. Diameter	Finish	Part No. of Receptacle Contact 070 Series (Strip Form) Brass	070 Series (Strip Form) Phos. Brz.	250 Series (Strip Form) Brass
24-22	0.2~0.35	**1.2~2.0** .047~.079	Pre-Tinned	173630-1[1]	173630-6	—
			Sel. Gold	173630-2	173630-7	—
20-16	0.5~1.25	**2.0~2.6** .079~.102	Pre-Tinned	173631-1[1]	173631-6[1]	—
			Sel. Gold	173631-2	173631-7	—
22-20	0.3~0.5	**1.5~2.2** .059~.087	—	—	—	170384-1
			Tin	—	—	170384-2
20-14	0.5~2.27	**2.2~3.4** .087~.134	—	—	—	170032-2
			Tin	—	—	170032-5
14-12	2.0~3.37	**2.9~3.8** .114~.150	—	—	—	170258-1
			Tin	—	—	170258-2

[1]US produced product, available upon request.

Plug Housing



Note: 15 Pos. Housing Dim. (Typ.)—43.80 [1.72] L x 24.30 [.957] W x 12.40 [.488] H

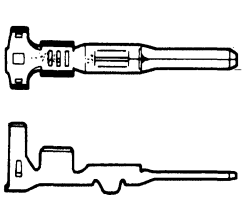
No. of Positions	Housing Color	Row	Plug Housing Part No.
11	White	2	174925-1
13	White	2	174926-1
15	White	2	174927-1

METRIC

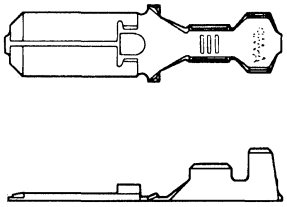
070 Series
(Continued)

070/250 Series Hybrid I/O
(Continued)

Tab Contact (For Cap Housing)



070 Series



250 Series

Wire Range AWG	Wire Range mm²	Wire Ins. Diameter	Finish	Part No. of Tab Contact 070 Series (Strip Form) Brass	070 Series (Strip Form) Phos. Brz.	250 Series (Strip Form) Brass
24-22	0.2~0.35	**1.2~2.0** .047~.079	Pre-Tnned	173633-1	173633-2	—
			Sel. Gold	—	173633-3	—
20-16	0.5~1.25	**2.0~2.6** .079~.102	Pre-Tinned	173645-1	173645-2	—
			Sel. Gold	—	173645-3	—
22-20	0.3~0.5	**1.5~2.2** .059~.087	—	—	—	170349-1
20-14	0.5~2.27	**2.2~3.4** .087~.134	—	—	—	170340-1
			Pre-Tnned	—	—	170340-3
14-12	2.0~3.37	**2.9~3.8** .114~.150	—	—	—	170341-1
			Pre-Tinned	—	—	170341-3

Cap Housings

Note: 11 Pos. Housing Dim. (Typ.)—39.60 [1.56] L x 35.50 [1.40] W x 16.60 [.654] H

No. of Positions	Housing Color	Row	Cap Housing Part No.
11	White	2	174940-1
13	White	2	174941-1
15	White	2	174942-1

SOURCE: Catalog 65839

Specifications subject to change.
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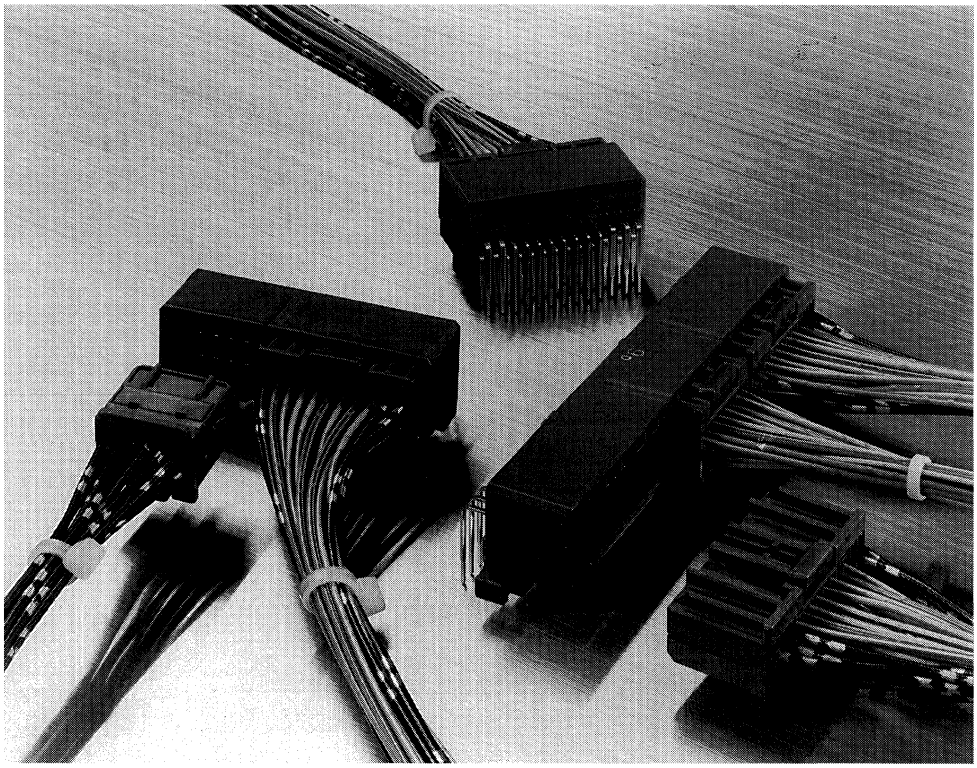
METRIC

040/070 Series Hybrid I/O



Product Facts

- **I/O connectors for use with a mixture of signal and power circuits**
- **Plug connector for wire termination accepts three types of circuitry, i.e., signal and power circuits singly or a mixture of both circuits**
- **Board-mounting cap connector accepts signal circuits or power circuits and a mixture of both**

AMP 040/070 Hybrid I/O Connectors are improved wire-to-board interconnection connectors incorporating the features of both 040 and 070 connectors, which have proven performance as a subminiature I/O connector for automotive applications. These connectors consist of a plug connector for wire termination which accepts three types of circuitry, i.e., signal, power and a mixture of both (for loading receptacle contacts) and a pc board-mount cap connector. The plug connector features a housing lance design; eliminating the possibility of contact lances tangling with one another or of contact lances being deformed. This receptacle contact is available in two series, 040 and 070. It resists damage with a built-in spring and ensures a reliable electrical connection. The plug housing also features an integral double-lock to hold contacts loaded after wire termination, providing an effective protection against contact damage due to rocking motion at mating and unmating.

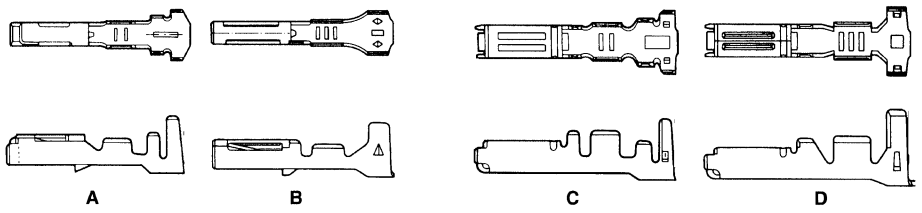
The board-mount cap connector is preloaded with right-angle post contacts for soldering.

SOURCE: Catalog 65839

040/070 Series Hybrid I/O
(Continued)

Receptacle Contact (For Plug Housings)

METRIC

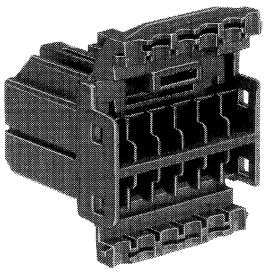


040 Series 070 Series

Wire Range AWG	Wire Range mm²	Wire Ins. Diameter	Finish	Part Number of Receptacle Contact 040 Series (Signal) KLF-5 Strip Form	040 Series (Signal) KLF-5 Loose Piece	070 Series (Power) Brass Strip Form	070 Series (Power) Brass Loose Piece	Hand Tool Part No.
22-20	0.3~0.56	**1.0~1.4** .039~.055	Pre-Tinned	175094-1 (A)	—	—	—	—
			Sel. Gold	175094-2 (A)	—	—	—	—
24-20	0.2~0.50	**1.4~2.1** .055~.083	Pre-Tinned	173716-1 (B)	175061-1	—	—	911738-1
			Sel. Gold	173716-2 (B)	175061-2	—	—	—
22-20	0.3~0.56	**1.0~1.4** .039~.055	Pre-Tinned	—	—	175124-1 (C)	—	—
			Sel. Gold	—	—	175124-2 (C)	—	—
24-22	0.2~0.30	**1.4~1.9** .055~.075	Pre-Tinned	—	—	173630-1 (D)[1]	175026-1	911799-2 58528-1
			Sel. Gold	—	—	173630-2 (D)	175026-2	58528-1
20-16	0.5~1.25	**1.3~1.8** .051~.071	Pre-Tinned	—	—	175095-1 (D)	—	—
		2.0~2.6 .079~.102	Pre-Tinned	—	—	173631-1 (D)	175027-1	911788-1 58521-1
			Sel. Gold	—	—	173631-2 (D)[1]	175027-2	58521-1

[1]US produced product, available upon request.

Plug Housings (Hinge Lock Type) Wire-to-Wire



Note: 12 Pos. Housing Dim. (Typ.)—19.60 [.772] L x 21.00 [.827] W x 14.80 [.583] H

No. of Positions	Housing Color	Plug Housing Part No.	Applicable Contact Series	Part Number of Mating Cap Housing (Position)
12	Yellow	174913-7	040	178780 (76)
	Gray	175442-6	070	175444 (34)/175448 (54) 178093 (38)
16	Yellow	174514-7	040	175521 (38)/175446 (42)/175448 (54) 178764 (64)/178780 (76)
	Blue	176243-5	040	176242 (42)
22	Gray	174515-6	040 and 070	175444 (34)/175521 (38)/174917 (48) 178764 (64)/178780 (76)
26	Yellow	174516-7	040 and 070	178811 (26)/178093 (38)/175446 (42) 174917 (48)/175448 (54)/178764 (64)/178780 (76)
	Gray	175567-6	040 and 070	178762 (26)/176242 (42)

Note: For possible additional housing color variations, please check customer drawing.

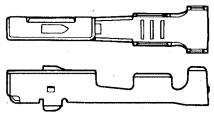
SOURCE: Catalog 65839

Specifications subject to change.
1-800-522-6752 Product Information Center/ AMP FAX Service
1-800-722-1111 Tooling/Technical Assistance Center

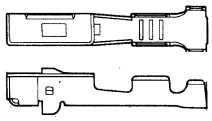
040/070 Series Hybrid I/O (Continued)

METRIC

Receptacle Contact (For Side Lock Type Plug)



040 Series

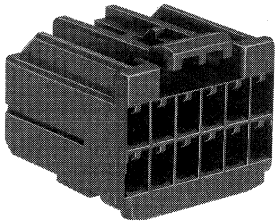


070 Series

Wire Range AWG	Wire Range mm²	Wire Ins. Diameter	Finish	Part Number of Receptacle Contact 040 Series (Signal) KLF-5 Strip Form	040 Series (Signal) KLF-5 Loose Piece	070 Series (Power) Brass Strip Form	070 Series (Power) Brass Loose Piece	Hand Tool Part No.
22-18	0.3~0.85	**1.1~1.8** .043~.071	Pre-Tinned	175265-1[1]	179417-1	—	—	934192-1
			Sel. Gold	175266-2	179418-2	—	—	
22-18	0.3~0.85	**1.1~1.8** .043~.071	Pre-Tinned	—	—	175268-1[1]	179423-1	934195-1
			Sel. Gold	—	—	175275-2	179424-2	
20-16	0.5~1.25	**1.8~2.5** .071~.098	Pre-Tinned	—	—	175269-1[1]	179425-1	934196-1
			Sel. Gold	—	—	175276-2	179426-2	

[1]US produced product, available upon request.

Plug Housings (Side Lock Type) Wire-to-Wire

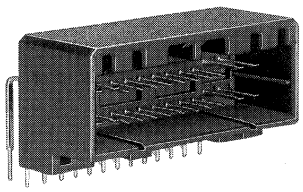


Note: 12 Pos. Housing Dim. (Typ.)—19.00 [.748] L x 21.00 [.827] W x 14.80 [.583] H

No. of Positions	Housing Color	Plug Housing Part No.	Applicable Contact Series	Part Number of Mating Cap Housing (Position)
12	Gray	178845-6	040 II	178780 (76)
		178881-6	070 II	175444 (34)/178093 (38) 175448 (54)
16	Gray	178795-6[1]	040 II	175521 (38)/175446 (42)175448 (54) 178764 (64)/178780 (76)
		178883-6	040 II	176242 (42)
22	Gray	178798-6[1]	040 II and 070 II	175444 (34)/175521 (38)/174917 (48) 178764 (64)/178780 (76)
26	Gray	178801-6[1]	040 II and 070 II	178811 (26)/178093 (38)/175446 (42) 174917 (48)/175448 (54)/178764 (64) 178780 (76)
		178885-6	040 II and 070 II	178762 (26)/176242 (42)

[1]US produced product available upon request.
Note: For possible additional housing color variations, please check customer drawing.

Cap Housings Assemblies Horizontal Mount Type (For Pc Board Applications)



Note: 26 Pos. Housing Dim. (Typ.)—45.40 [1.79] L x 25.80 [1.02] W x 21.90 [.862] H

No. of Positions	Housing Color	Cap Housing Assembly Part Number	Contact Plating	Part Number of Mating Plug (Position)
26	Gray	175571-6[1]	Pre-Tinned	174516 (26)*,178801 (26)**
		9-175571-6[1]	Tin-Lead	
		178762-6	Pre-Tinned	175567 (26)*, 178885 (26)**
34	Gray	175444-6[1]	Pre-Tinned	175442 (12)* ,174515 (22)* 178881 (12)** ,178798 (22)**
38	Gray	175521-6[1]	Pre-Tinned	174514 (16)* ,174515 (22)* 178795 (16)** ,178798 (22)**
42	Gray	175446-6	Pre-Tinned	174514 (16)* ,174516 (26)* 178795 (16)**, 178801 (26)**
	White	176242-1	Pre-Tinned	176243 (16)* ,175567 (26)*
	Blue	176242-5	Pre-Tinned	178883 (16)**, 178885 (26)**
48	Gray	174917-6[1]	Pre-Tinned	174515 (22)* ,174516 (26)* 178798 (22)**, 178801 (26)**
54	Gray	175448-6[1]	Pre-Tinned	175442 (12)*, 174514 (16)*, 174516 (26)* 178881 (12)**, 178795 (16)**, 178801 (26)**
64	Gray	176122-6[1]	Pre-Tinned	174514 (16)*, 174515 (22)*, 174516 (26)* 178795 (16)**, 178798 (22)**, 178801 (26)**
		9-176122-6[1]	Tin-Lead	
		4-177609-6[1]	†	
		2-178764-6[1]	†	
76	Gray	178780-6[1]	Pre-Tinned	174513 (12)*, 174514 (16)* 174515 (22)*, 174516 (26)* 178845 (12)**, 178795 (16)** 178798 (22)**, 178801 (26)**

*Hinge Lock Type
**Side Lock Type
† Selectively loaded gold/tin contacts please see customer drawing.
[1]US produced product, available upon request.
Note: For possible additional plating and housing color variations, please check customer drawing.

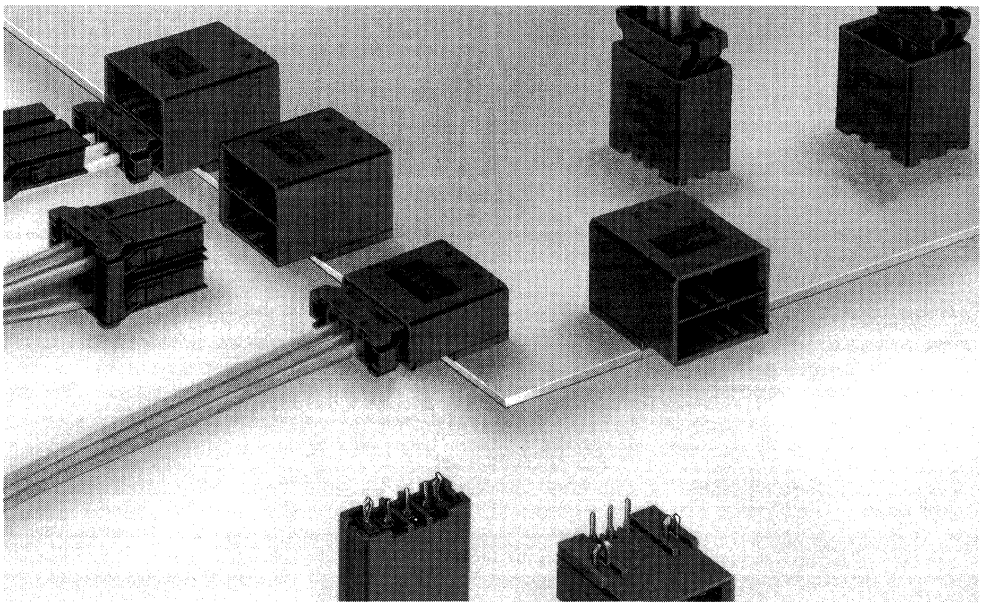
SOURCE: Catalog 65839

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

AMP

METRIC

AMP Dynamic D-3000 Series Connectors (Wire-to-Board) or (Wire-to-Wire)

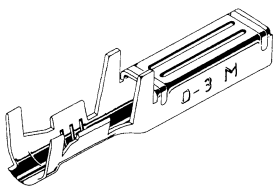


Product Facts

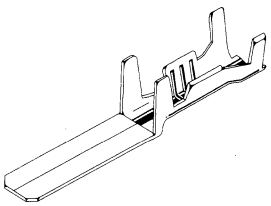
- Connector system designed for exclusive use with I/O and power circuits in the power and control boards of heavy electric systems and factory automation (FA) equipment, process computers, FA computers, PCs, NCs, servodrivers, servomotors, inverters, switching power supplies, etc.
- Consists of wire-side connector and board-side connector
- Diverse housings are available to meet virtually every application
- Easy-to-read circuit numbers on both tab and receptacle housings
- With contacts standardized, the tool types used can be reduced. Termination can be automated and field maintenance simplified
- Standardization of contacts leads to easier management of inventory parts
- To help prevent human errors in termination, a common wire range identification mark is stamped on hand tools and contacts
- Recognized under the Component Program of Underwriters Laboratories Inc., File No. E28476
- Certified by Canadian Standards Association, File No. LR7189

D-3 Contacts (For use in all D-3000 Series receptacle and tab housings)

Receptacle Contact
(used with receptacle housing)



Tab Contact
(used with tab housing for wire-to-wire connection)



Wire Range		Wire Ins. Dia.	Contact Form	Contact Part No.[1]			Minimum Order Quantity (pcs)	Application Tooling Part No.[4]	
				Receptacle Contact		Tab Contact			
AWG	mm²			Standard[2] Contact Force	High[3] Contact Force			Mini-Applicator	Hand Tool
28-24	0.08-0.20	**0.8-1.4** [.031-.055]	Strip	175194-☐	1-175194-☐	175284-☐	4,000	—	PRO-CRIMPER II Handle **Part No. 354940-1** Die Set for wire sizes 28-16 AWG **Part No. 90546-2**
			Loose Piece	175216-☐	1-175216-☐	175287-☐	1,000	—	
24-20	0.20-0.56	**1.5-2.6** [.059-.102]	Strip	175195-☐	1-175195-☐	175285-☐	3,500	680004-2	
			Loose Piece	175217-☐	1-175217-☐	175288-☐	1,000	—	
20-16	0.56-1.42	**1.8-2.8** [.071-.110]	Strip	175196-☐	1-175196-☐	175286-☐	3,000	567496-2	
			Loose Piece	175218-☐	1-175218-☐	175289-☐	1,000	—	

[1]Enter appropriate plating code in ☐ after Part Number:
-2 (Gold plating, 0.38 µm, min.);
-3 (Gold plating, 0.76 µm, min.); or
-5 (Bright tin plating)

[2]Standard Contact Force: Recommended for multi-position, (more than 9 positions) connectors. Also, suitable for applications requiring many mating cycles.
[3]High Contact Force: For connectors of less than 10 positions. Also, suitable for high current and high vibration applications, such as power circuits and motor connectors.
[4]Extraction Tool: **Part No. 914677-1**

SOURCE: Catalog 65224

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

AMP Dynamic Series Connector Housings

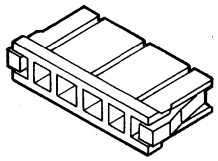
METRIC

Rated Voltage—250 VAC

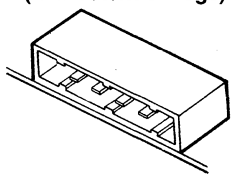
D - 3 100 S

- S — Single Row
- 100 — Series
- 3 — Contact Size
- D — Dynamic

Receptacle Housing

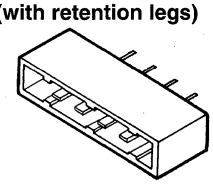


Horizontal Tab Header (with retention legs)



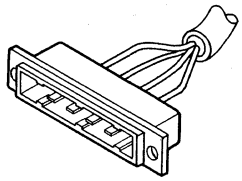
3.81 [.150] Centerline Solder Posts

Vertical Tab Header (with retention legs)



3.81 [.150] Centerline Solder Posts

Tab Housing (for wire-to-wire)



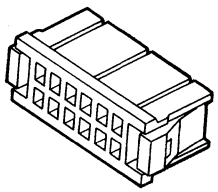
No. of Positions	Part Numbers				Minimum Order Quantity [2]
	Receptacle Housing[3]	Horizontal Tab Header[1]	Vertical Tab Header[1]	Tab Housing[3]	
3	1-178288-3	1-178293-☐	1-178313-☐	1-178802-3	230
5	1-178288-5	1-178295-☐	1-178315-☐	1-178802-5	170
8	1-178288-7	1-178297-☐	1-178317-☐	1-178802-7	120
10	1-178288-8	1-178298-☐	1-178318-☐	1-178802-8	100

[1]Enter appropriate plating code in ☐ after Part Number
-2 (Gold plating, 0.38 µm thick, min.);
-3 (Gold plating, 0.76 µm thick, min.); or
-5 (Solder plating)
[2]When placing your order, indicate the quantity you require in multiples of the listed quantity.
[3]Order contacts separately.
Note: Contact AMP for other Housing/Header sizes.

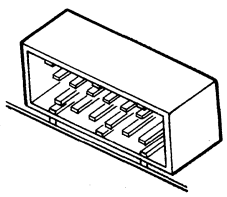
D - 3 100 D

- D — Double Row
- 100 — Series
- 3 — Contact Size
- D — Dynamic

Receptacle Housing

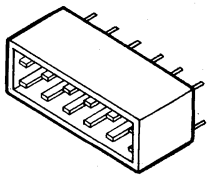


Horizontal Tab Header



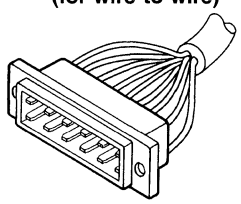
3.81 x 3.81 [.150 x .150] Solder Posts Grid

Vertical Tab Header



3.81 x 5.08 [.150 x .200] Solder Posts Grid

Tab Housing (for wire-to-wire)



No. of Positions	Part Numbers				Minimum Order Quantity [2]
	Receptacle Housing[3]	Horizontal Tab Header[1]	Vertical Tab Header[1]	Tab Housing[3]	
6	178289-3	178303-☐	178323-☐	178803-3	230
10	178289-5	178305-☐	178325-☐	178803-5	170
16	178289-7	178307-☐	178327-☐	178803-7	120
20	178289-8	178308-☐	178328-☐	178803-8	100

[1]Enter appropriate plating code in ☐ after Part Number
-2 (Gold plating, 0.38 µm thick, min.);
-3 (Gold plating, 0.76 µm thick, min.); or
-5 (Solder plating)
[2]When placing your order, indicate the quantity you require in multiples of the listed quantity.
[3]Order contacts separately.
Note: Contact AMP for other Housing/Header sizes.

SOURCE: Catalog 65224

Specifications subject to change.

1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

METRIC

AMP Dynamic Series Connector Housings
(Continued)

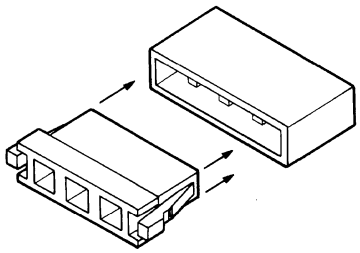
Rated Voltage—250 VAC

D - 3 100 M

- M — Modular
- 100 — Series
- 3 — Contact Size
- D — Dynamic

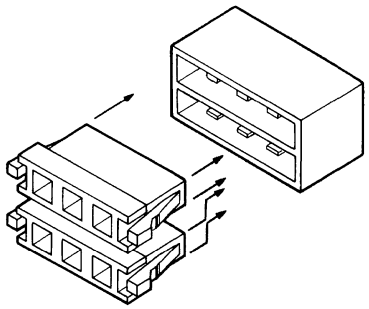
Two styles of keying (X/Y type) are available

Single-Row 3-Position Tab Header
3.81 [.150] Centerline Solder Posts



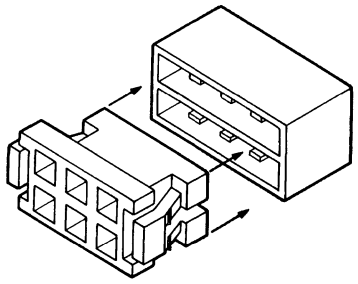
Single-Row 3-Position Receptacle Housing

Double-Row 6-Position Tab Header



2 Single-Row 3-Position Receptacle Housings

Double-Row 6-Position Tab Header



Double-Row 6-Position Receptacle Housing

Table of Mating Combinations for D-3100M Connectors[2]

Receptacle Housing	Tab Header[1] Horizontal[3]	Tab Header[1] Vertical[4]
Single-Row 3-Position X-type Keying Part No. 1-178288-3	Single-Row 3-Position X-type Keying Part No. 1-178293-☐	Single-Row 3-Position X-type Keying Part No. 1-178313-☐
Single-Row 3-Position Y-type Keying Part No. 2-178288-3	Single-Row 3-Position Y-type Keying Part No. 2-178293-☐	Single-Row 3-Position Y-type Keying Part No. 2-178313-☐
—	—	Double-Row 6-Position X/X-type Keying Part No. 1-178141-☐
Double-Row 6-Position X/Y-type Keying Part No. 3-178127-6	Double-Row 6-Position X/Y-type Keying Part No. 3-178137-☐	Double-Row 6-Position X/Y-type Keying Part No. 3-178141-☐

[1] Enter appropriate plating code in ☐ after Part Number:
-2 (Gold plating, 0.38 µm thick, min.);
-3 (Gold plating, 0.76 µm thick, min.); or
-5 (Solder plating)
[2] Minimum order quantity for every Part Number.
[3] Solder Post Grid—3.81 x 3.81 [.150 x .150]
[4] Solder Post Grid—3.81 x 7.62 [.150 x .300]

SOURCE: Catalog 65224

Specifications subject to change.

1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

METRIC

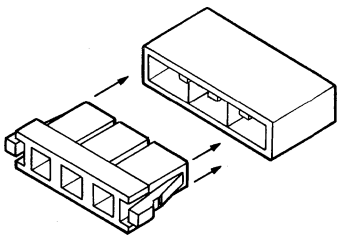
AMP Dynamic Series Connector Housings
(Continued)

Rated Voltage—600 VAC (per connector)

D - 3 200 S
- S — Single Row
- 200 — Series
- 3 — Contact Size
- D — Dynamic

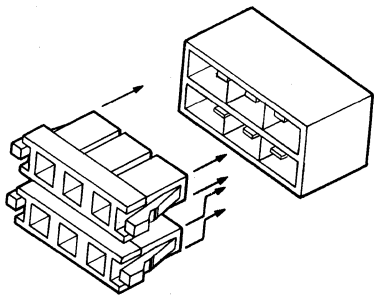
D - 3 200 M
- M — Modular
- 200 — Series
- 3 — Contact Size
- D — Dynamic

Single-Row 3-Position Horizontal Tab Header 5.08 [.200] Centerline Solder Posts



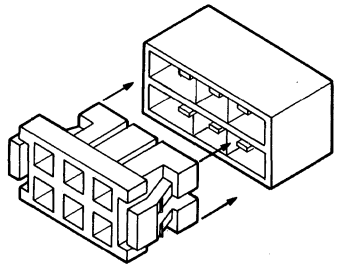
Single-Row 3-Position Receptacle Housing

Double-Row 6-Position Horizontal Tab Header 5.08 x 5.08 [.200 x .200] Solder Post Grid



2 Single-Row 3-Position Receptacle Housings

Double-Row 6-Position Horizontal Tab Header 5.08 x 5.08 [.200 x .200] Solder Post Grid



Double-Row 6-Position Receptacle Housing

Table of Mating Combinations for D-3200M Connectors[2]

Receptacle Housing	Horizontal Tab Header[1]
Single-Row 3-Position X-type Keying Part No. 1-178128-3	Single-Row 3-Position X-type Keying Part No. 1-178138-□
Single-Row 3-Position Y-type Keying Part No. 2-178128-3	Single-Row 3-Position Y-type Keying Part No. 2-178138-□
Double-Row 6-Position X/X-type Keying Part No. 1-178129-6	Double-Row 6-Position X/X-type Keying Part No. 1-178139-□
Double-Row 6-Position Y/Y-type Keying Part No. 2-178129-6	Double-Row 6-Position Y/Y-type Keying Part No. 2-178139-□
Double-Row 6-Position X/Y-type Keying Part No. 3-178129-6	Double-Row 6-Position X/Y-type Keying Part No. 3-178139-□

[1] Enter appropriate plating code in □ after Part Number
-2 (Gold plating, 0.38 µm thick, min.);
-3 (Gold plating, 0.76 µm thick, min.); or
-5 (Solder plating)

[2] Minimum order quantity for every Part Number.

SOURCE: Catalog 65224

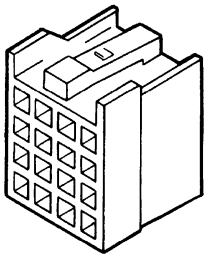
METRIC

AMP Dynamic Series Connector Housings
(Continued)

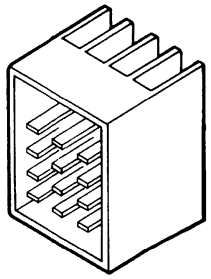
D - 3 400 F

- F — Four Row
- 400 — Series
- 3 — Contact Size
- D — Dynamic

Rated Voltage—250 VAC



12 Pos. Receptacle Housing



12 Pos. Horizontal Tab Header 3.81 x 5.08 [.150 x .200] Solder Post Grid

No. of Pos.	Part Numbers[2]	
	Receptacle Housing	Horizontal Tab Header[1]
12	178214-1	178216-☐

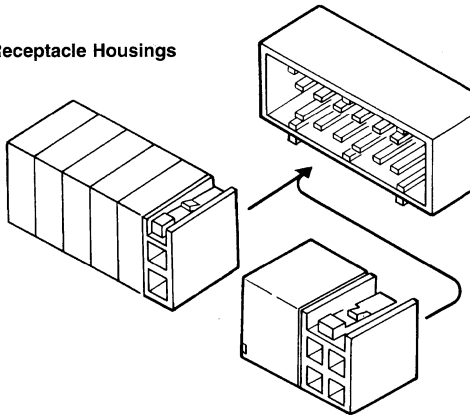
Note: Contact AMP for other Housing /Header sizes.
[1] Enter appropriate plating code in ☐ after Part Number:
-2 (Gold plating, 0.38 µm thick, min.);
-3 (Gold plating, 0.76 µm thick, min.); or
-5 (Solder plating)
[2] Minimum order quantity for every Part Number.

D - 3 500 D

- D — Double Row
- 500 — Series
- 3 — Contact Size
- D — Dynamic

Rated Voltage—600 VAC
(per connector)

Receptacle Housings



Horizontal Tab Header 5.08 x 5.08 [.200 x .200] Solder Post Grid

No. of Pos.	Part Numbers[2]	
	Receptacle Housing	Horizontal Tab Header[1]
2	175362-1	—
4	175363-1	—
12	—	177555-☐
20	—	175365-☐

[1] Enter appropriate plating code in ☐ after Part Number:
-2 (Gold plating, 0.38 µm thick, min.);
-3 (Gold plating, 0.76 µm thick, min.); or
-5 (Solder plating)
[2] Minimum order quantity for every Part Number.

D - 3 700 (For use in motors)

- 700 — Series
- 3 — Contact Size
- D — Dynamic

Rated Voltage—250 VAC

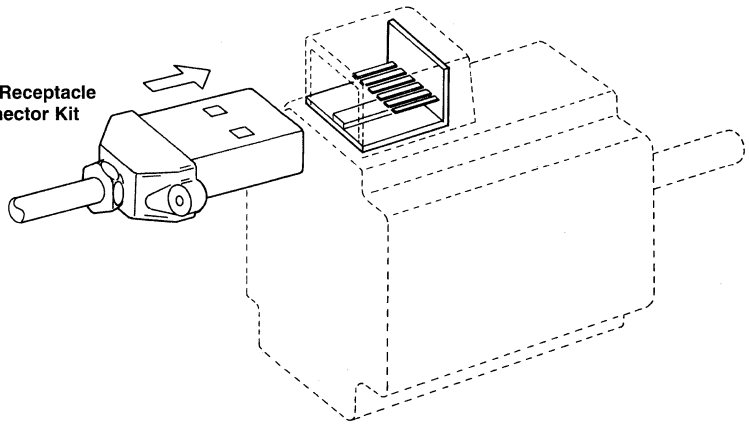
6 Pos. Receptacle Connector Kit

Description	Part Numbers
No contacts	176346-1
6 ea. of Contact Part No. 1-175218-2 included	176346-4

Minimum order quantity for each Part Number.

Tab Header on Motor Side

6 Pos. Receptacle Connector Kit



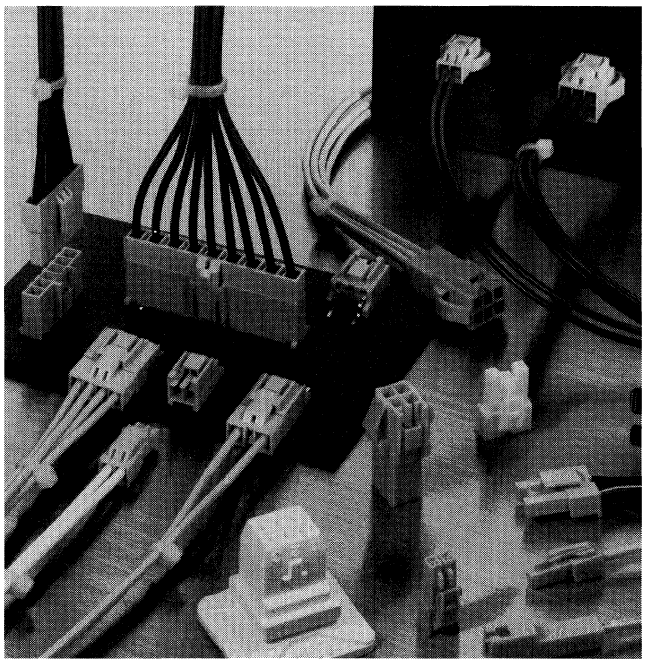
SOURCE: Catalog 65224

Specifications subject to change.

1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

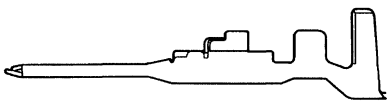
AMP Universal Power (UP) Connectors



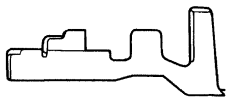
Product Facts

- Power circuit connectors of compact design
- Twin housing lance system insures positive retention of contacts and prevents them from backing out
- Contacts are lanceless and there is no entangling of contacts with one another
- Locking mechanism is an integral part of the housing; virtually no danger of wires being trapped or connectors being accidentally disconnected
- Complies with VDE specifications, the Electric Products Control Law of Japanese Government (150~300V) as well as UL and CSA (600V) requirements
- Easy loading of contacts into the housing
- Provided with a mechanism to prevent mismating
- The connectors have a low mating force with tactile indication when completely mated

Contacts



Tab
(for Cap Housing)

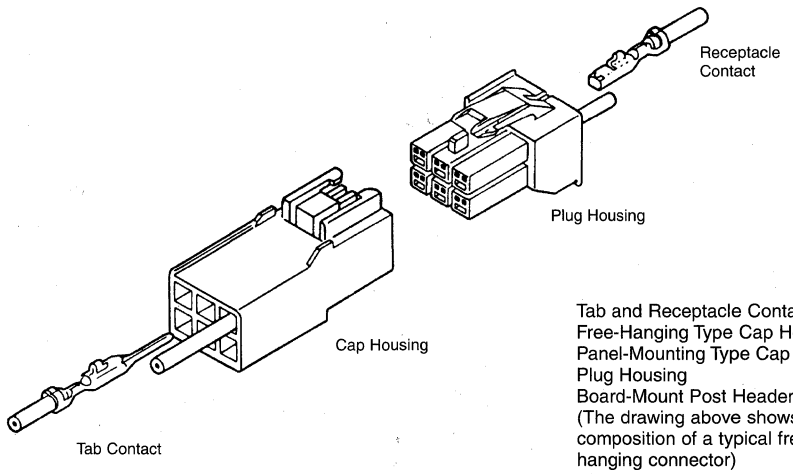


Receptacle
(for Plug Housing)

Wire Range		Wire Insulation Diameter	Material	Part Number of Contact				Hand Tool Part No.
				Tab		Receptacle		
AWG	mm²			Strip Form	Loose Piece	Strip Form	Loose Piece	
26-22	0.12-0.35	.047-.079 1.2-2.00	Tin-Plated Copper	175149-1	175153-1	175151-1	175155-1	914181-1
			Tin-Plated Brass	175149-2	175153-2	175151-2	175155-2	
20-16	0.50-1.42	.079-.130 2.0-3.30	Tin-Plated Copper	175150-1	175154-1	175152-1	175156-1	
			Tin-Plated Brass	175150-2	175154-2	175152-2	175156-2	

Extraction Tool **Part No. 913923-1.** Use **Part No. 913923-4** for special specifications of more than .138 [3.5] in insulation height.

Connector Components



Tab and Receptacle Contacts
Free-Hanging Type Cap Housing
Panel-Mounting Type Cap Housing
Plug Housing
Board-Mount Post Header
(The drawing above shows the composition of a typical free-hanging connector)

SOURCE: Catalog 82273

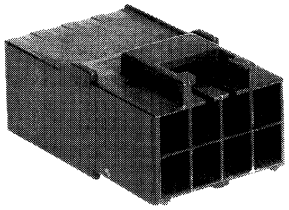
Specifications subject to change.

1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

Free-Hanging Type Cap Housings

Mates with—Plug Housings



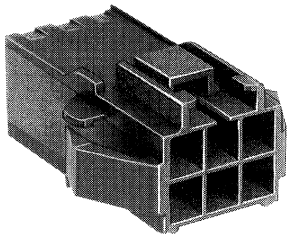
Note: 8 Clr. Housing Dim. (Typ.)—.669 [16.99] L x 1.14 [28.96] W x .512 [13.0] H

No. of Circuits	Part Numbers	Housing Color (for suffixed no.)
1	176281-❑	
2	176282-❑	
3	176283-❑	
4	176284-❑	-1–Natural
6	176285-❑	-2–Red
8	176286-❑	-4–Yellow
9	176287-❑	-6–Blue
10	176288-❑	-9–Black
12	176289-❑	
15	176290-❑	
18	176291-❑	

Note: Applicable Contact **Part Nos. 175149-2, 175150-2**

Panel Mount Type Cap Housings and Seal Caps

Mates with—Plug Housings



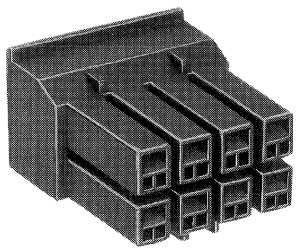
Note: 8 Clr. Housing Dim. (Typ.)—.669 [16.99] L x 1.14 [28.96] W x .512 [13.0] H

No. of Circuits	Part Numbers		Housing Color (for suffixed no.)
	Seal Cap*	Cap Housing	
2	—	176292-☐	
3	—	176293-☐	
4	178377-1	176294-☐	-1–Natural
6	178378-1	176295-☐	-2–Red
8	—	176296-☐	-4–Yellow
9	178379-1	176297-☐	-6–Blue
10	—	176298-☐	-9–Black
12	—	176299-☐	
15	—	176300-☐	
18	—	176301-☐	

Note: Applicable Contact **Part Nos. 175149-2, 175150-2**
*Insulation diameter of applicable wire: .079-.110 [2.0-2.8] (sealing characteristics of wire entry port) when using wire of over .079 [2.0] O.D., a bit larger force is required to mount contacts (Contact **Part No. 175150-**☐)

Plug Housings

Mates with—Free-Hanging and Panel Mount Type Cap Housings



Note: 8 Cir. Housing Dim. (Typ.)— .669 [16.99] L x .760 [19.3] W x .567 [14.4] H

No. of Circuits	Part Numbers	Housing Color (for suffixed no.)
1	176270-☐	
2	176271-☐	
3	176272-☐	
4	176273-☐	-1–Natural
6	176274-☐	-2–Red
8	176275-☐	-4–Yellow
9	176276-☐	-6–Blue
10	176277-☐	-9–Black
12	176278-☐	
15	176279-☐	
18	176280-☐	

Note: Applicable Contact **Part Nos. 175151-2, 175152-2.**

SOURCE: Catalog 82273

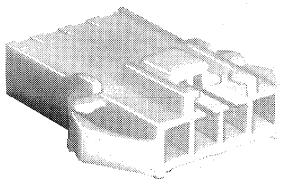
Specifications subject to change.

1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

Single Row Type .156 [3.96] Centerline

Cap Housing for Panel Mount Type, for 4 Circuits

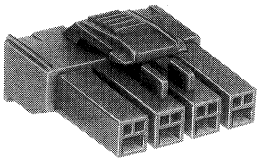


Note: 4 Cir. Housing Dim. (Typ.)—
.669 [16.99] L x 1.140 [28.96] W x .350 [8.89] H

Part Numbers		Housing Color (for suffixed no.)
Cap Housing	Mating Plug Housing	
178740-☐	178481-☐	-1–Natural -2–Red -4–Yellow -6–Blue -9–Black

Note: Applicable Contact **Part Nos. 175149, 175150**

Plug Housings for 4, 5 and 6 Circuit Post Headers



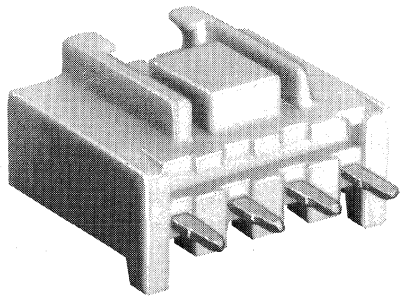
Note: 4 Cir. Housing Dim. (Typ.)—.669 [16.99] L x .760 [19.3] W x .382 [9.7] H

No. of Circuits	Plug Housing Part Number	Part Number of Mating Housing			Housing Color (for suffixed no.)
		Cap Housing (Panel Mount)	Post Header		
			Vertical Type	Horizontal Type	
4	178481-☐	178740-☐	1-178487-☐	178497-☐	-1–Natural -2–Red -4–Yellow -6–Blue -9–Black
5	178482-☐	—	1-178488-☐	178498-☐	
6	178483-☐	—	1-178489-☐	178499-☐	

Note: Applicable Contact **Part Nos. 175151, 175152.**

Post Header for Printed Circuit Board

Vertical Mount Type



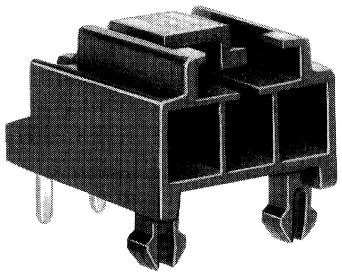
Note: 4 Cir. Housing Dim. (Typ.)— .669 [16.99] L x .390 [9.90] W x .551 [14.0] H

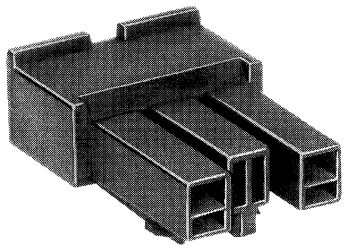
Mounting Hole Dia.	Dimension of Contact Tine	No. of Circuits and Contact Centerline	Post Header Part Nos.	Housing Color (for suffixed no.)	Part No. of Mating Housing
.059 [1.50]±.022 [0.55] Punched Hole or .065 [1.65]±.022 [0.55] Drilled Hole	**.025 x .043** [0.64 x 1.10]	2 Circuit/.156 [3.96] pitch	1-176975-☐	-1–Natural -2–Red -4–Yellow -6–Blue -9–Black	176271-☐
		2 Circuit/.312 [7.92] pitch	6-176976-☐		178125-☐
		3 Circuit/.156 [3.96] pitch	5-176976-☐		176272-☐
		4 Circuit/.156 [3.96] pitch	1-178487-☐		178481-☐
		3 Circuit/.312 [7.92] pitch	3-178488-☐		178482-☐
		5 Circuit/.156 [3.96] pitch	1-178488-☐		
		6 Circuit/.156 [3.96] pitch	1-178489-☐		178483-☐

Notes: 1. 2 Circuits (.312 [7.92] centerline) post header is not loaded in Circuit 2;
3 Circuits (.312 [7.92] centerline) post header is not loaded in Circuit 2 and 4.
2. Multiple row headers of 12, 18, 24 and 30 positions available, contact AMP.

Post Header for Printed Circuit Board and Plug Housing

Horizontal Mount Type Solder-Mount Type (With Retention Leg)





Note: 4 Cir. Housing Dim. (Typ.)— Header, .669 [16.99] L x .378 [9.6] W x .551 [14.0] H; Plug, .669 [16.99] L x .760 [19.3] W x .382 [9.7] H

No. of Circuits	Centerline	Part Numbers		Housing Color (for suffixed no.)
		Post Headers	Mating Plug Housing	
2	**.156** 3.96	178495-□	176271-□	-1–Natural -2–Red -4–Yellow -6–Blue -9–Black
2	**.312** 7.92	2-178496-□	178125-□	
3	**.156** 3.96	178496-□	176272-□	
3*	**.312** 7.92	3-178498-□	178482-□	
4	**.156** 3.96	178497-□	178481-□	
5	**.156** 3.96	178498-□	178482-□	
6	**.156** 3.96	178499-□	178483-□	

Notes: 1. Applicable Contact **Part Nos. 175151, 175152.**
2. Multiple row headers of 12, 18, 24 and 30 positions available, contact AMP.
*3 Circuit (.312 [7.92] centerline) is a five position header with circuit contacts removed in Circuit 2 and 4.

Horizontal Mount Type Surface-Mount Type (With Retention Leg)

Note: 2 Cir. Housing Dim. (Typ.)—Header, .512 [13.0] L x .382 [9.7] W x .551 [14.0] H; Plug, .539 [13.69] L x .760 [19.3] W x .382 [9.7] H

No. of Circuits	Centerline	Part Numbers		Housing Color (for suffixed no.)
		Post Header	Mating Plug Housing	
2	**.312** [7.92]	178601-□	178125-□	-1–Natural -2–Red -4–Yellow -6–Blue -9–Black

SOURCE: Catalog 82273

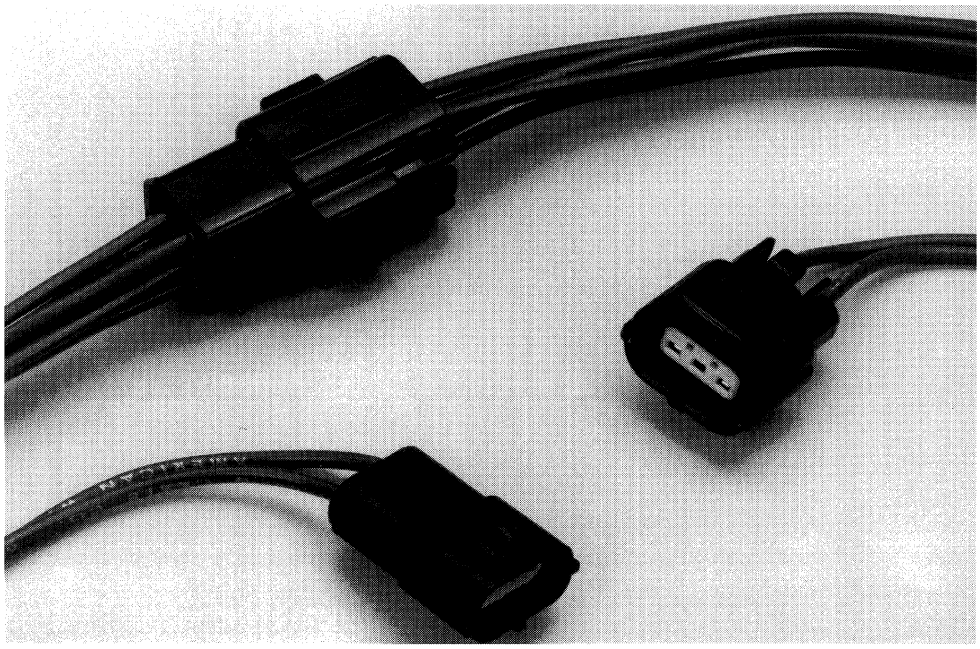
Specifications subject to change.

1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

METRIC

Econoseal J Series [Mark II(+)] Connectors



Product Facts

- Waterproof connectors with excellent sealing property and durability
- Wire seal can be loaded at the same time as contacts are crimped
- Besides wire seals, cavity plugs are provided to plug up unused contact cavities
- Effectively prevents mismating and damage of contacts at mating/unmating
- Mark II(+) has a double-lock feature
- Capable of detecting half-mating of contacts
- Applicable wire ranges: AWG 24-16 for 070 Series contacts
- Connector sizes: 1, 2, 3, 4, 6, 8, 10 and 12 positions
- Recognized under the Component Program of Underwriters Laboratories Inc., File No. E28476

AMP Econoseal J Series Connectors Mark II(+) have been developed for use in automobile engine compartments and other applications where waterproof protection and rugged construction are required for electric connections.

Waterproof protection with these connectors is achieved by means of a wire seal which is inserted on the wire and crimped in the insulation support of the contact simultaneously with contact crimping. This system also has a plug to seal up the unused contact cavity and a seal ring preloaded in the plug housing.

Both the wire seal and cavity plug have 3 parallel ridges on their external circumference for ease of insertion into the housing cavity.

One of the major features of these products is that insertion force of contacts into the housing is reduced by beveling the edge of the ridge of both the wire seal and cavity plug and making the diameters of the 2 front ridges smaller than that of the 1 rear ridge.

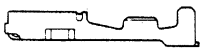
Another important feature lets the trapped air out whenever internal pressure has risen excessively due to changes in temperature and atmospheric pressure.

In addition, the Mark II(+) Connector has a plate inserted in its housing to detect half-mating of contacts, increase their retention, provide a double tab-lock function and prevent damage of contacts at mating/unmating.

All sealing surfaces of the housing are located inside. Mark II(+) Connectors can be assembled easily and fast.

070 Series Contacts

Tab



Receptacle

Wire Range		Wire Ins. Dia.	Material & Finish	Part Numbers				Hand Tool Part No.
				Tab		Receptacle		
AWG	mm²			Strip	Loose Piece	Strip	Loose Piece	
24-20	0.20~0.56	**1.4~2.4** .055~.095	Brass Pre-Tin	171631-1	173600-1	171630-1	171699-1	753890-1
20-16	0.50~1.25	**2.0~2.7** .079~.106		171661-1	173706-1	171662-1	173707-1	755262-1 (Receptacle) 755241-1 (Tab)

SOURCE: Catalog 65481

Specifications subject to change.

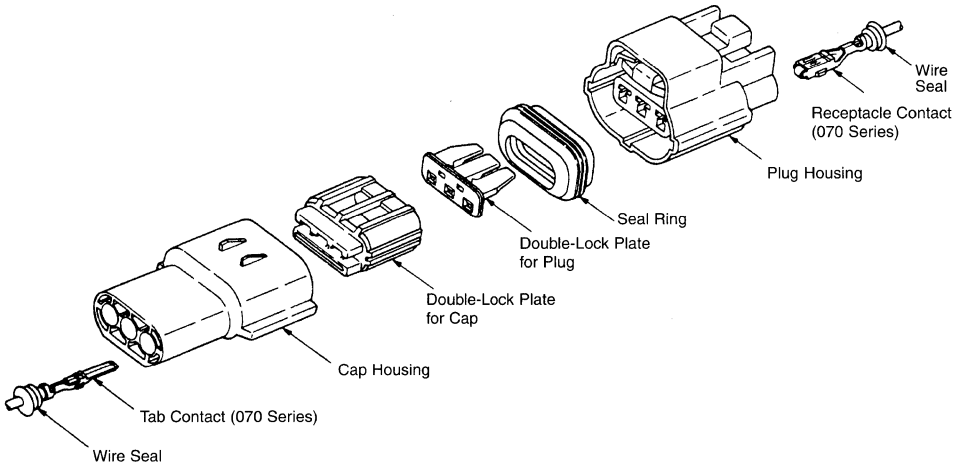
1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

Econoseal J Series [Mark II(+)] Connectors (Continued)

METRIC

Connector Components



070 Series Housing and Double-Lock Plates

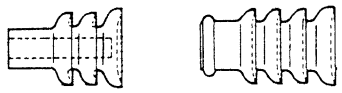
Note: 6 Pos. Housing Dim. (Typ).—Cap, 23.1 [.910] L x 35.5 [1.40] W x 20.6 [.811] H; Plug, 25.4 [1.00] L x 27.6 [1.09] W x 29.3 [1.15] H

No. of Pos.	Part Numbers			
	Housing		Double-Lock Plate[1]	
	Cap	Plug w/Seal Ring	For Cap*	For Plug**
1	174879-2	174877-2	174880-7	174878-7
2	174354-2	174352-2	174355-7	174353-7
3	174359-2	174357-2	174360-7	174358-7
4	174259-2	174257-2	174260-7	174258-7
6	174264-2	174262-2	174265-7	174263-7
8	174984-2	174982-2	174985-7	174983-7
10	174657-2	174655-2	174658-7	174656-7
12	174663-2	174661-2	174664-7	174662-7

[1]Double-Lock Plate is purchased separately and necessary for a complete connector system. Plate Insertion Tool, **Part No. 755369-1**; Extraction Tool, **Part No. 755368-1.**
*Tab contacts
**Receptacle contacts

Wire Sealing

Wire Seal—To be crimped on contact
Cavity Plug—For unloaded cavity



Wire Seal Cavity Plug

Wire Range		Wire Ins. Dia.	Material	Part Numbers	
AWG	mm²			Wire Seal	Cavity Plug
24-20	0.20~0.56	**1.4~2.4** .055~.095	NBR	172746-1 (black)	172748-1 (black)
20-16	0.50~1.42	**2.0~2.7** .079~.106		172888-2 (grey)	172748-2 (grey)

SOURCE: Catalog 65481

Specifications subject to change.

1-800-522-6752
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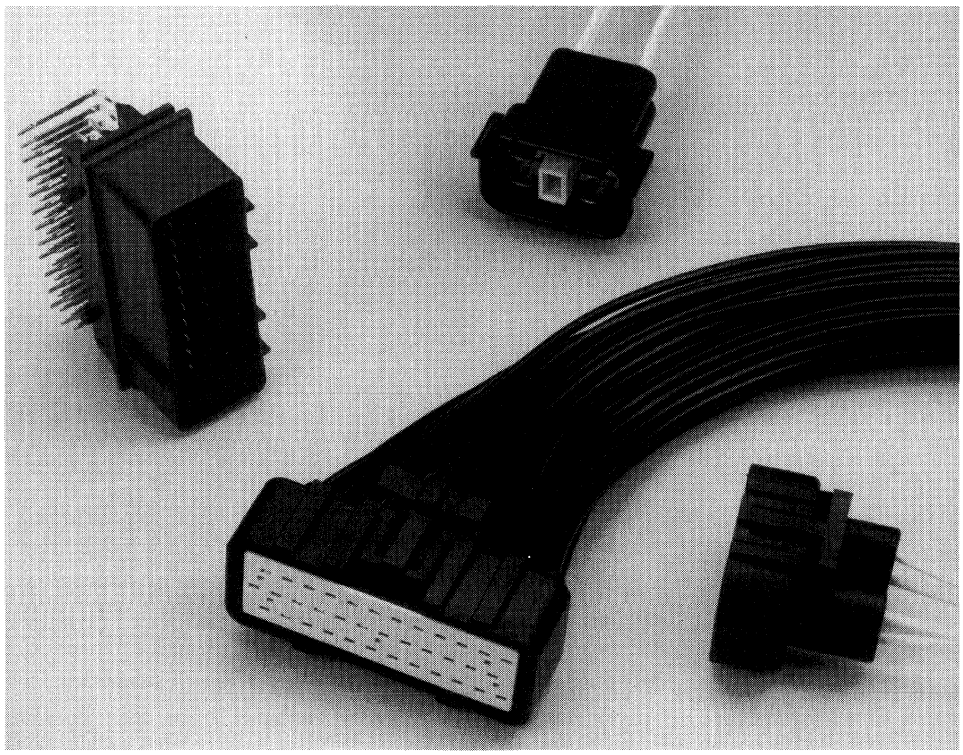
1-800-722-1111
Tooling/Technical Assistance Center

METRIC

Econoseal III Connectors



Product Facts

Wire-to-Wire Connectors

- Free hanging
- 250 Series FASTON blade and receptacle
- 2, 4 or 8 positions
- Wire range 20-12 AWG
- Contact rating up to 20 amps continuous
- Lanceless contact system
- Inertia locking

Wire-to-PCB Connectors

- Horizontal header and sealed receptacle connector
- 070 Series blade and receptacle
- 18 and 36 positions
- Wire range 20-14 AWG
- Contact rating up to 10 amps continuous
- Selective gold plated contacts

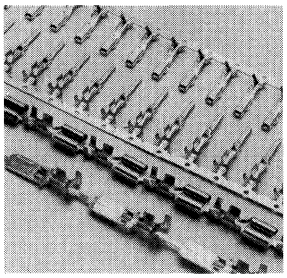
The AMP Econoseal III connector has been designed to meet the exacting requirements of the automotive industry, for a reliable sealed connector. Two series of connectors have been developed by AMP, wire-to-wire, and wire-to-pcb. Each series offers a choice of housing positions, polarized mating, discrete cable sealing and contact secondary locking, plus a choice of hand or machine tooling for simple termination.

Wire-to-wire connectors accept a cable range from 20-12 AWG with a current rating up to 20 amps.

All connectors are designed to be used with thin walled non-irradiated PVC cables. For other cable types please contact AMP.

Though designed initially for automotive applications, Econoseal III can be used in any industry where a reliable sealed connector is needed.

Contacts for Series 250 and 070



Series	Wire Range AWG	Wire Range mm²	Wire Ins. Dia.	Material/ Finish	Part Numbers Tab Strip	Part Numbers Receptacle Strip
070	20-14	0.50-2	**1.6-2.7** .063-.106	Ph. Bze./Gold	—	175104-2
250	20-16	0.50-1.25	**1.6-2.4** .063-.095	Brass/Pre-Tin	344069-1	344070-1
	14-12	2-3	**2.6-3.4** .102-.134	Brass/Pre-Tin	344008-1	344009-1

SOURCE: Catalog 65481

Specifications subject to change.

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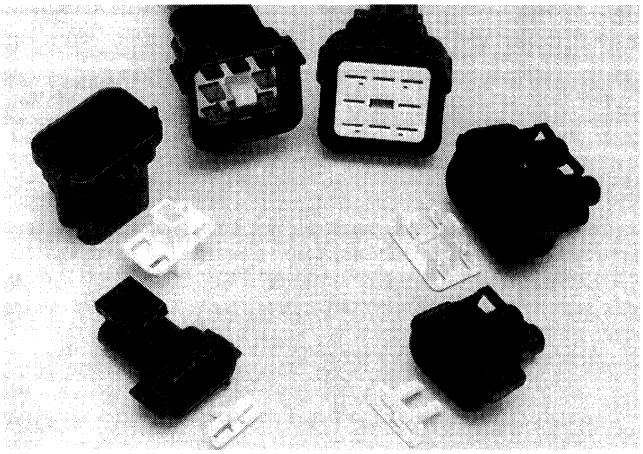
METRIC

Econoseal III
(Continued)

Housings—250 Series
Wire-to-Wire

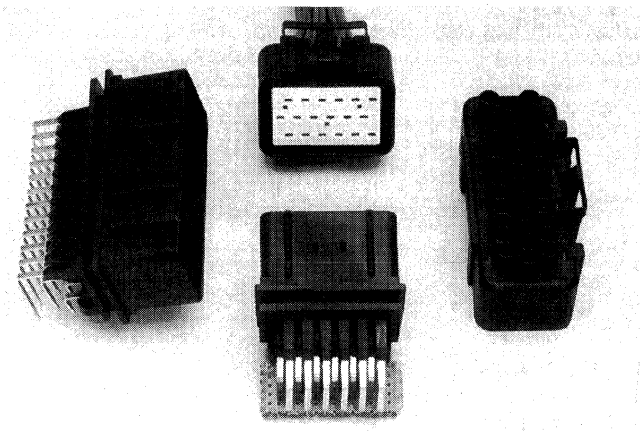


Note: 4 Pos. Housing Dim. (Typ.)—Receptacle, 43.85 [1.726] L x 34.0 [1.339] W x 32.45 [1.278] H; Tab, 41.55 [1.636] L x 37.4 [1.472] W x 28.15 [1.108] H

250 Series Housings

No. of Positions	Part Numbers			
	Housing		Double-Lock Plate	
	Receptacle	Tab	For Receptacle	For Tab
2	344081-1	344075-1	344089-1	344090-1
4	344080-1	344074-1	344087-1	344088-1
8	344079-1	344073-1	344085-1	344086-1

Housings—070 Series
Wire-to-Board



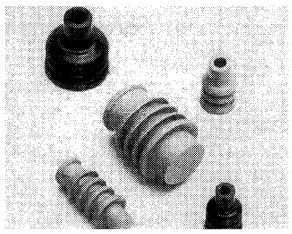
Note: 18 Pos. Housing Dim. (Typ.)—Header, 41.0 [1.614] L x 37.50 [1.476] W x 30.6 [1.205] H; Receptacle, 40.8 [1.606] L x 27.0 [1.063] W x 28.0 [1.102] H

070 Series Housings

No. of Pos.	Part Numbers		
	Header	Receptacle	Double-Lock Plate*
18	344103-1	344106-1	344107-1
36	344108-1	344111-1	344112-1

*For Receptacle Housing

Wire Seals and Cavity Plugs



Series	Wire Range		Wire Ins. Dia.	Part Numbers	
	AWG	mm²		Wire Seal	Cavity Plug
070	20-16	0.50-1.25	**1.6-2.4** .063-.095	172746-1 (black)	172748-1 (black)
	14	2	**2.4-2.7** .095-.106	172888-2 (grey)	172748-2 (grey)
250	20-16	0.50-1.25	**1.6-2.4** .063-.095	344095-1 (black)	172749-1 (black)
	14-12	2-3	**2.6-3.4** .102-.134	172747-1 (black)	172749-2 (grey)

SOURCE: Catalog 65481

Specifications subject to change.

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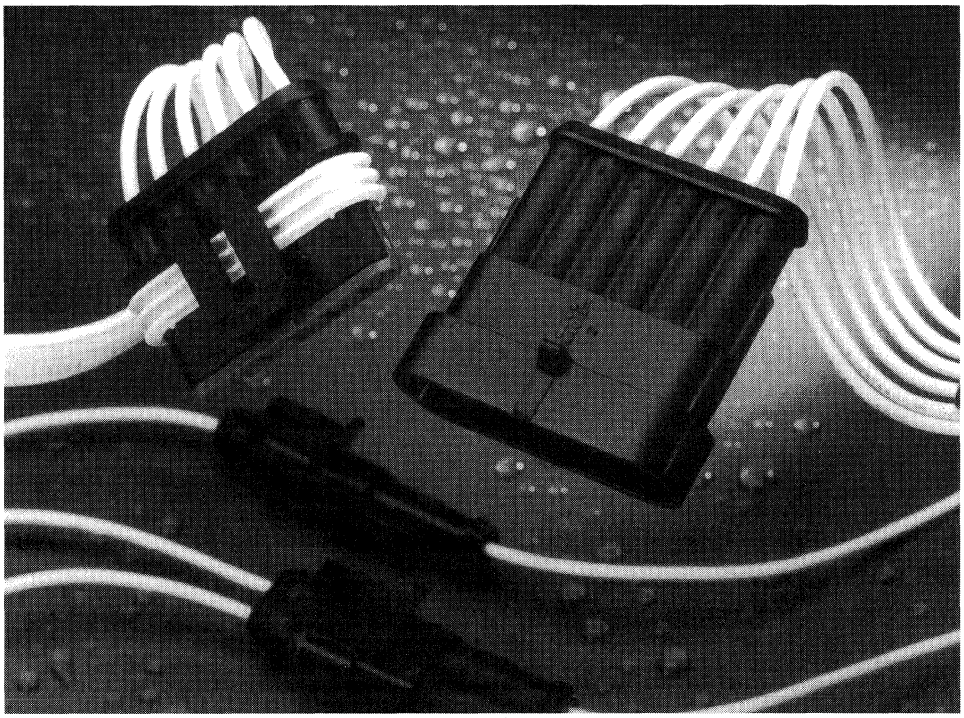
Tooling/Technical Assistance Center

METRIC

SUPERSEAL 1.5 Series Connectors



Product Facts

Receptacle Contacts

- Material: phosphor bronze, tin plated
- Lanceless contact
- Double contact spring (main spring and auxiliary antioverstress spring) ensuring low insertion force, but high contact force

Tab Contacts

- Material: brass, tin plated
- Lanceless contact
  - Wire size range: 20-16 AWG
  - Current rating: 14 amps maximum
  - Insertion force: max. 8 N

Wire Seals

- Material: silicon rubber
- Seals shape to make them easy to insert in the cavity
- The collar in the crimping area provides excellent strain relief on terminals
- Suitable for wire with insulation diameter ranging from 1.5-3.3 [.060-.130]

Connectors

- Material: housing and secondary lock: polyamide 6.6 glass filled, UL approved radial seal: silicon rubber
- Resistant to: ozone, salts ($CaCl_2$-NaCl), gasoline, diesel fuel, brake fluid, detergents, anti-freeze coolant, transmission gear lubricant, motor oil
- Watertight capability: conforming to IEC 529 I.P. 6.7 standards

They are watertight and they exceed the requirements prescribed by the IEC 529 and DIN 40050 I.P. 6.7 standards regarding waterproofness.

The AMP SUPERSEAL 1.5 Series connectors are completely interchangeable and can be connected with existing components and with the devices currently used in the automotive industry (sensors, oil pressure senders, water temperature monitoring, etc.).

The special features of the AMP SUPERSEAL 1.5 Series connectors are as follows:

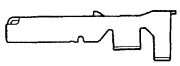
- Sturdy and reliable contacts: their lanceless design eliminates contact tangling during handling operations.
- Double contact spring: main spring and auxiliary antioverstress spring.
- Preassembled secondary lock which ensures correct and complete insertion of the contact in the housing and prevents it from slipping out of the connector. The secondary lock cannot be closed if the contact is not correctly inserted in the housing.

Both plug and receptacle have a collar to fit additional protective caps if required.

The plug connector is equipped with a device which allows easy fastening to a panel.

Contacts

Tab



Receptacle

Wire Range AWG	Wire Insulation Dia.	Part Numbers					
		Tab Contact		Receptacle Contact		Hand Tool	
		Strip	Loose piece	Strip	Loose piece	Frame	Die set
22-20	**1.4-1.7** .055-.067	282404-1	183036-1	282403-1	183035-1	785353-1	785360-1
20-16	**1.8-3.3** .071-.13	282109-1	183024-1	282110-1	183025-1		

Extraction Tool **Part No. 784980-1**

SOURCE: Catalog 65481

Specifications subject to change.

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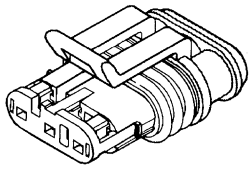
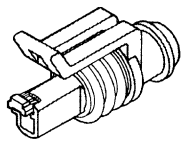
METRIC

SUPERSEAL 1.5 Series
(Continued)

Plug Housings



3 Position

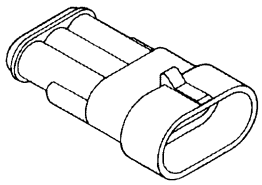


1 Position

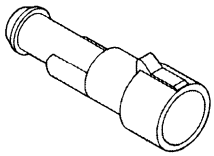
Note: 3 Pos. Housing Dim. (Typ.)—21.3 [.839] L x 28 [1.10] W x 19 [.748] H

No. of Pos.	Part Numbers			For Wire Insulation Diameter
	Plug Housing	Applicable Contact	Single Wire Seal	
1	282079-2	282403-1	281934-4	**1.4-1.7** .055-.067
2	282080-1	282110-1	281934-2	**1.8-2.4** .071-.094
3	282087-1			
4	282088-1	282110-1	281934-3	**2.6-3.3** .102-.130
5	282089-1			
6	282090-1			

Tab Housings



3 Position



1 Position

Note: 3 Pos. Housing Dim. (Typ.)—25.8 [1.02] L x 42 [1.65] W x 16.3 [.642] H

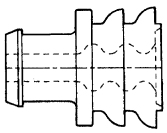
No. of Pos.	Part Numbers			For Wire Insulation Diameter
	Tab Housing	Applicable Contact	Single Wire Seal	
1	282103-1	282404-1	281934-4	**1.4-1.7** .055-.067
2	282104-1	282109-1	281934-2	**1.8-2.4** .071-.094
3	282105-1			
4	282106-1	282109-1	281934-3	**2.6-3.3** .102-.130
5	282107-1			
6	282108-1			

Extraction Tool for Secondary Lock of Tab Housing—**Part No. 785084-1**
Insertion Tool for Secondary Lock of Tab Housing—For 1 and 2 position, **Part No. 785061-1**; for 3 through 6 positions, **Part No. 785061-2**

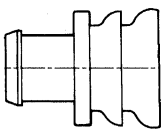
Wire Sealing

Single Wire Seal—To be crimped on contact

Cavity Plug—For unloaded cavity



Single Wire Seal



Cavity Plug

Wire Insulation Dia.	Material	Part Numbers	Color	Part Number	Color
		Single Wire Seal		Cavity Plug	
1.4-1.7 .055-.067	Silicon Rubber	281934-4	Green	282081-1	Red
1.8-2.4 .071-.094		281934-2	Yellow		
2.6-3.3 .102-.130		281934-3	Red		

Extraction Tool for Secondary Lock of Tab Housing—**Part No. 785084-1**
Insertion Tool for Secondary Lock of Tab Housing—For 1 and 2 position, **Part No. 785061-1**; for 3 through 6 positions, **Part No. 785061-2**

SOURCE: Catalog 65481

Specifications subject to change.

1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

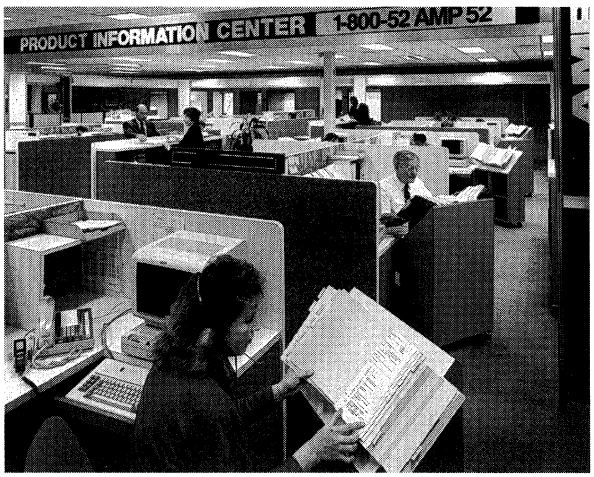
Need Information?
Call the AMP

PRODUCT INFORMATION CENTER

1-800-522-6752

The Product Information Center is staffed with specialists well versed in all AMP products. The Center can provide you with:

- Catalogs
- Technical Support
- Product Samples



AMP FAX SERVICE

Instant information by FAX 24-hours a day.

- Drawings
- Instruction Sheets (IS#)
- Product Specifications
- Application Specifications
- Latest Revision of Catalog Pages
- AMP Authorized Distributors Locations
- Instructions for AMP FAX Service

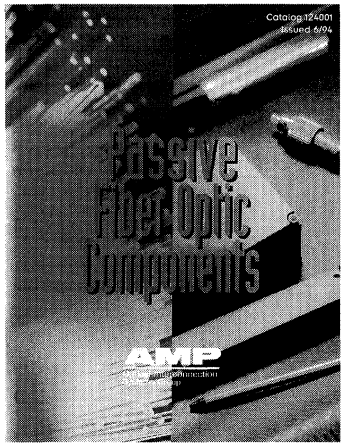
See Inside Front Cover for Instructions on "How to Access" AMP FAX SERVICE

Fiber Optic Products

Our commitment to fiber optic technology began in 1975, and has evolved to today's capability to provide component solutions that go from the circuit board to the end-user. More than 500 engineers, scientists, technicians, marketers, and manufacturing personnel in the AMP Optical Interconnection Systems Group are actively working to develop and produce the industry's best fiber optic products.

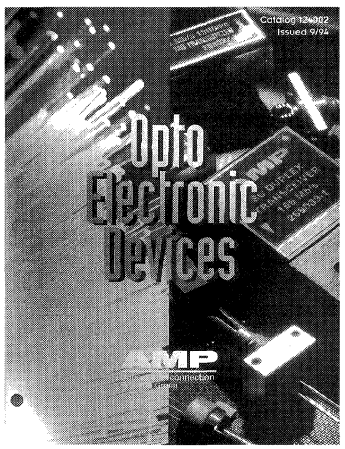
The AMP fiber optic product line includes:

- **Emitters and detectors**
- **Data links**
- **Cable**
- **Optical switches**
- **Wavelength division multiplexers**
- **Connectors**
- **Wall outlets**
- **Fiber management hardware**
- **Cable assemblies**
- **Couplers/splitters**
- **Attenuators**



Passive Fiber Optic Components
Catalog 124001

Switching, branching, and control of fiber optic signals can be accomplished with AMP couplers, wavelength division multiplexers, attenuators, and switches.

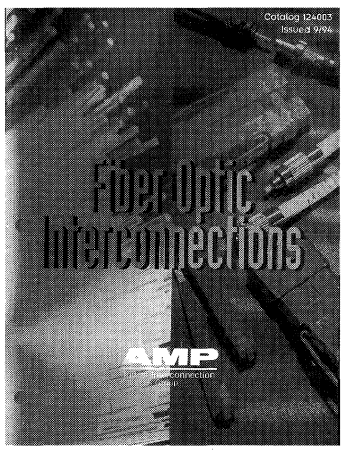


Opto Electronic Devices
Catalog 124002

Emitters, detectors, and data links from AMP provide data rates up to 1 Gb/s. They are packaged with industry standard interfaces, and are compatible with commonly used manufacturing.

- All of these products are produced under a Quality Management System certified to ISO 9001

  A copy of the certificate is available upon request



Fiber Optic Interconnections
Catalog 124003

AMP can provide all types of industry standard fiber optic connectors. Designed and manufactured by AMP, these connectors offer high performance and simple assembly. Some connectors can be applied without epoxy, in less than two minutes.

- All of these products are produced under a Quality Management System certified to ISO 9001

  A copy of the certificate is available upon request

Specifications subject to change.

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1-800-722-1111
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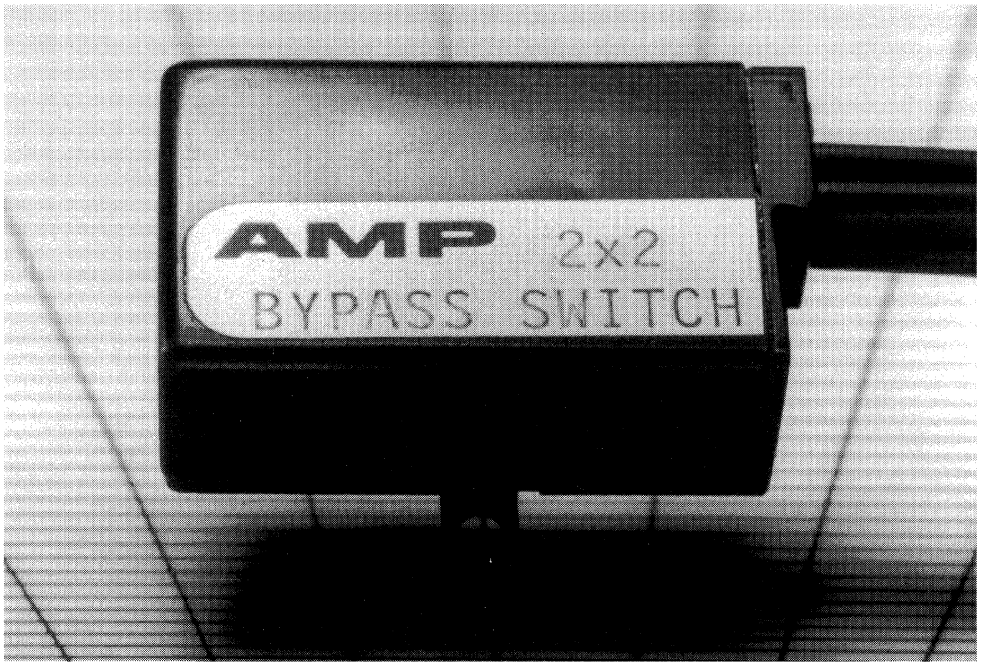
Fiber Optic Switches

1 x 2, SPDT Switch

Dual 1 x 2, DPDT Switch

2 x 2 Bypass Switch



Product Facts

- Low profile
- Utilizes pivoting mirror
- Wide wavelength range
- Low insertion loss
- Excellent repeatability
- Environmentally stable
- Shock and vibration resistant
- Custom configurations for:
  - Fiber type
  - Connectors
- Board or chassis mounting
- Choice of 5V or 12V
- Switch state sensing option
- Optical and electrical leads exit from one end for easy cable routing

AMP Low Profile Fiber Optic Switches are miniature, board mountable devices that permit the switching of an optical signal from one fiber to another. Switching is accomplished by a slight pivoting motion of a spherical mirror which reflects the optical signal to the appropriate fiber. This patented imaging technology provides very low optical loss.

AMP Fiber Optic Switches can be terminated with any AMP fiber optic connector, and they are available in the following configurations, in standard and ruggedized versions:

- **1 x 2, SPDT Switch**
- **Dual 1 x 2, DPDT Switch**

The SPDT and DPDT switches permit the transfer of optic signals from an input fiber to either of two output fibers. Switches are activated when a 5 VDC signal is applied to the positive terminal. The switch reverts to its original state when power is removed.

- **2 x 2 Fully Reversing Switch (FDDI)**

Fully Reversing Bypass Switches provide bypass protection for fiber optic ring networks per IEEE 802.5 and ANSI FDDI standards. A self-test path permits testing the node's transmitter against its receiver when the switch is in the bypass mode. This transmitter/receiver path is attenuated to prevent saturation of the receiver, while maintaining minimal light loss in the bypass path.

SOURCE: Catalog 124001

1 x 2, SPDT Switch
Dual 1 x 2, DPDT Switch
2 x 2 Bypass Switch

(Continued)

Specifications

Configuration	1 x 2 and Dual 1 x 2	2 x 2 Fully Reversing Bypass
Switching speed	5 milliseconds typical, 10 milliseconds maximum	5 milliseconds typical, 10 milliseconds maximum
Operating wavelength	750–1450 nanometers	750–1450 nanometers
Insertion loss at 1300 nm	0.5 dB typical, 0.8 dB max. per FOTP-34 Method B (long launch) 0.8 dB typical, 1.1 dB max. per FOTP-34 Method A (short launch)	0.5 dB typical, 0.8 dB max. per FOTP-34 Method B (long launch) 0.8 dB typical, 1.1 dB max. per FOTP-34 Method A (short launch) 1-5 dB on loopback path
Crosstalk	-45 dB typical per FOTP-42	-45 dB typical per FOTP-42
Switch driver	5 V at 80mA max., 12 V option available	5 V at 80mA max., 12 V option available
Drop In/Drop Out Voltage	Drop In: 4.0 V minimum Drop Out: 0.5 V minimum	Drop In: 4.0 V minimum Drop Out: 0.5 V minimum
Fiber types	Graded index 50/125, 62.5/125, 100/140 (others available upon request)	Graded index 50/125, 62.5/125, 100/140 (others available upon request)
Lead length	1 meter	1 meter
Temperature range	Operating –10°C to +65°C per FOTP-3, C2 Storage –30°C to +70°C per FOTP-3, C2	Operating –10°C to +65°C per FOTP-3, C2 Storage –30°C to +70°C per FOTP-3, C2
Vibration tolerance	15 Gs on 3 axes per FOTP-11	15 Gs on 3 axes per FOTP-11
Physical shock	30 Gs on 3 axes per FOTP-14	30 Gs on 3 axes per FOTP-14
Connector styles	ST-Style (others available upon request)	ST-Style (others available upon request)
Electrical interface	Bent pins for Pcb soldering, straight pins for soldering or AMP modular connector	Bent pins for Pcb soldering, straight pins for soldering or AMP modular connector
Durability	>1 million cycles	>1 million cycles
Weight (unconnectorized)	<1 oz.	<1 oz.

Part Number Information

Switch Type	Electrical Interface	Base Part Numbers Pigtail Options		
		Fiber Connector	1.2 mm Loose Tube	3 mm Cable Jacket
1 x 2 SPDT	Bent Pin	None	99402	99403
		ST-Style	99414	99415
	Straight Pin	None	99420	99421
		ST-Style	99426	99427
Dual 1 x 2 DPDT	Bent Pin	None	99973	99974
		ST-Style	99975	99976
	Straight Pin	None	99979	99980
		ST-Style	99981	99982
2 x 2 Bypass	Bent Pin	None	99404	99405
		ST-Style	99416	99417
	Straight Pin	None	99422	99423
		ST-Style	99428	99429

Add the appropriate "dash numbers" below to the base part number above.

Fiber Type:	50/125	62.5/125	100/140
	-1	-2	-3

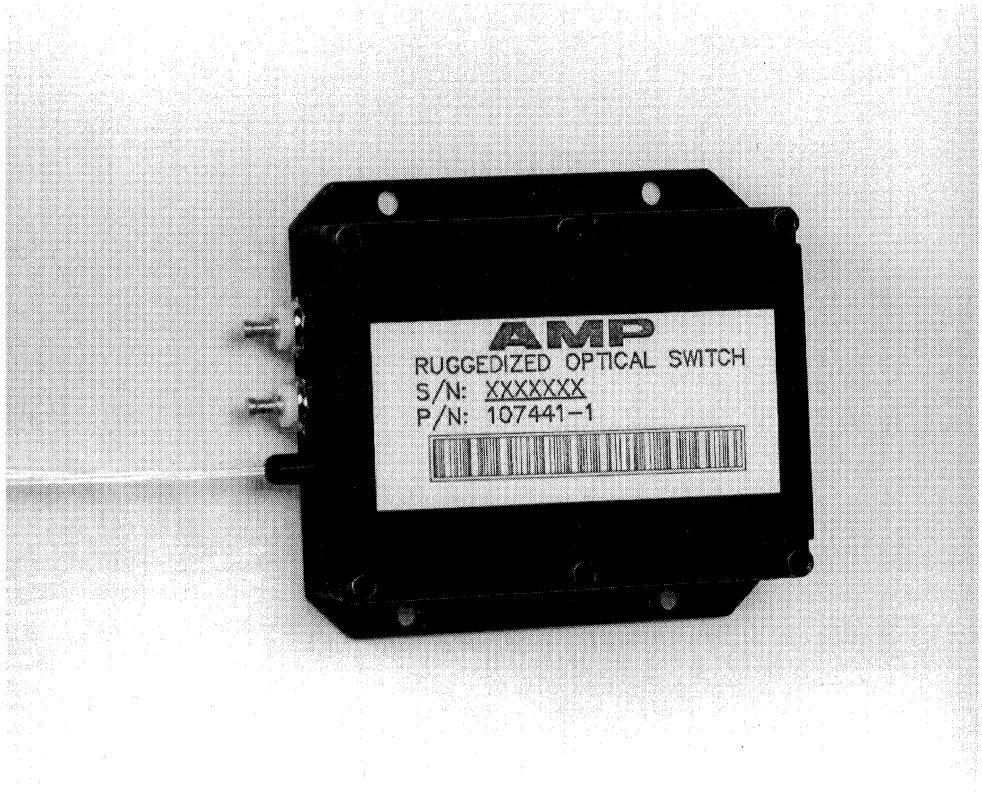
SOURCE: Catalog 124001

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

Ruggedized Fiber Optic Switches

1 x 2, SPDT Switch

2 x 2, FDDI Bypass Switch



Product Facts

- Environmentally sealed
- Wide environmental tolerance
- Low profile
- Custom configurations for:
  - Fiber type
  - Connectors
  - Specifications
- Board or chassis mounting
- Choice of 5V or 12V
- Optical and electrical leads exit from one end for easy cable routing

Applications

- Avionics
- Military
- Harsh commercial environments

Designed to meet the following specifications:

- ARINC 636; On-board Local Area Network
- MIL-S-24625/1
- SAFENET (Survivable, Adaptable Fiber Optic Embedded Network)
- FDDI

AMP Ruggedized Fiber Optic Switches are high-reliability devices that switch an optical signal from one fiber to another. Switching is accomplished by a precise pivoting motion of a spherical mirror which reflects the optical signal to the appropriate fiber.

These ruggedized switches are environmentally sealed, and feature an isolated internal chassis to withstand effects of temperature, vibration, and shock. They are intended for use in avionic, military, and other harsh environments. Versions of these devices have been selected exclusively for use in the new Boeing 777 local area network system. Custom designs are possible for specific applications.

Typical insertion loss is 0.65 dB. The maximum insertion loss through all environmental and mechanical stresses is 1.1 dB.

The SPDT switch permits the transfer of an optical signal from an input fiber to either of two output fibers. The switch is activated when an electrical signal is applied to the positive terminal. The switch reverts to its original state when power is removed.

The 2 x 2 FDDI bypass switch provides fully reversing bypass operation for fiber ring networks per IEEE 802.5 and ANSI FDDI standards. A self test path permits testing of a network node's transmitter against its receiver when the switch is in the bypass mode.

Both 5 volt and 12 volt switches are available.

Switches are supplied with 500 µm buffered fiber, terminated with any standard connector type, or non-terminated. Fiber choices include 50/125/500 µm, 62.5/125/500 µm and 100/140/500 µm.

SOURCE: Catalog 124001

1 x 2, SPDT Switch
2 x 2, FDDI Bypass Switch
(Continued)

Specifications

Insertion Loss*	0.65 dB Typical, 0.8 dB Max. per EIA/TIA-455-34, Method A (short launch condition)
Crosstalk	–45 dB Typical per EIA/TIA-455-42
Fiber Types	50/125/500 µm, 62.5/125/500 µm, 100/140/500 µm
Switching Speed	<15 ms Max. (7 ms Typical)
Operating Wavelengths	Optimized for 1250-1350 (Standard) Other wavelengths available
Switch Driver Options	5 VDC @ 80 mA, 12 VDC @ 33 mA
Leads	Optical: 500 µm Buffered Fiber Electrical: Glass to metal sealed feed-through terminals
Dimensions	2.2" L x 2.1" W x 0.81" H Includes mounting flanges
Weight	100 grams

*Insertion loss is indicated for primary optical paths.
Loss through loop-back path in 2 x 2 switch is <5.0 dB.
Specifications subject to change.

Environmental Specifications

Operating Temperature	-40°C to +85°C (per EIA/TIA-455-3, Test Condition C-3)
Storage Temperature	-55°C to +90°C (per EIA/TIA-455-3, Test Condition C-2)
Humidity	60°C, 95% RH (per EIA/TIA-455-5, Test Type 1)
Altitude	50,000 ft (per EIA/TIA-455-190, Test Condition I)
Vibration	13.5 Gs rms Random Vibration 10-2000 Hz (per EIA-TIA-455-11, Test Condition VI)
Mechanical Shock	150 Gs rms, 11 ms, half-sine (per EIA/TIA-455-14)
Durability	>1 million cycles

Part Number Information

Base Part Numbers

Switch Type	Fiber Connector	Driver Options 12 VDC	Driver Options 5 VDC
1 x 2 SPDT	None	107440	107441
	ST-Style	107442	107443
2 x 2 Bypass Fully Reversing	None	107444	107445
	ST-Style	107446	107447

Note: Other connector options available.

Dash Numbers

Fiber Size (µm)		
50/125/500	62.5/125/500	100/140/500
-1	-2	-3

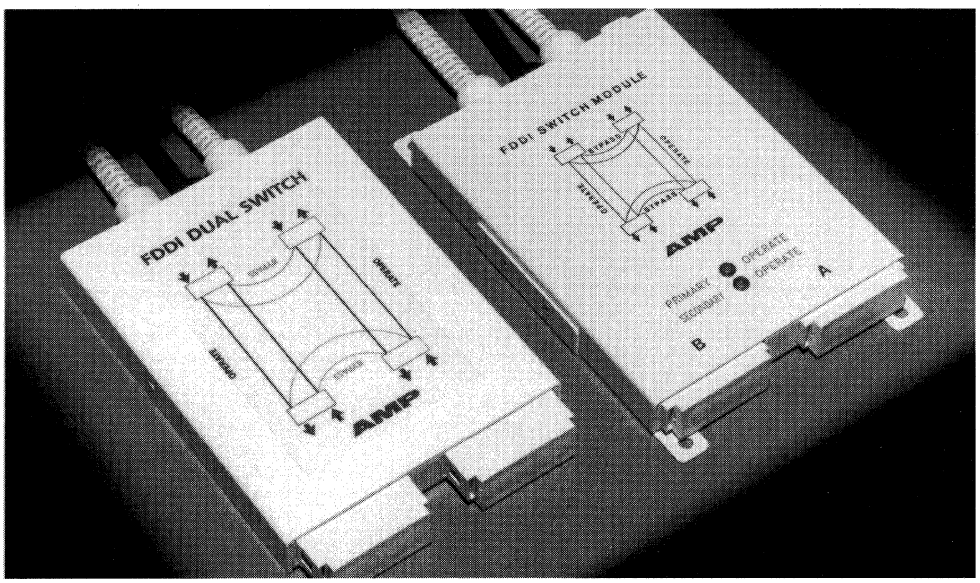
SOURCE: Catalog 124001

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

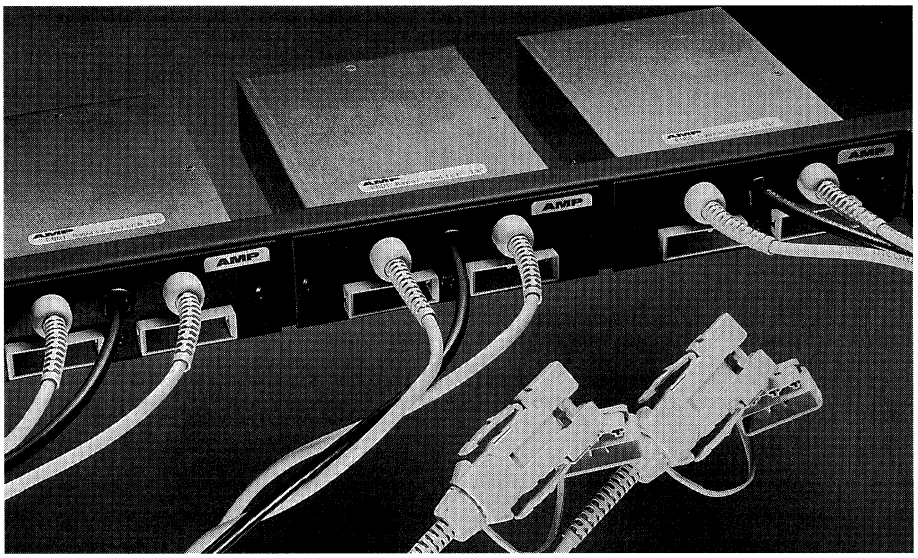
FDDI Dual Bypass Switch Module Assemblies

Product Facts

- **Available with 62.5/125 µm and 50/125 µm fiber type**
- **Low insertion loss (1.4 dB typical)**
- **Meets or exceeds all ANSI Standards**
- **Meets ANSI FDDI Standard Power Output Specs (20 dBm)**
- **Can be located inside or outside equipment or rack mounted**
- **Offers critical network protection**



Low-Profile FDDI Dual Bypass Switch Module



Rack-Mounted FDDI Dual Bypass Switch Module

The AMP FDDI switch module allows a station on a dual ring Fiber Distributed Data Interface (FDDI) network to be bypassed without loss of network integrity. The module contains two fully reversing, optical bypass switches that direct the optical signals to the appropriate fiber, according to signal on the device's electrical interface.

Optical switching is accomplished by a precise, high speed motion of a spherical mirror that reflects the light path to a specific fiber. Attenuation of the signal on the network path is very low, while the path between the transmitter and receiver is attenuated in the bypass mode to prevent saturation of the receiver. Holding the switches in the operating state (non-bypass) requires a 4 to 5.5 VDC, 160 mA signal. Both switches return to the bypass state when the signal is removed. Switching occurs in less than 10 ms.

The modules are easy to install between a dual attached station and a FDDI ring. FDDI duplex or ST-Style connectors on the module plug into the network ports; connections from the station plug into the module. The electrical input is supplied through one of five standard electrical connectors. A status LED, available on some models, indicates that the module is in the operating state. The stand alone low profile switch module has the smallest package available in the market today.

The rack mountable modules fit into a panel with simple push-pull fasteners for easy installation. Face plates cover unused slots in the panel.

SOURCE: Catalog 124001

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
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FDDI Dual Bypass Switch Module Assemblies (Continued)

Specifications: Stand Alone Module and Rack-Mount Module

Specifications		
Switching speed	10 milliseconds max.	
Operating wavelength	750–1450 nm	
Insertion loss at 1300 nm including 1 connector pair	1.1 dB typical, 1.8 dB max. per FOTP-34 Method B (long launch) 1.4 dB typical, 2.1 dB max. per FOTP-34 Method A (short launch) <5 dB on loopback path (other ranges available upon request)	
Crosstalk	-45 dB typical per FOTP-42	
Switch driver	5 V at 175 mA max. (non-LED version) 5 V at 190 mA max. (LED version)	Pickup voltage = 4.0 V (min.) Dropout voltage = 0.5 V (min.)
Fiber types	Graded index 50/125, 62.5/125	
Operating Temperature	-10°C to +65°C per FOTP-3, Condition C2	
Storage Temperature	-30°C to +70°C per FOTP-3, Condition C2	
Vibration tolerance	15 Gs on 3 axes per FOTP-11	
Physical shock	30 Gs on 3 axes per FOTP-14	
Durability	>1 million cycles	
Weight	17 oz.	

Standard Profile Switch Modules

Fiber Type:	62.5/125		50/125	
Standard Profile Switch Modules/No LEDs (w/ FDDI Adapter Input)	Pigtail Fiber Connector		Pigtail Fiber Connector	
	FDDI	ST-Style	FDDI	ST-Style
Station Connector:				
6 pos. MTE Receptacle	501916-1	502443-1	–	–
6 pos. shielded DIN Plug	501916-2	–	501916-4	–
6 pos. shielded MOD Plug	501916-3	502443-2	501916-5	502443-8
6 pos. Mini DIN	501916-6	502443-3	501916-7	502443-9
9 pos. Sub-D	501916-9	–	–	–
4 pos. shielded MOD Plug	501916-8	–	–	–

Low-Profile Switch Modules

Fiber Type:	62.5/125		50/125	
Low-Profile Switch Modules with LEDs (w/ FDDI Adapter Input)	Pigtail Fiber Connector		Pigtail Fiber Connector	
	FDDI	ST-Style	FDDI	ST-Style
Station Connector:				
6 pos. MTE Receptacle	99045-1	99046-1	–	–
6 pos. shielded DIN Plug	99045-2	99046-2	99045-4	99046-4
6 pos. shielded MOD Plug	99045-3	99046-3	99045-5	99046-5
6 pos. Mini DIN	99045-6	99046-6	99045-7	99046-7
9 pos. Sub-D	99045-8	99046-8	–	–

Fiber Type:	62.5/125		50/125	
Low-Profile Switch Modules/ No LEDs (w/ FDDI Adapter Input)	Pigtail Fiber Connector		Pigtail Fiber Connector	
	FDDI	ST-Style	FDDI	ST-Style
Station Connector:				
6 pos. MTE Receptacle	99507-1	99517-1	–	–
6 pos. shielded DIN Plug	99507-2	99517-2	99507-4	99517-4
6 pos. shielded MOD Plug	99507-3	99517-3	99507-5	99517-5
6 pos. Mini DIN	99507-6	99517-6	99507-7	99517-7
9 pos. Sub-D	–	–	–	–

Fiber Type:	62.5/125	50/125
Low-Profile Switch Module/No LEDs (w/ ST-Style Adapter Input)	Pigtail Fiber Connector	
	ST-Style	ST-Style
Station Connector:		
6 pos. MTE Receptacle	107316-1	–
6 pos. shielded DIN Plug	107316-2	107316-4
6 pos. shielded MOD Plug	107316-3	107316-5
6 pos. Mini DIN	107316-6	107316-7
9 pos. Sub-D	107316-8	–

SOURCE: Catalog 124001

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

FDDI Dual Bypass Switch Module Assemblies
(Continued)

Rack-Mounted Switch Module

Fiber Type:	62.5/125		50/125	
Rack-Mounted Switch Modules with LEDs (w/ FDDI Adapter Input)	Pigtail Fiber Connector		Pigtail Fiber Connector	
	FDDI	ST-Style	FDDI	ST-Style
Station Connector:				
6 pos. MTE Receptacle	99827-1	107263-1	–	–
6 pos. shielded DIN Plug	99827-2	107263-2	99827-4	107263-4
6 pos. shielded MOD Plug	99827-3	107263-3	99827-5	107263-5
6 pos. Mini DIN	99827-6	107263-6	99827-7	107263-7
9 pos. Sub-D	99827-8	107263-8	–	–

19" Rack-Mount Panel with Face Plates and Push/Pull Fasteners (Accepts up to 3 Rack Mountable Switch Modules)

Part Number 99733-1

Wavelength Division Multiplexers

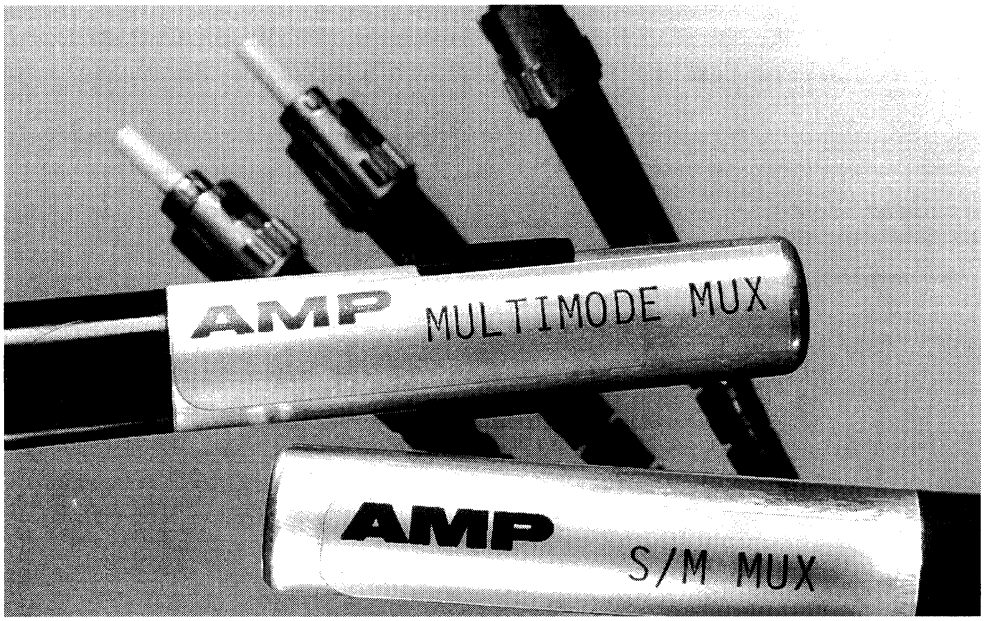
Lensed Wavelength Division Multiplexers, Singlemode and Multimode

Product Facts

- High isolation
- Wide bandpass
- Excellent reflectance
- Small footprint

Applications

- ISDN Subscriber loop
- Long-haul Telecommunication
- Multichannel Video
- Broadband Multichannel Communication
- Terminal and Telephone Communication
- High-speed, Computer-to Peripheral Links
- Two-way, Single-fiber CATV Links
- CCTV
- LAN, MAN and WAN



Multiplexers allow use of a single fiber for simultaneous transmission of two signals of different wavelengths (colors).

Demultiplexers separate the combined wavelengths from the single fiber into individual fibers. Both the multiplexers and demultiplexers are available for multimode as well as singlemode applications.

Through the use of high-quality dichroic coatings, which act as bandpass filters, numerous wavelength combinations from 400-1600 nm can be accommodated.

Unlike the narrow passband of fused multiplexers, the minimum passband of these devices around the central wavelength is ±50 nm. This feature makes these multiplexers ideal for use in broadband communications applications.

These devices are unique in that their optical performance is independent of polarization effects of the light source.

The 7/16 inch [11.9 mm] thick encapsulated devices with monolithic lens structures tolerate vibration and shock; their low profile permits easy printed circuit board mounting.

The Singlemode Multiplexers and Demultiplexers, with the use of angled fiber holders, provide extremely low reflectance.

Specifications—Multimode:

Insertion Loss (per FOTP-34, Method A):

	Typical	Maximum
Type A & B	0.9 dB	1.2 dB
Demux	0.9 dB	1.3 dB

Directivity: (50/125, 62.5/125 only)

Typical: >55 dB

Minimum: >45 dB

Wavelength Bandpass (nm):

Typical: 120 nm
Minimum: 100 nm

Reflectance:

WDM A & B—Minimum: 35 dB

DEMUX—

Port 1	≤–13 dB
Port 2	≤–15 dB
Port 3	≤–35 dB

Isolation:

Bi-directional (Type A + Type B)	40 dB Minimum (Typical 48 dB)
Unidirectional (Type A or B + Demux)	35 dB Minimum (Typical 42 dB)

Fiber Types:

50/125, 62.5/125, 100/140 and others.

Specifications—Singlemode:

Insertion Loss (per FOTP-180):

	Typical	Maximum
Type A & B	0.9 dB	1.2 dB
Demux	0.9 dB	1.3 dB

Directivity:

Typical: >65 dB
Minimum: >55 dB

Wavelength Bandpass (nm):

Typical: 120 nm
Minimum: 100 nm

Reflectance:

WDM A & B—Minimum: 60 dB

DEMUX—

Port 1	≤–40 dB
Port 2 & 3	≤–55 dB

Isolation:

Bi-directional (Type A + Type B)	40 dB Minimum (Typical 48 dB)
Unidirectional (Type A or B + Demux)	35 dB Minimum (Typical 42 dB)

Polarization Sensitivity: <0.1 dB

Fiber Types: (Corning SMF-28)

8–9/125
Others available by request.

Temperature:

Multimode:

-40°C to +65°C (Operating)

-40°C to +75°C (Storage)

Singlemode:

-20°C to +60°C (Operating)

-20°C to +60°C (Storage)

Weight:

1.5 oz. [42 grams]

Pigtail:

0.5 meter, 0.12" [3 mm] OD cable, tight or loose buffer (others available).

Terminations and connectors available on request.

SOURCE: Catalog 124001

Specifications subject to change.

1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

Lensed Wavelength Division Multiplexers, Singlemode and Multimode

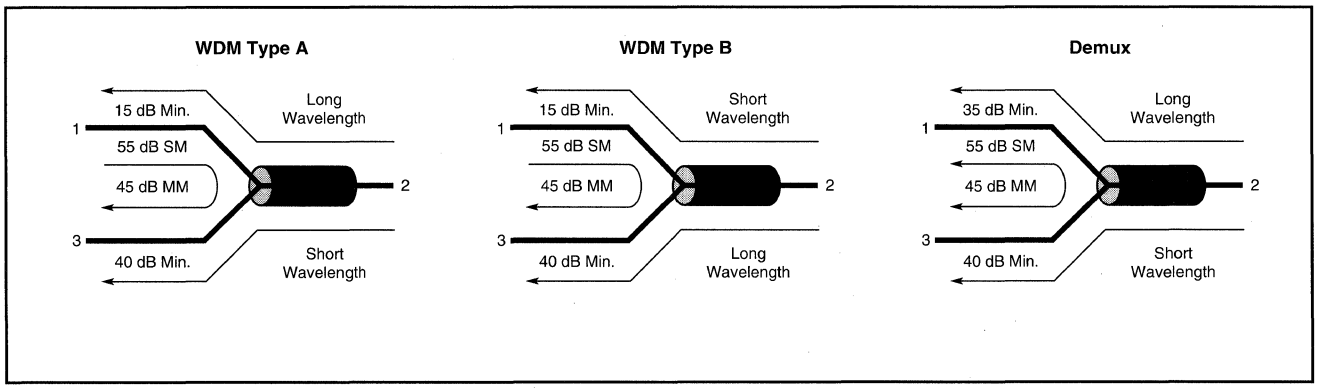
(Continued)

Part Numbers

Fiber	Fiber Connector	820/1300 nm			1300/1550 nm		
		Type A	Type B	Demux	Type A	Type B	Demux
50/125 Multimode	ST-Style	99100-2	99101-2	99102-2	99103-2	99104-2	99105-2
	FSMA I (905 Style)	99100-6	99101-6	99102-6	99103-6	99104-6	99105-6
	FSMA II (906 Style)	1-99100-0	7-99101-0	1-99102-0	1-99103-0	1-99104-0	1-99105-0
	None	99106-1	99107-1	99108-1	99109-1	99110-1	99111-1
62.5/125 Multimode	ST-Style	99100-3	99101-3	99102-3	99103-3	99104-3	99105-3
	FSMA I (905 Style)	99100-7	99101-7	99102-7	99103-7	99104-7	99105-7
	FSMA II (906 Style)	1-99100-1	7-99101-1	1-99102-1	1-99103-1	1-99104-1	1-99105-1
	None	99106-2	99107-2	99108-2	99109-2	99110-2	99111-2
100/140 Multimode	ST-Style	99100-5	99101-5	99102-5	99103-5	99104-5	99105-5
	FSMA I (905 Style)	99100-9	99101-9	99102-9	99103-9	99104-9	99105-9
	FSMA II (906 Style)	1-99100-3	7-99101-3	1-99102-3	1-99103-3	1-99104-3	1-99105-3
	None	99106-4	99107-4	99108-4	99109-4	99110-4	99111-4
9/125 Singlemode	2.5 mm Threaded (FC/PC)	—	—	—	99715-1	99716-1	99717-1
	2.0 mm Threaded (D4)	—	—	—	99715-2	99716-2	99717-2
	Biconic	—	—	—	99715-3	99716-3	99717-3
	2.5 mm ST-Style	—	—	—	99715-4	99716-4	99717-4
	None	—	—	—	99715-5	99716-5	99717-5
	Super FC/PC*	—	—	—	99715-6	99716-6	99717-6
	Super ST-Style/PC	—	—	—	99715-7	99716-7	99717-7
	Super AMP SC/PC	—	—	—	99715-8	99716-8	99717-8

*Super FC/APC also available.
Notes: 1. Type A and Type B are used in pairs in bi-directional applications.
2. 3.0 mm cable jacket

Crosstalk (Isolation) Performance



Notes: 1 = Transmitter, 2 = Trunk Line, 3 = Receiver
(Demux)—1 & 3 = Receiver or Transmitter, 2 = Trunk Line
SM—Singlemode, MM—Multimode

SOURCE: Catalog 124001

Wavelength Division Multiplexers

(Continued)

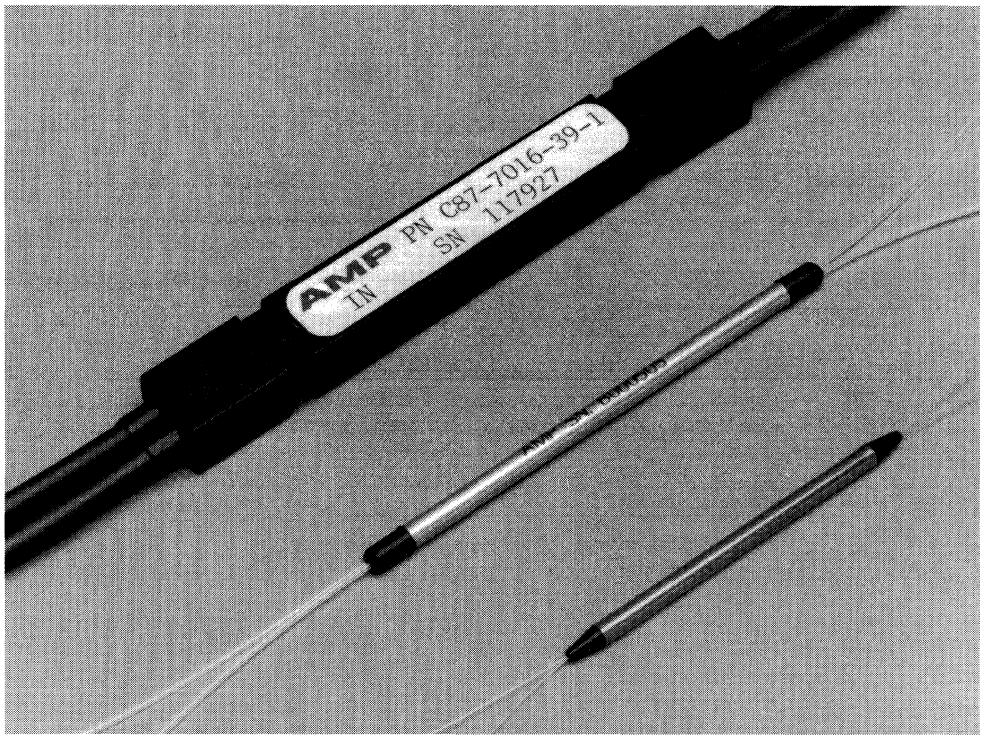
Singlemode Fused Wavelength Division Multiplexers

Product Facts

- **Designed to comply with Bellcore TR-NWT-1209 and TA-NWT-1221**
- **Good wavelength isolation**
- **Low excess loss**
- **Low insertion loss**
- **Low polarization sensitivity**
- **High directivity**
- **Excellent mechanical and environmental characteristics**
- **Wide range of package and connector options**

Applications

- **Telephone networks**
- **CATV systems**
- **Capacity upgrades**
- **Optical instrumentation**
- **Subscriber loop**
- **Multichannel Video**
- **High-speed, Computer-to-Peripheral Links**
- **CCTV**
- **Optical sensors**



AMP Fused Bi-directional Multiplexers allow use of a single fiber for simultaneous transmission of two signals of different wavelengths. They combine two signals onto a single fiber. Also, they can be used to separate two wavelengths from one fiber onto two separate fibers.

AMP Singlemode Wavelength Division Multiplexers (WDMs) are ideal for capacity upgrades. They are used in telecommunication systems, CATV, High Speed Data and Metropolitan Area Networks.

The compact, rugged package permits easy printed circuit board mounting. All devices are tested according to industry standard test procedures and are supplied with all pertinent measurement data. Full traceability is ensured by a unique serial number assigned to each device.

Fiber Pigtail Options

Light duty—250 µm buffered fiber

Medium duty—900 µm loose tube buffer

Heavy duty—3 mm OD cable

Fibers—9/125

Specifications

	Grade A	Grade B
Operating Wavelength	1310/1550 ± 20 nm	1310/1550 ± 20 nm
Max. Insertion Loss	≤0.3 dB*	≤0.6 dB*
Directivity	≥55 dB	≥55 dB
Polarization Sensitivity	≤0.1 dB	≤0.15 dB
Thermal Stability	(-40° to +75°C) ≤0.2 dB	(-40° to +75°C) ≤0.2 dB
Reflectance	≤-55 dB** ≤-40 dB*** ≤-45 dB****	≤-55 dB** ≤-40 dB*** ≤-45 dB****
Isolation	≥16 dB	≥14 dB

*Connector Loss Not Included
**Unconnectorized
***With PC Polish
****With Super PC Polish

SOURCE: Catalog 124001

Specifications subject to change.
1-800-522-6752 Product Information Center/ AMP FAX Service
1-800-722-1111 Tooling/Technical Assistance Center

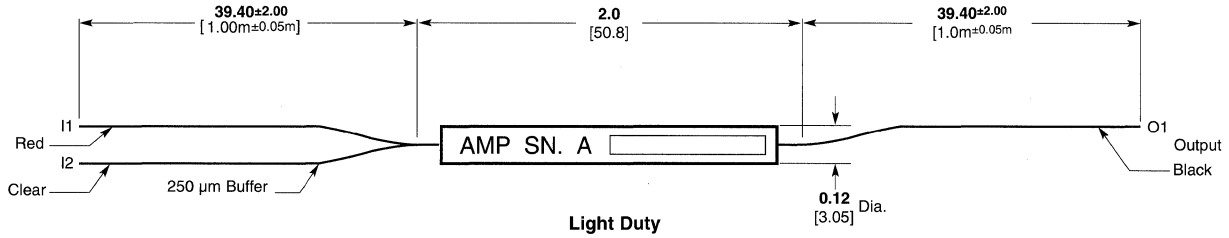
Singlemode Fused Wavelength Division Multiplexers

(Continued)

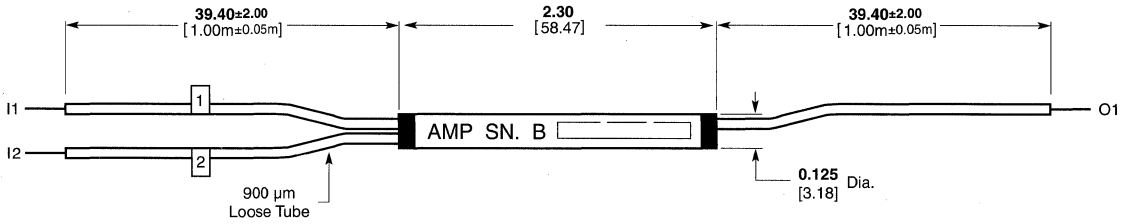
Fiber Connector Style	Part Numbers	
Light Duty (250 micron buffer)	**Grade A**	**Grade B**
None	107822-1	107823-1
2.5 mm Threaded (FC/PC)	107822-2	107823-2
2.0 mm Threaded (D4)	107822-3	107823-3
Biconic	107822-4	107823-4
AMP SC	107822-5	107823-5
ST-Style	107822-6	107823-6
Super FC/PC	107822-7	107823-7
Super AMP SC	107822-8	107823-8
Super ST-Style/PC	107822-9	107823-9
Medium Duty (900 micron loose tube)		
None	107824-1	107825-1
2.5 mm Threaded (FC/PC)	107824-2	107825-2
2.0 mm Threaded (D4)	107824-3	107825-3
Biconic	107824-4	107825-4
AMP SC	107824-5	107825-5
ST-Style	107824-6	107825-6
Super FC/PC	107824-7	107825-7
Super AMP SC	107824-8	107825-8
Super ST-Style/PC	107824-9	107825-9

Fiber Connector Style	Part Numbers	
Heavy Duty (3.0 mm cable jacket)	**Grade A**	**Grade B**
None	107826-1	107827-1
2.5 mm Threaded (FC/PC)	107826-2	107827-2
2.0 mm Threaded (D4)	107826-3	107827-3
Biconic	107826-4	107827-4
AMP SC	107826-5	107827-5
ST-Style	107826-6	107827-6
Super FC/PC	107826-7	107827-7
Super AMP SC	107826-8	107827-8
Super ST-Style/PC	107826-9	107827-9

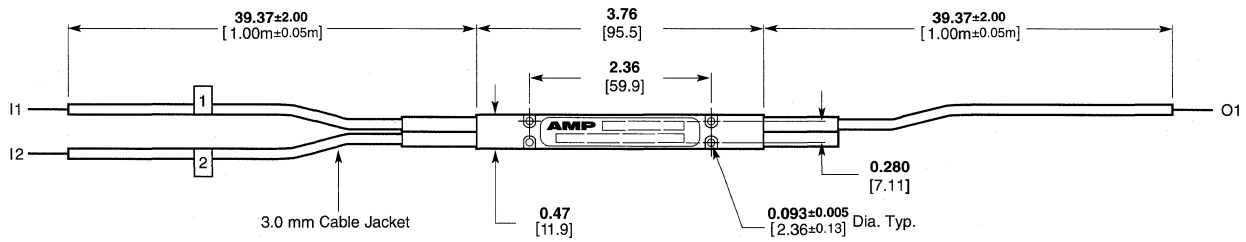
Multiplexer/Demultiplexer



Light Duty



Medium Duty



Heavy Duty

SOURCE: Catalog 124001

Specifications subject to change.
1-800-522-6752
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1-800-722-1111
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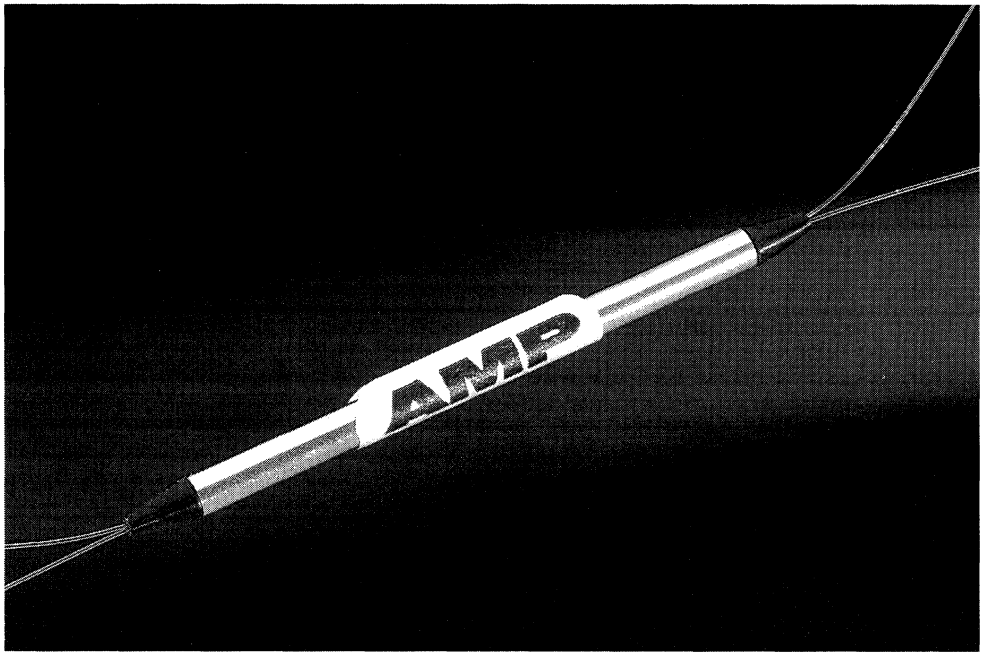
Singlemode Wideband Coupler/Splitters



Product Facts

- **Consistent performance**
- **Low loss**
- **Low polarization sensitivity**
- **Designed to comply with Bellcore TR-NWT-1209 and TA-NWT-1221**
- **Excellent optical mechanical and environmental characteristics**
- **Wide variety of package and connector options**

Applications

- **Telephony**
- **CATV**
- **Subscriber loop**
- **Taps for Signal Monitoring**
- **Test Equipment**

Singlemode Couplers are available in a range of styles and sizes to split and combine light without significant loss. These branching devices are used in applications of subscriber loop, broadband communication networks, and test/measurement and sensor systems.

1 x 2 and 2 x 2 Singlemode Couplers are fabricated under full computer control, using fused biconic taper technology. Available in light duty and rugged packages, couplers can be supplied with a variety of fiber pigtails, with or without connectors.

Wideband couplers are designed and tested to industry standard requirements and test procedures.

The wavelength insensitivity allows for wide tolerance optical sources for lower cost networks. Two performance grades allow flexibility in choosing the most cost-effective coupler for the intended application.

Maximum Insertion Loss (dB)

Wavelength Bandpass (nm)	Grade A	Grade B
1310/1550 ± 20	3.8	4.0
1310 ± 20	3.8	4.0
1550 ± 20	3.8	4.0
1310/1550 ± 50	4.0	4.3
1310 ± 50	4.0	4.3
1550 ± 50	4.0	4.3

Specifications

(split ratio of 50:50)

Coupling Ratios:

Standard: 50:50
Optional: 50:50 to 99:1

Temperature Range:

-40°C to +75°C (Operating)
-40°C to +85°C (Storage)

Pigtail:

Cabled or buffered fiber,
1 meter standard length

Heat age test per EIA-455-4, 85°C

Humidity test per EIA-455-5,
90-95% at +60°C

Thermal shock test per EIA 455-71,
-40°C to +85°C

Vibration test per EIA 455-11,
10 to 2000 Hz, 15 Gs

Physical shock test per
EIA 455-14, 30 Gs

Polarization Sensitivity:

0.1 dB max. for Grade A
0.15 dB max. for Grade B

Directivity:

≥60 dB

Reflectance:

≤-55 dB (Unconnectorized)
≤-40 dB (With PC Polish)
≤-45 dB (With Super PC Polish)

SOURCE: Catalog 124001

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

Singlemode Wideband Coupler/Splitters

(Continued)

Light Duty Package, 250 µm Buffer

Configuration	Bandpass (nm)	Base Part Numbers Grade A	Grade B
1 x 2	1310/1550 ± 20	107750	107751
	1310 ± 20	107752	107753
	1550 ± 20	107754	107755
	1310/1550 ± 50	107756	107757
	1310 ± 50	107758	107759
	1550 ± 50	107760	107761
2 x 2	1310/1550 ± 20	107762	107763
	1310 ± 20	107764	107765
	1550 ± 20	107766	107767
	1310/1550 ± 50	107768	107769
	1310 ± 50	107770	107771
	1550 ± 50	107772	107773

Medium Duty Package, 900 µm Loose Tube

Configuration	Bandpass (nm)	Base Part Numbers Grade A	Grade B
1 x 2	1310/1550 ± 20	107774	107775
	1310 ± 20	107776	107777
	1550 ± 20	107778	107779
	1310/1550 ± 50	107780	107781
	1310 ± 50	107782	107783
	1550 ± 50	107784	107785
2 x 2	1310/1550 ± 20	107786	107787
	1310 ± 20	107788	107789
	1550 ± 20	107790	107791
	1310/1550 ± 50	107792	107793
	1310 ± 50	107794	107795
	1550 ± 50	107796	107797

Heavy Duty Package, 3 mm Cable

Configuration	Bandpass (nm)	Base Part Numbers Grade A	Grade B
1 x 2	1310/1550 ± 20	107798	107799
	1310 ± 20	107800	107801
	1550 ± 20	107802	107803
	1310/1550 ± 50	107804	107805
	1310 ± 50	107806	107807
	1550 ± 50	107808	107809
2 x 2	1310/1550 ± 20	107810	107811
	1310 ± 20	107812	107813
	1550 ± 20	107814	107815
	1310/1550 ± 50	107816	107817
	1310 ± 50	107818	107819
	1550 ± 50	107820	107821

Part Numbers

Select a base part number from tables above. From table below, select dash number prefix and suffix to specify split ratio and connectors respectively.

Examples:

1) 1 x 2, Singlemode coupler, 50/50 split, 1310/1550 ± 50 nm bandpass, Grade A, Light Duty Package, AMP SC Connectorized
P/N = 0-107756-5

2) 2 x 2, Singlemode coupler, 90/10 split, 1550 ± 20 nm bandpass, Grade B, Heavy Duty Package, Super FC/PC Connectorized
P/N = 7-107815-7

# Prefix	Split Ratio
0-	50/50
1-	55/45
2-	60/40
3-	65/35
4-	70/30
5-	75/25
6-	80/20
7-	90/10
8-	95/5
9-	85/15

# Suffix	Fiber Connector Type
-1	None
-2	2.5 mm Threaded (FC/PC)
-3	2.0 mm Threaded (D4)
-4	Biconic
-5	AMP SC
-6	ST-Style
-7	Super FC/PC
-8	Super AMP SC
-9	Super ST-Style/PC

Singlemode 1 x 4 Wideband Coupler/Splitters

Product Facts

- **Designed to comply with Bellcore TR-NWT-1209**
- **Low insertion loss**
- **Excellent uniformity**
- **Excellent optical, mechanical and environmental characteristics**

Applications

- **Communication Systems**
- **CATV**
- **Subscriber loop**
- **Instrumentation**
- **Sensors**

1 x 4 Singlemode Wideband Couplers are manufactured using the proven fused biconic taper technology and AMP rigid quality procedures. These devices offer excellent optical performance over a wide range of environmental and mechanical conditions, including Bellcore TR-1209 specifications.

These low loss devices are ideally suited for cable TV applications and for video distribution applications in fiber-in-the-loop networks.

Packaging options include 3.0 mm cable jacket or 900 µm loose tube fiber leads, with any connectorization option. Also, AMP can supply these devices preinstalled and tested in custom enclosures for easy installation in fiber termination shelves or other fiber management hardware.

All devices are tested according to industry standard test procedures and are supplied with all pertinent measurement data. Full traceability is ensured through a unique serial number assigned to each device during manufacturing.

1 x 4 Singlemode Wideband Coupler/Splitter
1310 nm and 1550 nm Single Window; 1310/1550 nm Dual Window

Heavy Duty Package, 900 micron Loose Tube

Configuration	Bandpass (nm)	Base Part Number
1 x 4	1310/1550 ± 20	107832
	1310 ± 20	107833
	1550 ± 20	107834

Heavy Duty Package, 3 mm Cable Jacket

Configuration	Bandpass (nm)	Base Part Number
1 x 4	1310/1550 ± 20	107835
	1310 ± 20	107836
	1550 ± 20	107837

Part Numbers

Select a base part number from tables above.

From table at right, select dash number to specify connectors.

Connector Option

# Suffix	Fiber Connector
-1	None
-2	2.5 mm Threaded (FC/PC)
-3	2.0 mm Threaded (D4)
-4	Biconic
-5	AMP SC
-6	ST-Style
-7	Super FC/PC
-8	Super AMP SC
-9	Super ST-Style/PC

Bandpass (nm)	Maximum Insertion loss
1310/1550 ± 20	7.2 dB
1310 ± 20	7.2 dB
1550 ± 20	7.2 dB

Specifications

Temperature Range:

-40°C to +75°C (Operating)
-40°C to +85°C (Storage)

Pigtail:

3 mm Cabled or 900 micron buffered fiber, 1 meter standard length

Polarization Sensitivity:

≤0.15 dB max.

Directivity:

≥55 dB

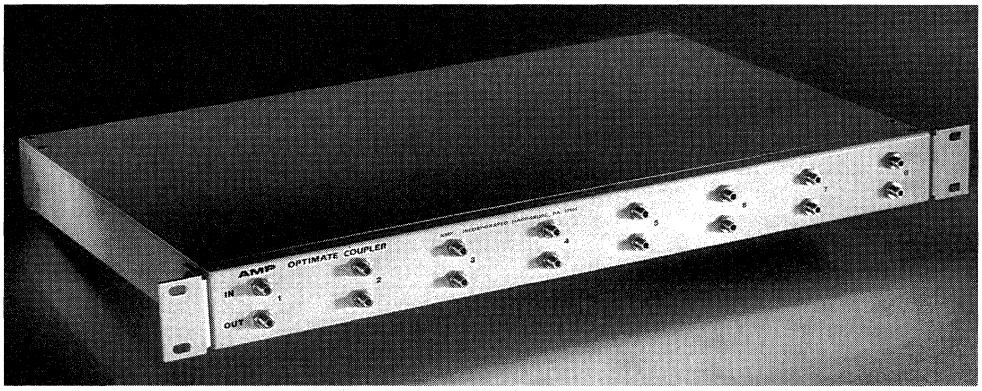
Reflectance:

≤–60 dB (Unconnectorized)
≤–40 dB (With PC Polish)
≤–45 dB (With Super PC Polish)

SOURCE: Catalog 124001

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

Multimode Fiber Optic Couplers/Splitters



Product Facts

- Splitting combinations from 1 x 2 to 32 x 32
- Low insertion loss
- Excellent environmental stability
- Various package and cabling options, including rack-mount boxes
- Custom designs available

Applications

- LAN
- Optical Busses
- Communications
- Instrumentation
- Fiber Sensors

These Multimode, bi-directional couplers passively split and combine light from multiple fibers without significant loss.

Couplers can be supplied in rack-mount enclosures or in various packaging options and connector types.

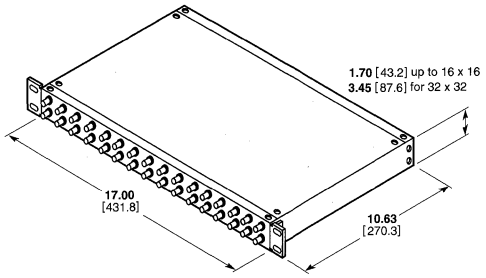
Specifications: Multimode Coupler Loss and Uniformity (excluding connectors)

Number of Ports	Maximum Insertion Loss (dB) (per FOTP-34, Method A)	Maximum Uniformity (dB)
2 x 2	4.0	0.75
3 x 3	6.5	1.0
4 x 4	8.0	1.0
5 x 5	9.0	1.0
6 x 6	10.0	1.5
7 x 7	11.0	1.5
8 x 8	11.5	1.5
10 x 10	13.0	2.0
12 x 12	14.0	2.0
16 x 16	15.5	2.5
20 x 20	16.5	3.0
24 x 24	17.5	3.0
32 x 32	19.0	3.0
1 x 2	4.0	0.5
1 x 3	6.0	0.75
1 x 4	7.5	1.0
1 x 5	8.0	1.0
1 x 6	9.0	1.0
1 x 7	10.0	1.0
1 x 8	11.0	1.0
1 x 10	12.0	2.0
1 x 12	13.0	2.0
1 x 16	15.0	2.0
1 x 20	15.5	2.5
1 x 24	16.5	2.5
1 x 32	18.0	2.5

Operating Temperatures: -40°C to +85°C.
Directivity: ≥40 dB.

Part Numbers

To determine a part number, select a base part number that describes the desired coupler style. Add dash-number prefix and/or suffix from the dash number table to specify connectors and fiber size.



SOURCE: Catalog 124001

19-inch Rack-Mount Couplers

Coupler Type	Base Part Number
4 x 4	502402
8 x 8	502403
16 x 16	502404
32 x 32	502405

Miniature metal enclosure up to total 6 ports available.

Dash Numbers

Fiber Connector	Fiber Size (µm)		
	50/125	62.5/125	100/140
2.5 mm (ST-Style)	x-8	x-3	x-4
FSMA I (905 Style)	1-x-3	1-x-1	1-x-2
FSMA II (906 Style)	x-5	x-1	x-2
FC Style	x-9	1-x-4	x-6

Other connectors available.
x = Base part number.

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

Multimode Fiber Optic Couplers/Splitters

(Continued)

1 x 2 Multimode Couplers

Base Part Numbers

Split Ratio	Miniature Package 250 µm buffer 1m pigtail length	Medium Duty Package 900 µm loose tube 1m pigtail length	Heavy Duty Package 3.0 mm cable jacket 1m pigtail length
50/50	107840	107841	107842
55/45	107843	107844	107845
60/40	107846	107847	107848
65/35	107849	107850	107851
70/30	107852	107853	107854
75/25	107855	107856	107857
80/20	107858	107859	107860
85/15	107861	107862	107863
90/10	107864	107865	107866
95/5	107867	107868	107869

2 x 2 Multimode Couplers

Base Part Numbers

Split Ratio	Miniature Package 250 µm buffer 1m pigtail length	Medium Duty Package 900 µm loose tube 1m pigtail length	Heavy Duty Package 3.0 mm cable jacket 1m pigtail length
50/50	107870	107871	107872
55/45	107873	107874	107875
60/40	107876	107877	107878
65/35	107879	107880	107881
70/30	107882	107883	107884
75/25	107885	107886	107887
80/20	107888	107889	107890
85/15	107891	107892	107893
90/10	107894	107895	107896
95/5	107897	107898	107899

1 x N and N x N Multimode Couplers: (N=3, 4, ···, 32)

Base Part Numbers

Type	Miniature Package	Heavy Duty Package		
	250 µm buffer 1m [39.4] length	250 µm buffer 1m [39.4] length	1.2 mm loose tube 1m [39.4] length	3.0 mm cable jacket 1m [39.4] length
1 x 4	107900	107904	502424	95013
4 x 4	107901	107905	502420	95010
1 x 8	107902	107906	502425	95014
8 x 8	107903	107907	502421	95011
1 x 16	—	107908	502426	95015
16 x 16	—	107909	502422	95012
1 x 32	—	107910	502427	—
32 x 32	—	107911	502423	—

Dash Numbers

Fiber Connector	Fiber Size (µm)		
	50/125	62.5/125	100/140
ST-Style	x-8	x-3	x-4
FSMA I (905 Style)	1-x-3	1-x-1	1-x-2
FSMA II (906 Style)	x-5	x-1	x-2
FC Style	x-9	1-x-4	x-6
None	x-7	1-x-0	1-x-5

x = Base part number.

SOURCE: Catalog 124001

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

Ruggedized Multimode Fiber Optic Couplers

1 x N and N x N Ruggedized Couplers

Product Facts

- Low insertion loss
- Excellent uniformity
- Low profile options available
- Environmentally sealed
- Custom configurations for:
  - Fiber type
  - Case
  - Connectors
  - Specifications

Applications

- Avionics
- Space/Satellite
- Military
- Shipboard
- Harsh commercial environments

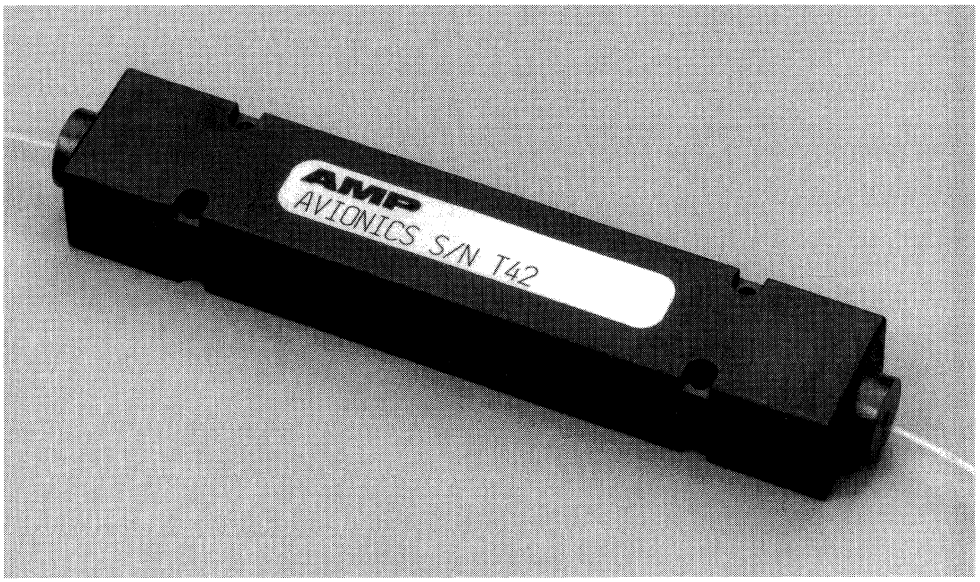
AMP Ruggedized Multimode Fiber Optic Couplers split and combine light from fibers without significant loss. These bi-directional branching devices are used in applications of optical busses, communications and local area networks, in-flight systems, and test/sensor applications.

These ruggedized couplers are intended for use in avionic, military, and other harsh environments. They are available in standard configurations and in custom designed and built packages for specific applications. Couplers can be built with particular fiber, cable, package, and connector options.

Part Numbers

Select a base part number from the table shown at right.

From table below, select dash number suffix to specify connectors.



Environmental Specifications:	8 x 8 Coupler (Polyimide Fiber, 100/120/138/250 µm)
Operating Temperature	-55°C to +85°C (per EIA/TIA-455-3, Test Condition C-3)
Storage Temperature	-62°C to +90°C (per EIA/TIA-455-3, Test Condition C-2)
Humidity	95% RH, 65°C per RTCA-DO-160C, Sect. 6, Category B
Altitude	-15,000 to 55,000 ft (per RTCA-DO-160C, Section 4.6)
Vibration	7.9 Gs RMS Random Sinusoidal Vibration from 10-2000 Hz (per EIA/TIA-455-11, Test Condition VI)
Mechanical Shock	6 Gs, 11 ms, half-sine (per RTCA-DO-160C, Section 7)
Weight (unconnectorized)	< 3 oz.

Note: Corning Fiber Coupler designed to meet above specs.

Base Part Numbers

Coupler Type	Corning Fiber 62.5/125/500 µm	Corning Fiber 100/140/500 µm	Spectran® Polyimide Fiber 100/120/138/250 µm
1 x 2	107960	107961	107962
2 x 2	107963	107964	107965
1 x 4	107966	107967	107968
4 x 4	107969	107970	107971
1 x 8	107972	107973	107974
8 x 8	107975	107976	107977
1 x 16	107978	107979	107980
16 x 16	107981	107982	107983
1 x 32	107984	107985	107986
32 x 32	107987	107988	107989

Fiber Connectors	Dash Numbers
None	-1
MIL-ST-Style M83522/16 ANX	-2
2.5 mm ST-Style	-3
FC Style	-4
Deutsch Multiport	-5
Bendex Multiport	-6

SOURCE: Catalog 124001

Specifications subject to change.
1-800-522-6752 Product Information Center/ AMP FAX Service
1-800-722-1111 Tooling/Technical Assistance Center

Singlemode Fiber Optic Attenuators

AMP Singlemode Attenuators utilize unique all fiber mechanisms to increase the loss of an optical signal. These designs minimize reflectance; there are no filters, air-gaps, or core mismatches. The fixed value attenuators use a fused fiber technology that relies on a patented wavelength independent attenuating element with low inherent reflectance.

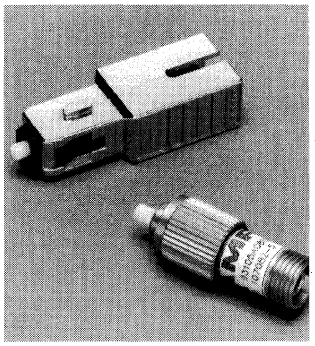
AMP variable attenuator depends on variable, controlled bend radii of a specially processed fiber. The loss is varied by rotation of an adjustment screw. Reliability is enhanced through the use of a hermetically coated fiber, and precise control of bend radii.

These devices are designed to meet the requirements of Bellcore TR-NWT-000910.

Fixed Value, Build Out Attenuator

Product Facts

- **Fixed attenuation values of 3, 5,10,15, 20, 25, and 30 dB**
- **≤ -45 dB reflectance**
- **Polarization insensitive**
- **Compact design fits in existing connections or patch panels**
- **FC and AMP SC Style connector interfaces**
- **1300 or 1550 nm or dual window versions available**



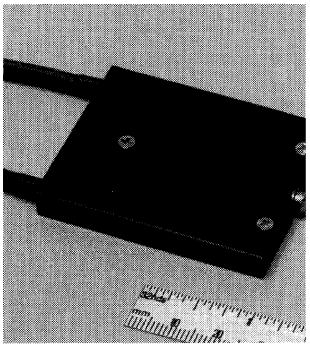
Specifications

Attenuation Values:	3-30 dB (Fixed)
Operational Wavelength:	1310, 1550 nm
Reflectance:	≤-40 dB, ≤-45 dB
Operating Temperature:	-40°C to +75°C
Temperature Stability:	≤ 0.15 x attenuation
Vibration Resistance:	≤ 0.1 x attenuation

Variable Optical Attenuator

Product Facts

- **Repeatable, variable attenuation from 2 to 40 dB**
- **≤ -70 dB reflectance (unconnectorized)**
- **Slimline design allows dense mounting, with easy access to adjustment screw**
- **Available with standard connector types, or unterminated**
- **Polarization insensitive**



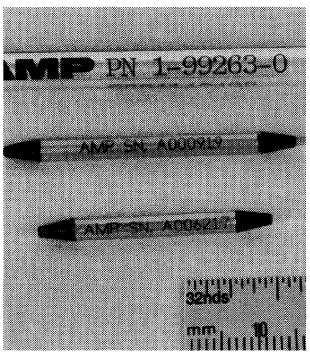
Specifications

Minimum Attenuation:	≤ 2 dB
Maximum Attenuation:	≥ 40 dB
Operational Wavelength:	1310, 1550 nm
Reflectance:	≤ -70 dB
Operating Temperature:	-40°C to +75°C
Temperature Stability:	≤ 0.15 x attenuation setting
Vibration Resistance:	≤ 0.15 x attenuation setting
Adjustment Resolution:	Continuously Adjustable

Fixed Value In-line Attenuator

Product Facts

- **Fixed attenuation values of 3, 5, 10, 15, 20, 25, and 30 dB**
- **≤ -60 dB reflectance (unconnectorized)**
- **Available with most standard connector types or unterminated**
- **1300 or 1550 or broadband versions available**
- **Polarization insensitive**



Specifications

Attenuation Values:	3–30 dB (Fixed)
Operational Wavelength:	1310, 1550 nm
Reflectance:	≤ –60 dB (no connectors)
Operating Temperature:	–40°C to +75°C
Temperature Stability:	≤ 0.1 x attenuation

SOURCE: Catalog 124001

Specifications subject to change.

1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

Singlemode Fiber Optic Attenuators

(Continued)

FC Style Build Out Attenuator, Fixed Value

Part Numbers

Attenuation (dB)	FC/PC R ≤ –40 dB	FC/PC R ≤ –45 dB
3	107082-3	107828-3
5	107082-5	107828-5
10	1-107082-0	1-107828-0
15	1-107082-5	1-107828-5
20	2-107082-0	2-107828-0
25	2-107082-5	2-107828-5
30	3-107082-0	3-107828-0

R=Reflectance

AMP SC Style Build Out Attenuator, Fixed Value

Part Numbers

Attenuation (dB)	AMP SC/PC R ≤ –40 dB	AMP SC/PC R ≤ –45 dB
3	107829-3	107830-3
5	107829-5	107830-5
10	1-107829-0	1-107830-0
15	1-107829-5	1-107830-5
20	2-107829-0	2-107830-0
25	2-107829-5	2-107830-5
30	3-107829-0	3-107830-0

R=Reflectance

Variable Optical Attenuator

Part Numbers

Fiber Connector Type	
None	107059-1
2.5 mm Threaded (FC/PC)	107059-2
2.0 mm Threaded (D4)	107059-3
Biconic	107059-4
AMP SC	107059-5
ST-Style	107059-6
Super FC/PC	1-107059-2
Super D4	1-107059-3
Super AMP SC	1-107059-5

Fixed Value In-line Attenuator

Miniature Light Duty

Atten. (dB)	Base Part Numbers		
	Dual Wavelength	Single Wavelength	
	1310/1550 nm	1310 nm	1550 nm
3	99220	99221	99222
5	99223	99224	99225
10	99226	99227	99228
15	99229	99230	99231
20	99232	99233	99234
25	99274	99275	99276
30	99235	99236	99237

Miniature Medium Duty

Atten. (dB)	Base Part Numbers		
	Dual Wavelength	Single Wavelength	
	1310/1550 nm	1310 nm	1550 nm
3	99238	99239	99240
5	99241	99242	99243
10	99244	99245	99246
15	99247	99248	99249
20	99250	99251	99252
25	99277	99278	99279
30	99253	99254	99255

Heavy Duty

Atten. (dB)	Base Part Numbers		
	Dual Wavelength	Single Wavelength	
	1310/1550 nm	1310 nm	1550 nm
3	99256	99257	99258
5	99259	99260	99261
10	99262	99263	99264
15	99265	99266	99267
20	99268	99269	99270
25	99280	99281	99282
30	99271	99272	99273

Part Numbers

Select a base part number from tables shown above.

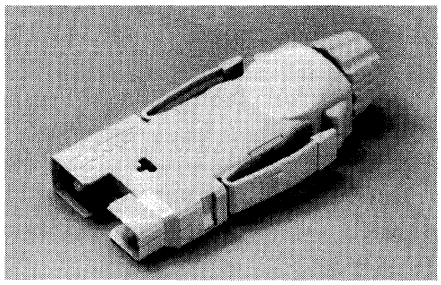
From table below, select dash number prefix and/or suffix to specify connectors.

Fiber Connector Option	Dash Numbers
None	x-1
ST-Style	x-2
2.5 mm Threaded FC/PC	x-3
2.0 mm Threaded D4	x-4
Biconic	x-5
AMP SC	x-6
Super FC/PC	1-x-3
Super AMP SC	1-x-6
Super ST-Style	1-x-2

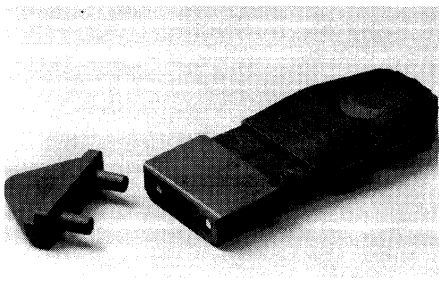
Note: x = base part number.

Multimode Fiber Optic Attenuators

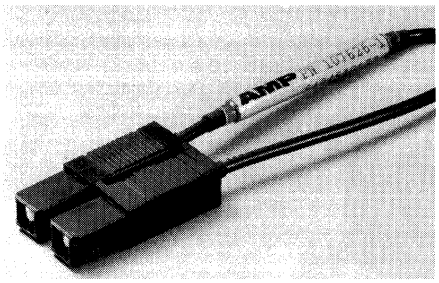
AMP Multimode Attenuators utilize a unique all fiber mechanism to cause a fixed attenuation of an optical signal. There are no filters, air-gaps, or core mismatches. These fixed value attenuators use a patented fused fiber technology that relies on the natural physical property of evanescent coupling to create the desired attenuation level.



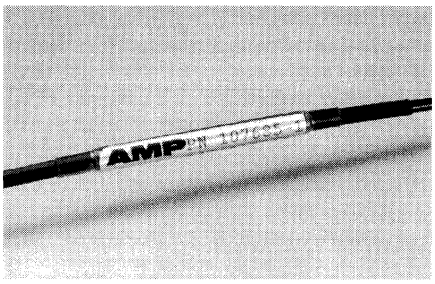
FSD Loopback Attenuator



RSD Loopback Attenuator



AMP SC Loopback Attenuator



In-line Attenuator

Product Facts

- **Fixed attenuation values of 3 to 30 dB, other attenuation values available**
- **Simulates FDDI Cable Plant Budget (FSD, AMP SC, and In-line Type)**
- **Simulates ESCON Cable Plant Budget (RSD Type)**
- **Compact package**
- **Mechanically and environmentally stable**
- **Wavelength independent**

Applications

- **Test an FDDI Station (FSD, AMP SC, and In-line Type)**
- **Test an ESCON Station (RSD Type)**
- **Attenuate signal at cross-connect panel**
- **Simulate System Optical Budget**
- **Shipping cover for transceiver modules**

Specifications

Attenuation Values:	3–30 dB (Fixed)
Operational Wavelength:	600-1600 nm
Operating Temperature:	-40°C to +85°C
Weight:	< 1 oz.

FSD Loopback Attenuator

Attenuation	Fiber Size (µm)	
	50/125	62.5/125
0	107915-1	107916-1
3	107915-3	107916-3
11	1-107915-1	1-107916-1
14	1-107915-4	1-107916-4

Other Attenuator values available.

RSD Loopback Attenuator

Attenuation	Fiber Size (µm)	
	50/125	62.5/125
0	107917-1	107918-1
3	107917-3	107918-3
11	1-107917-1	1-107918-1
14	1-107917-4	1-107918-4

Other Attenuator values available.

AMP SC Loopback Attenuator

Attenuation	Fiber Size (µm)	
	50/125	62.5/125
0	107919-1	107920-1
3	107919-3	107920-3
11	1-107919-1	1-107920-1
14	1-107919-4	1-107920-4

Other Attenuator values available.

In-line Attenuator

Attenuation	Base Part Number
3	107921
5	107922
11	107923
14	107924
20	107925
25	107926
30	107927

Other Attenuator values available.

Dash Numbers for In-Line Attenuator

Fiber Connector	Fiber Size (µm)		
	50/125/500	62.5/125/500	100/140/500
2.5 mm (ST-Style)	x-1	x-2	x-3
FSMA I (905 Style)	x-4	x-5	x-6
FSMA II (906 Style)	x-7	x-8	x-9
FC Style	1-x-0	1-x-1	1-x-2
None	1-x-3	1-x-4	1-x-5

x = Base part number

Note: For In-line Attenuator part number, select a base part number; add dash number prefix and/or suffix from chart above to specify connector and fiber type.

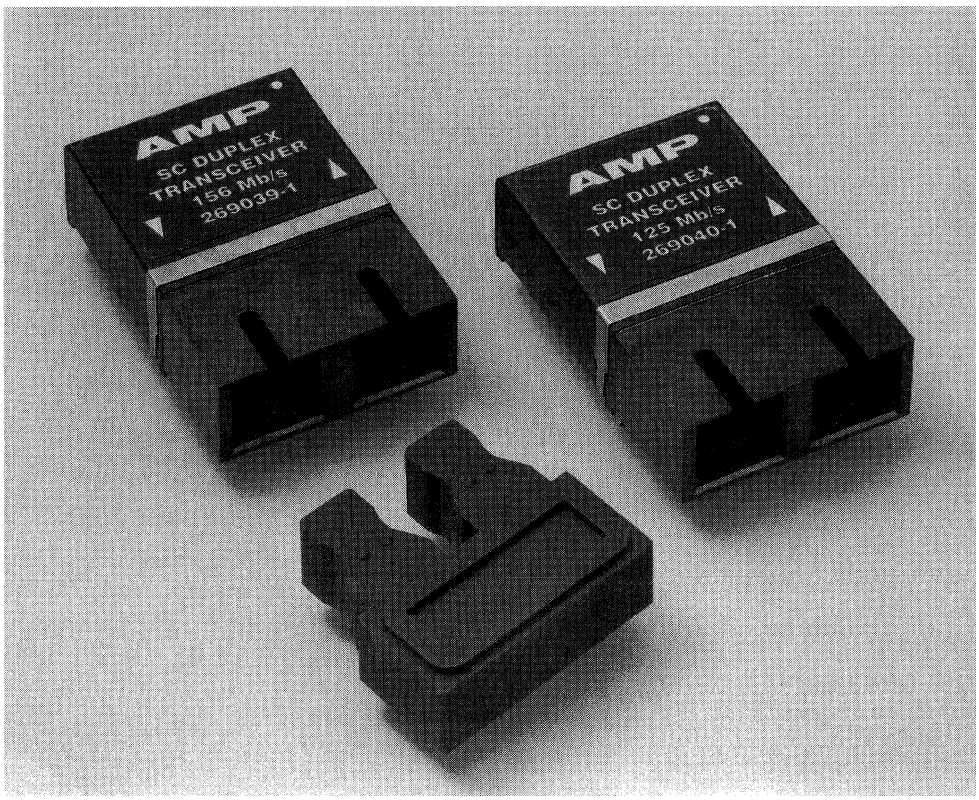
SOURCE: Catalog 124001

Specifications subject to change.

1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

9 Pin AMP SC Duplex Molded-Optronic Transceivers



Product Facts

- **New product design utilizing advanced molded optical lens technology**
- **Data rates of 125 Mb/s (FDDI) and 156 Mb/s (ATM)**
- **Multisourced 9 pin single row footprint**
- **Process compatible (i.e. wave soldering)**
- **Compatible with standard FDDI and ATM chip sets**
- **Single +5 volts power supply**
- **ECL compatible**
- **AMP SC style optical interface**

Technological advancements in the areas of optical polycarbonate precision molding and resin circuit board manufacturing have enabled AMP to introduce its new line of low cost fiber optic transceivers. AMP has incorporated these design breakthroughs into their new 9 pin AMP SC Duplex transceiver products. High quality polycarbonate camera lens technology has been configured for 1300 nm fiber optics thus eliminating high cost optical subassemblies without a performance penalty. Precision chip and wire processes used with advanced resin circuit boards make it possible for mass production of low cost modules. The AMP Molded-Optronic 9 pin AMP SC Duplex transceivers are standard compliant and multisourced high density footprint products that utilize AMP SC connector interfaces capable of delivering the power budget requirements needed for FDDI and ATM applications.

Transceivers are supplied with process plugs to protect optical ports during soldering and cleaning processes.

Note: Overall Housing Dim. (Typ.)—
1.510 [38.34] L x 1.010 [25.65] W x .417 [10.59] H

Data Rate	Part Numbers
156 Mb/s	269039-1
125 Mb/s	269040-1

9 Pin AMP SC Duplex Molded-Optronic Transceivers

(Continued)

Note: For pinout view order customer drawing.

Transmitter Performance Specifications:

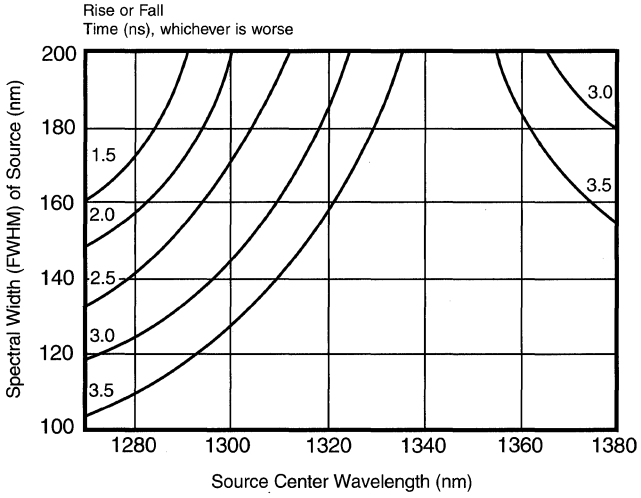
(T_A = 0° to 70°C, V_{CC}-V_{EE} = 4.75 to 5.25 VDC)

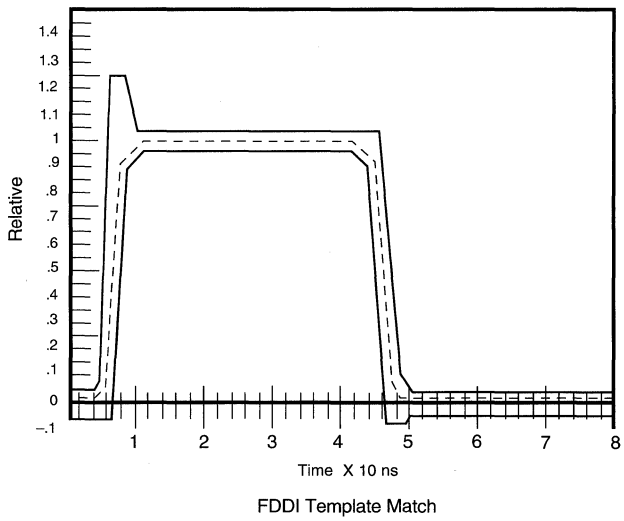
Parameter	Symbol	125 Mb/s			156 Mb/s			Units
		Min.	Typical	Max.	Min.	Typical	Max.	
Data rate (NRZ)	B	0	—	125	0	—	156	Mb/s
Optical output (avg.)(5)	P_{OH}	-19	—	-14	-19	—	-14	dBm
Extinction ratio (P_{OL}/P_{OH}) x 100%		—	—	10	—	—	10	%
Optical wavelength (2)	λout	1270	1330	1380	1270	1330	1380	nm
Spectral width (2)	Δλ	—	130	—	—	130	200	nm
Duty cycle	—	0	—	100	0	—	100	%
Output risetime (2)	t_{TLH}	.6	1.5	3.5	.6	1.2	2.5	ns
Output falltime (2)	t_{THL}	.6	1.5	3.5	.6	1.2	2.5	ns
Pulse width distortion (1)	—	—	—	0.6	—	—	0.5	ns
Data dependent jitter (1)	t_{DDJ}	—	—	0.6	—	—	0.3	ns
Random jitter (1)	t_{RAN}	—	—	0.6	—	—	0.5	ns
Data (3)(4)	V_{IL}	V_{CC}-1.81	—	V_{CC}-1.475	V_{CC}-1.81	—	V_{CC}-1.475	V
	V_{IH}	V_{CC}-1.165	—	V_{CC}-.88	V_{CC}-1.165	—	V_{CC}-.88	V
Inputs	I_{IL}	-2	—	—	-2	—	—	μA
	I_{IH}	—	—	400	—	—	400	μA
Reference voltage (output)	V_{BB}	V_{CC}-1.396	—	V_{CC}-1.24	V_{CC}-1.396	—	V_{CC}-1.24	V
Power supply voltage	V_{CC}-V_{EE}	4.75	5.0	5.25	4.75	5.0	5.25	V
Supply current	I_{CC} or I_{EE}	—	—	140	—	—	140	mA
Operating temperature	T_A	0	—	70	0	—	70	°C

(1) Driven with a differential signal.
(2) Limits on optical wavelength, spectral width, output risetime, and output falltime are controlled by figures below for 125 Mb/s.
(3) When V_{BB} is used as the reference voltage.
(4) Voltage levels listed are compatible with 100K Series ECL logic levels. The parts are 100% compatible with 10K and 10KH Series logic when driven with differential signals.
(5) .275 NA 62.5/125 μm fiber.

Absolute Maximum Ratings:

Parameter	Symbol	125 Mb/s			156 Mb/s			Units
		Min.	Typical	Max.	Min.	Typical	Max.	
Storage temperature	—	-40	—	100	-40	—	100	°C
Lead soldering limits	—	—	—	240/10	—	—	240/10	°C/s
Supply voltage	V_{CC}-V_{EE}	-.2	—	7.00	-.2	—	7.00	V





FDDI Template Match

SOURCE: Catalog 124002

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

9 Pin AMP SC Duplex Molded-Optronic Transceivers

(Continued)

Note: For pinout view order customer drawing.

Receiver Performance Specifications:

(T_A = 0° to 70°C, V_{CC}-V_{EE} = 4.75 to 5.25 VDC)

Parameter	Symbol	125 Mb/s			156 Mb/s			Units
		Min.	Typical	Max.	Min.	Typical	Max.	
Data rate (NRZ)	B	10	—	125	10	—	156	Mb/s
Optical input (avg.)[3] [5] sensitivity	P_{IN}	-33.5	—	-14.0	-32.5	—	-14.0	dBm
Optical wavelength	λin	1270	—	1380	1270	—	1380	nm
Duty cycle	—	25	50	75	25	50	75	%
Output risetime	t_{TLH}	.5	—	2.5	.5	—	2.5	ns
Output falltime	t_{THL}	.6	—	2.5	.5	1.8	2.5	ns
Pulse width distortion[1]	—	—	—	0.4	—	—	0.4	ns
Data dependent jitter	t_{DDJ}	—	—	0.8	—	—	0.8	ns
Data output[4]	V_{OH}	V_{CC}-1.025	—	V_{CC}-.88	V_{CC}-1.025	—	V_{CC}-.88	V
	V_{OL}	V_{CC}-1.81	—	V_{CC}-1.62	V_{CC}-1.81	—	V_{CC}-1.62	V
Signal detect (output)	V_A	V_{CC}-1.025	—	V_{CC}-.88	V_{CC}-1.025	—	V_{CC}-.88	V
	V_D	V_{CC}-1.81	—	V_{CC}-1.62	V_{CC}-1.81	—	V_{CC}-1.62	V
P_{IN} power levels (avg.):								
Deassert[2]	P_D	-41.0 or P_B	—	-32.5	-39.0 or P_B	—	-32.5	dBM
Assert	P_A	-39.5	—	-31	-38	—	-31.0	dBM
Hysteresis	—	1.5	2.0	—	1.5	2.0	—	dB
Signal detect delay time:								
Deassert	—	—	—	350	—	—	50	µs
Assert	—	—	—	100	—	—	50	µs
Power supply voltage	V_{CC}.V_{EE}	4.75	5.0	5.25	4.75	5.0	5.25	V
Supply current	$I_{CC\ or}\ I_{EE}$	—	—	150	—	—	150	mA
Operating temperature	T_A	0	—	70	0	—	70	°C

(1) Measured using FDDI test signaling format, ANSI X3.166-1989.
(2) P_B = Power at which BER = .01, whichever is greater.
(3) Ons Eye opening, V_{CC} = 5V, 25°C, 2^{15} -1 PRBS, 0.275 NA 62.5/125 µm Fiber, BER = 2.5 x 10^{-10} for 125 Mb/s.
(4) Voltage levels listed are compatible with 100K Series ECL logic levels. The parts are 100% compatible with 10K and 10KH Series when driven with differential signals.
(5) Onsec Eye opening, V_{CC} = 5V, 25°C, 2^{23} -1 PRBS, 0.275 NA 62.5/125 µm Fiber, BER = 1.0 x 10^{-10} for 156 Mb/s.

Notes: 1. Pin plating: 150 microinches minimum Sn93 Pb7 over 50/150 microinches Ni. Case material: Polyethersulfone UL 94V-0 rated.
2. Mates with optical connectors meeting JIS C 5973.

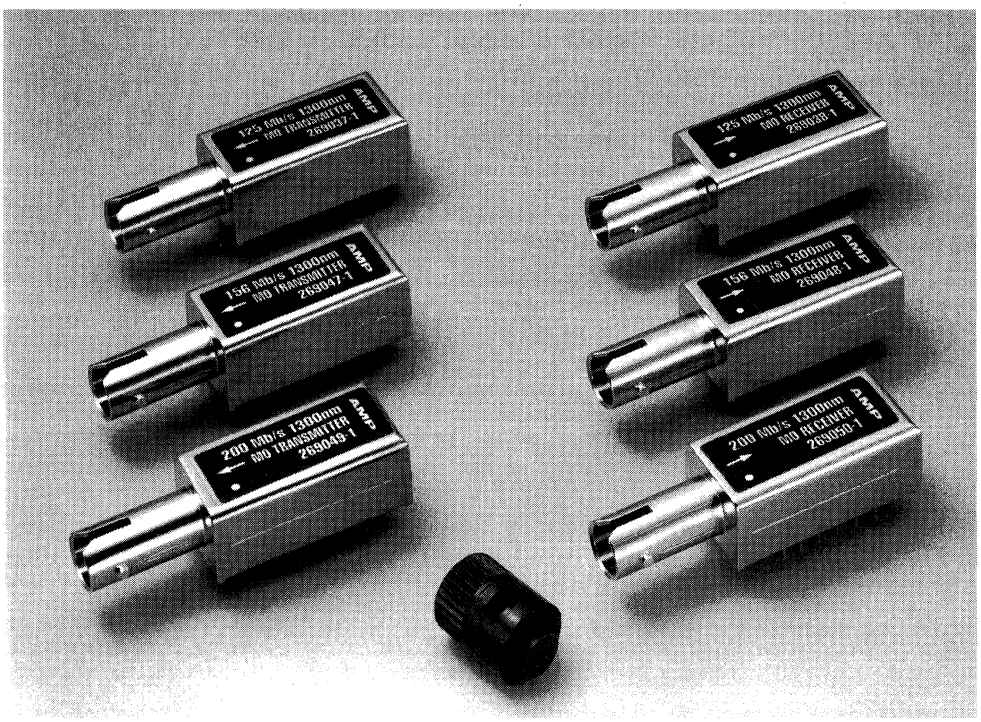
Absolute Maximum Ratings, Transmitter and Receiver:

Parameter	Symbol	125 Mb/s			156 Mb/s			Units
		Min.	Typical	Max.	Min.	Typical	Max.	
Storage temperature	—	-40	—	100	-40	—	100	°C
Lead soldering limits	—	—	—	240/10	—	—	240/10	°C/s
Supply voltage	V_{CC}-V_{EE}	-.2	—	7.00	-.2	—	7.00	V

16 Pin ST-Style Molded-Optronic Data Links

Product Facts

- New product design utilizing advanced molded optical lens technology
- ST-Style optical interface
- 16 pin multisourced packages
- Products compatible with standard FDDI and ATM chip sets
- ECL compatible
- Full optical power budget
- Data rates of 125 Mb/s (FDDI), 156 and 200 Mb/s (ATM)
- Single +5 volts power supply
- Process compatible (i.e. wave soldering)



The AMP molded-optronic 16 pin data links offer full functionality for FDDI and ATM applications. These technologically advanced products incorporate the AMP state-of-the-art designs for high quality data link products at a new low cost.

Advancements in the resin circuit board technologies have made precision chip and wire processes a sourceable commodity.

Also, optical polycarbonate molding technologies can now provide low cost, high quality camera lenses for 1300 nm fiber optics. Due to these technological breakthroughs, high cost subassemblies can now be eliminated from data link designs without a performance penalty. The AMP offering of 156 Mb/s and 200 Mb/s modules allows for use of 4B/5B encoding or scrambled Sonet transmission formats.

Units are supplied with process caps which seal the connector interface during soldering and cleaning processes.

Note: Overall Housing Dim. (Typ.)—1.57 [39.8] L x .480 [12.19] W x .400 [10.16] H

Data Rate	Part Numbers	
	Transmitter	Receiver
125 Mb/s	269037-1	269038-1
156 Mb/s	269047-1	269048-1
200 Mb/s	269049-1	269050-1

SOURCE: Catalog 124002

Specifications subject to change.

1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

16 Pin ST-Style Molded-Optronic Data Links

(Continued)

Molded-Optronic Receiver 16 Pin Modules

Note: For pinout view, order customer drawing.

Receiver Performance Specifications:
(T_A = 0° to 70°C, V_{CC} = 4.75 to 5.25 VDC)

Parameter	Symbol	125 Mb/s			156 Mb/s			200 Mb/s			Units
		Min.	Typical	Max.	Min.	Typical	Max.	Min.	Typical	Max.	
Data rate (NRZ)	B	10	—	125	10	—	156	10	—	200	Mb/s
Optical input (avg.)[4] sensitivity	P_{IN}	-33.5	—	-14.0	-32.5	—	-14.0	-32.0	—	-14.0	dBm
Optical wavelength	λin	1270	—	1380	1270	—	1380	1270	—	1380	nm
Duty cycle	—	25	50	75	25	50	75	25	50	75	%
Output risetime	t_{TLH}	.5	—	2.5	.5	—	2.5	.5	—	2.5	ns
Output falltime[2]	t_{THL}	.5	—	2.5	.5	—	2.5	.5	—	2.5	ns
Pulse width distortion	—	—	—	0.4	—	—	0.4	—	—	0.4	ns
Data dependent jitter	t_{DDJ}	—	—	0.8	—	—	0.8	—	—	0.8	ns
Data output[5]	V_o	V_{CC}-1.81	—	V_{CC}-1.62							V
	V_{OH}	V_{CC}-1.025	—	V_{CC}-.88							V
	V_{OL}	V_{CC}-1.81	—	V_{CC}-1.62							V
Signal detect (output)	V_A	V_{CC}-1.025	—	V_{CC}-.88							V
	V_D	V_{CC}-1.81	—	V_{CC}-1.62							V
P_{IN} power levels (avg.):											
Deassert[3]	P_D	-41.0 or P_B	—	32.5	-39.0 or P_B	—	-32.5	-39.0 or P_B	—	33.0	dBM
Assert	P_A	-39.5	—	-31	-38	—	-31	-38	—	-32	dBM
Hysteresis	—	1.5	2.0	—	1.5	2.0	—	1.5	2.0	—	dB
Signal detect delay time[2]:											
Deassert	—	—	—	350	—	—	50	—	—	50	µs
Assert	—	—	—	100	—	—	50	—	—	50	µs
Power supply voltage	V_{CC}-V_{EE}	4.75	5.0	5.25							V
Supply current	I_{CC} or I_{EE}	—	—	150							mA
Operating temperature	T_A	0	—	70							°C

(1) Measured using FDDI test signaling format, ANSI X3.166-1989.
(2) As specified in FDDI PMD Document, ANSI X3.166-1989.
(3) P_B = Power at which BER = .01, whichever is greater.
(4) Ons Eye opening, V_{CC} = 5V, 25°C, 2^{15} -1 PRBS, 0.29 NA 62.5/125 µm fiber, BER = 2.5 x 10^{-10}
(5) Voltage levels listed are compatible with 100K Series ECL logic levels. The parts are 100% compatible with 10K and 10KH Series when driven with differential signals.
Note: Pin plating 100 microinches minimum Sn93Pb7 over 50 microinches Ni solder dipped in Sn90Pb10.

Absolute Maximum Ratings, Transmitter and Receiver:

Parameter	Symbol	125 Mb/s			156 Mb/s			200 Mb/s			Units
		Min.	Typical	Max.	Min.	Typical	Max.	Min.	Typical	Max.	
Storage temperature	—	-40	—	100	-40	—	100	-40	—	100	°C
Lead soldering limits	—	—	—	240/10	—	—	240/10	—	—	240/10	°C/s
Supply voltage	V_{CC}-V_{EE}	-.2	—	7.00	-.2	—	7.00	-.2	—	7.00	V

16 Pin ST-Style Molded-Optronic Data Links

(Continued)

Molded-Optronic Transmitter 16 Pin Modules

Note: For pinout view order customer drawing.

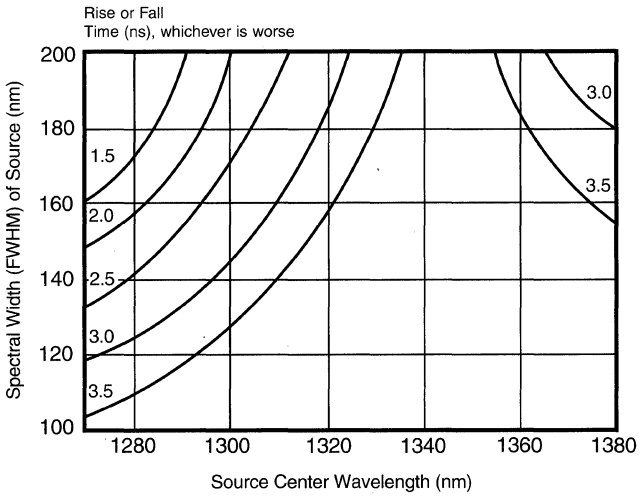
Transmitter Performance Specifications:
(T_A = 0° to 70°C, V_{CC} = 4.75 to 5.25 VDC)

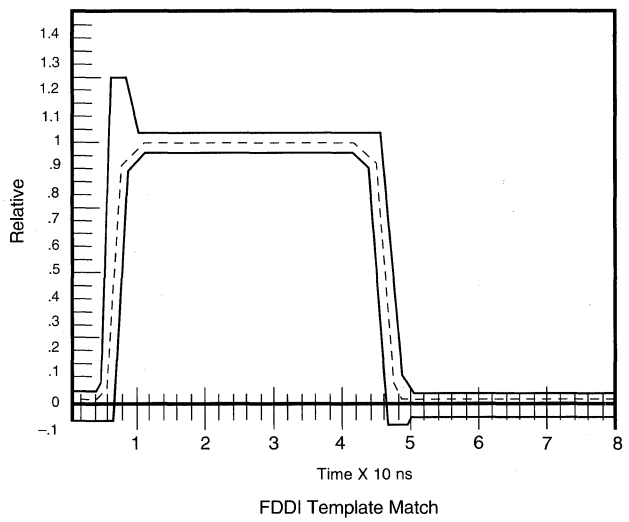
Parameter	Symbol	125 Mb/s			156 Mb/s			200 Mb/s			Units
		Min.	Typical	Max.	Min.	Typical	Max.	Min.	Typical	Max.	
Data rate (NRZ)	B	0	—	125	0	—	156	0	—	200	Mb/s
Optical output (avg.)	P_{OH}	-19	—	-14	-19	—	-14	-19	—	-14	dBm
Extinction ratio	(P_{OL}/P_{OH}) x 100%	—	—	10	—	—	10	—	—	10	%
Optical wavelength(2)	λout	1270	1330	1380	1270	1380	—	1270	—	1380	nm
Spectral width(2)	Δλ	—	140	—	—	—	200	—	—	200	nm
Duty cycle	—	0	—	100	0	—	100	0	—	100	%
Output risetime(2)	t_{TLH}	.6	1.5	3.5	.6	1.2	2.5	.6	1.2	2.5	ns
Output falltime(2)	t_{THL}	.6	1.5	3.5	.6	1.2	2.5	.6	1.2	2.5	ns
Pulse width distortion	—	—	—	0.6	—	—	0.5	—	—	0.5	ns
Data dependent jitter	t_{DDJ}	—	—	0.6	—	—	0.3	—	—	0.3	ns
Random jitter	t_{RAN}	—	—	0.6	—	—	0.5	—	—	0.5	ns
Data(3)(4)	V_{IL}	V_{CC}-1.81	—	V_{CC}-1.475							V
	V_{IH}	V_{CC}-1.165	—	V_{CC}-.88							V
Inputs	I_{IL}	-2	—	—							μA
	I_{IH}	—	—	400							μA
Reference voltage (output)	V_{BB}	V_{CC}-1.396	—	V_{CC}-1.24							V
Power supply voltage	V_{CC}-V_{EE}	4.75	5.0	5.25							V
Supply current	I_{CC} or I_{EE}	—	—	140							mA
Operating temperature	T_A	0	—	70							°C

(1) Driven with a differential signal.
(2) Limits on optical wavelength, spectral width, output risetime, and output falltime are controlled by figures below.
(3) When V_{BB} is used as the reference voltage.
(4) Voltage levels listed are compatible with 100K Series ECL logic levels. The parts are 100% compatible with 10K and 10KH Series logic when driven with differential signals.

Absolute Maximum Ratings:

Parameter	Symbol	125 Mb/s			156 Mb/s			200 Mb/s			Units
		Min.	Typical	Max.	Min.	Typical	Max.	Min.	Typical	Max.	
Storage temperature	—	-40	—	100	-40	—	100	-40	—	100	°C
Lead soldering limits	—	—	—	240/10	—	—	240/10	—	—	240/10	°C/s
Supply voltage	V_{CC}-V_{EE}	-.2	—	7.00	-.2	—	7.00	-.2	—	7.00	V





FDDI Template Match

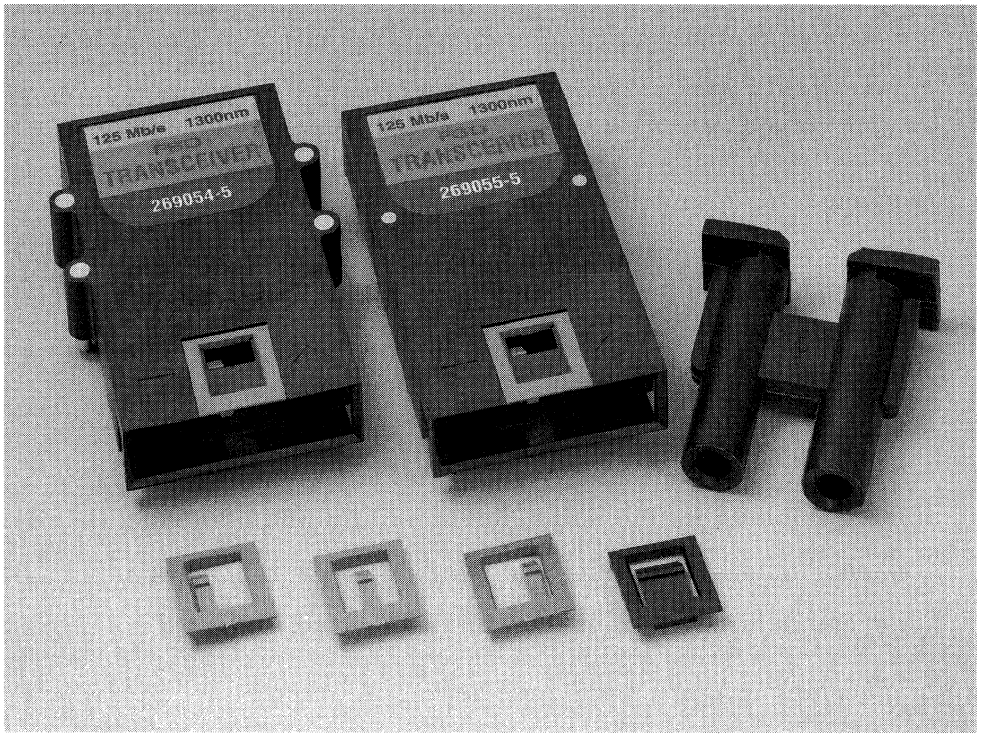
SOURCE: Catalog 124002

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

13 Pin MIC Molded-Optronic Transceivers

Product Facts

- New product design utilizing advanced molded optical lens technology
- Data rates of 125 Mb/s (FDDI) and 156 Mb/s (ATM)
- Multisourced 13 pin single row footprint
- Process compatible (i.e. wave soldering)
- Compatible with standard FDDI and ATM chip sets
- Single +5 volts power supply
- ECL compatible
- MIC interface with programmable field keys
- Standard and narrow case widths



Technological advancements in the areas of optical polycarbonate precision molding and resin circuit board manufacturing have enabled AMP to introduce its new line of low cost fiber optic transceivers. AMP has incorporated these design breakthroughs into their new 13 pin MIC transceiver products. High quality polycarbonate camera lens technology has been configured for 1300 nm fiber optics thus eliminating high cost optical subassemblies without a performance penalty. Precision chip and wire processes used with advanced resin circuit boards make it possible for mass production of low cost modules. The AMP Molded-Optronic 13 pin MIC transceivers are standard compliant and multisourced single in-line package products that utilize MIC interfaces capable of delivering the power budget requirements needed for FDDI and ATM applications. Two package widths and mounting options are available, allowing for mounting on circuit boards configured for either 13 pin only or 13 pin and 2 x 11 pin transceivers.

Note: Overall Housing Dim. (Typ.)—2.58 [65.57] L x 1.70 [43.18] W x .500 [12.70] H

Field Keyable Transceiver	Part Numbers		
Key Type	**FDDI Standard Case**	**FDDI Narrow Case**	**ATM Standard Case**
A, B, M, S	269054-5	269055-5	269061-5
Fixed Keyable Transceiver			
Key Type	**FDDI Standard Case**	**FDDI Narrow Case**	**ATM Standard Case**
A	269054-1	269055-1	269061-1
B	269054-2	269055-2	269061-2
M	269054-3	269055-3	269061-3
S	269054-4	269055-4	269061-4

SOURCE: Catalog 124002

13 Pin MIC Molded-Optronic Transceivers

(Continued)

Note: For pin assignments order customer drawing.

Transmitter Performance Specifications:

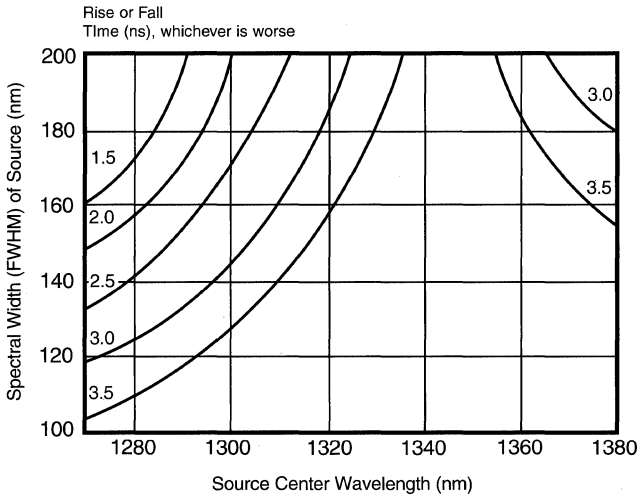
(T_A= 0° to 70°C, V_{CC}-V_{EE} = 4.75 to 5.25 VDC)

Parameter	Symbol	125 Mb/s			156 Mb/s			Units
		Min.	Typical	Max.	Min.	Typical	Max.	
Data rate (NRZ)	B	0	—	125	0	—	156	Mb/s
Optical output (avg.)(5)	P_{OH}	-19	—	-14	-19	—	-14	dBm
Extinction ratio (P_{OL}/P_{OH}) x 100%		—	—	10	—	—	10	%
Optical wavelength(2)	λout	1270	1330	1380	—	1330	—	nm
Spectral width(2)	Δλ	—	130	—	—	130	200	nm
Duty cycle	—	0	—	100	0	—	100	%
Output risetime(2)	t_{TLH}	.6	1.5	3.5	.6	1.2	2.5	ns
Output falltime(2)	t_{THL}	.6	1.5	3.5	.6	1.2	2.5	ns
Pulse width distortion(1)	—	—	—	0.6	—	—	0.5	ns
Data dependent jitter(1)	t_{DDJ}	—	—	0.6	—	—	0.3	ns
Random jitter(1)	t_{RAN}	—	—	0.6	—	—	0.5	ns
Data(3) (4)	V_{IL}	V_{CC}-1.81	—	V_{CC}-1.475	V_{CC}-1.81	—	V_{CC}-1.475	V
	V_{IH}	V_{CC}-1.165	—	V_{CC}-.88	V_{CC}-1.165	—	V_{CC}-.88	V
Inputs	I_{IL}	-2	—	—	-2	—	—	μA
	I_{IH}	—	—	400	—	—	400	μA
Reference voltage (output)	V_{BB}	V_{CC}-1.396	—	V_{CC}-1.24	V_{CC}-1.396	—	V_{CC}-1.24	V
Power supply voltage	V_{CC}-V_{EE}	4.75	5.0	5.25	4.75	5.0	5.25	V
Supply current	I_{CC} or I_{EE}	—	—	160	—	—	160	mA
Operating temperature	T_A	0	—	70	0	—	70	°C

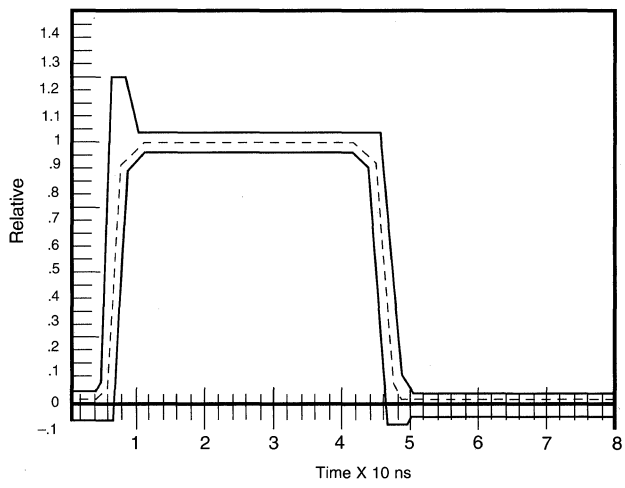
(1) Driven with a differential signal.
(2) Limits on optical wavelength, spectral width, output risetime, and output falltime are controlled by figures below.
(3) When V_{BB} is used as the reference voltage.
(4) Voltage levels listed are compatible with 100K Series ECL logic levels. The parts are 100% compatible with 10K and 10KH Series logic when driven with differential signals.
(5) .275 NA 62.5/125 μm fiber.

Absolute Maximum Ratings:

Parameter	Symbol	125 Mb/s			156 Mb/s			Units
		Min.	Typical	Max.	Min.	Typical	Max.	
Storage temperature	—	-40	—	100	-40	—	100	°C
Lead soldering limits	—	—	—	240/10	—	—	240/10	°C/s
Supply voltage	V_{CC}-V_{EE}	-.2	—	7.00	-.2	—	7.00	V



Maximum allowed source spectral width as a function of source center wavelength for the various source rise and fall times. These specifications in conjunction with the fibers S chromatic dispersion and modal bandwidth parameters given in clause 10. ANSI X3.166-1990. Result in an optical risetime of less than 5.0 ns exiting a 2km fiber cable. Curves are shown for source rise and fall time ranging from 1.5 ns to 3.5 ns



FDDI Template Match

SOURCE: Catalog 124002

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

13 Pin MIC Molded-Optronic Transceivers

(Continued)

Note: For pin assignment order customer drawing.

Receiver Performance Specifications:

(T_A=0° to 70°C, V_{CC}-V_{EE} = 4.75 to 5.25 VDC)

Parameter	Symbol	125 Mb/s			156 Mb/s			Units
		Min.	Typical	Max.	Min.	Typical	Max.	
Data rate (NRZ)	B	10	—	125	10	—	156	Mb/s
Optical input (avg.)(1) sensitivity	P_{IN}	-33.5	—	-14.0	-32.5	—	-14.0	dBm
Optical wavelength	λin	1270	—	1380	1270	—	1380	nm
Duty cycle	—	25	50	75	25	50	75	%
Output risetime	t_{TLH}	.5	—	2.5	.5	—	2.5	ns
Output falltime	t_{THL}	.6	—	2.5	.5	1.8	2.5	ns
Pulse width distortion	—	—	—	0.4	—	—	0.4	ns
Data dependent jitter(3)	t_{DDJ}	—	—	0.8	—	—	0.8	ns
Data output(5)	V_O	V_{CC}-1.81	—	V_{CC}-1.62	V_{CC}-1.81	—	V_{CC}-1.62	V
	V_{OH}	V_{CC}-1.025	—	V_{CC}-.88	V_{CC}-1.025	—	V_{CC}-.88	V
	V_{OL}	V_{CC}-1.81	—	V_{CC}-1.62	V_{CC}-1.81	—	V_{CC}-1.62	V
Signal detect (output)	V_A	V_{CC}-1.025	—	V_{CC}-.88	V_{CC}-1.025	—	V_{CC}-.88	V
	V_D	V_{CC}-1.81	—	V_{CC}-1.62	V_{CC}-1.81	—	V_{CC}-1.62	V
P_{IN} power levels (avg.):								
Deassert(4)	P_D	-41.0 or P_B	—	-32.5	-39.0 or P_B	—	-33.0	dBM
Assert	P_A	-39.5	—	-31	-38	—	-32	dBM
Hysteresis	—	1.5	2.0	—	1.0	2.0	—	dB
Signal detect delay time								
Deassert	—	—	—	350	—	—	50	µs
Assert	—	—	—	100	—	—	50	µs
Power supply voltage	V_{CC}-V_{EE}	4.75	5.0	5.25	4.75	5.0	5.25	V
Supply current(7)	$I_{CC\ or}\ I_{EE}$	—	—	110	—	—	110	mA
Operating temperature	T_A	0	—	70	0	—	70	°C

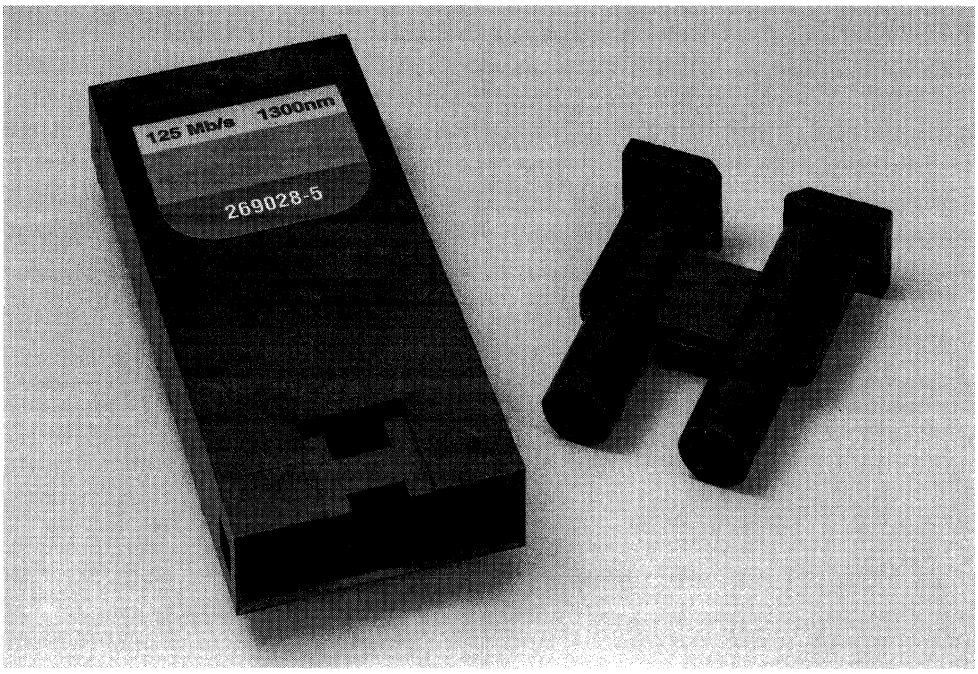
(1) 2^{15}–1 PRBS center of eye opening.
(3) Measured using FDDI test signaling format, ANSI X3.166-1990.
(4) P_B = Power at which BER = .01.
(5) Pin/lead plating: 150 min. microinches 93/7 Tin/Lead, 50 min. microinches nickel
(6) Conforms to ANSI X3.166-1990.
(7) Does not include current drawn by ECL output loads.
Notes: 1. Unit provided with process plug to protect optical ports during soldering and cleaning.
2. Case material: Polyetherimide UL 94V-0 rated. Mounting pin material: Brass. Lead material: Phosphor Bronze.

Absolute Maximum Ratings, Transmitter and Receiver:

Parameter	Symbol	125 Mb/s			156 Mb/s			Units
		Min.	Typical	Max.	Min.	Typical	Max.	
Storage temperature	—	-40	—	100	-40	—	100	°C
Lead soldering limits	—	—	—	240/10	—	—	240/10	°C/s
Supply voltage	V_{CC}-V_{EE}	-.2	—	7.00	-.2	—	7.00	V

SOURCE: Catalog 124002

FSD Multimode Transceiver



Product Facts

- Fiber Distributed Data Interface (FDDI) compliant
- 22-pin multisourced package
- Compatible with raised 10H, 10K and 100K ECL
- AMP FSD (Fixed Shroud Duplex) Connector interface with field programmable keys
- Internally shielded plastic package with low EMI/RFI emission
- High optical power budget
- 125 Mb/s performance
- Differential ECL signal detect
- Compatible with all standard FDDI chip sets
- Polarized receptacle
- Low ESD susceptibility
- Single power supply
- Temperature and power supply compensated transmitter optical power
- Wide duty cycle (25% to 75%) receiver operation at 125 Mb/s
- Includes process plug for full process compatibility

The AMP FSD Transceiver provides logic-to-logic serial data transmission over a fiber optic transmission path. It has the advantages of a light and small plastic package, built-in FSD (Fixed Shroud Duplex) optical connector, circuit integration for reliability, single power supply operation, and raised ECL compatibility.

The transmitter produces a shaped optical output signal from an ECL electrical input. The receiver produces an ECL signal from an optical input.

Receiver signal detect circuitry provides an indication of optical signal strength. The transceiver conforms to the Fiber Distributed Data Interface Physical Medium Dependent (FDDI PMD) layer requirements.

Note: Overall Housing Dim. (Typ.)— 3.155 [80.14] L x 1.40 [35.56] W x .500 [12.70] H

Field Keyable Transceiver

Key type	Part Numbers
A, B, M, S	269028-5

Fixed Keyable Transciever

Key Type	Part Numbers
A	269028-1
B	269028-2
M	269028-3
S	269028-4

The transceiver is designed for raised ECL operation (+5 volt V_{CC} supply).

Transmitter Section Specifications:

(T_A = 0° to 70°C, V_{CC} = 4.5 to 5.5 VDC, V_{EE} = GND)

Parameter	Symbol	Test Conditions	Min.	Typical	Max.	Unit
Data rate, NRZ	B	—	0	—	125	Mb/s
Optical output	p_{oh}	62.5 µm/.275 NA fiber	–19	—	–14	avg. dBm
Extinction ratio	$(P_{lo}/P_{hi}) \times 100\%$	—	—	—	5	%
Optical wavelength	λ_{out}	Center (3)	1270	1330	1380	nm
Spectral width	$\Delta\lambda$	FWHM (3)	—	140	—	nm
Duty cycle	—	B = 0–125 Mb/s	0	—	100	%
Output risetime	t_{TLH}	10–90% (3)	.6	2.0	3.0	ns
Output falltime	t_{THL}	90–10% (3)	.6	2.0	3.0	ns
Propagation delay	t_{PLH}	—	—	—	15	ns
Propagation delay	t_{PHL}	—	—	—	15	ns
Pulse width distortion	—	Peak-Peak	—	—	0.6	ns
Data dependent jitter	t_{DDJ}	Peak-Peak (1)	—	—	0.6	ns
Random jitter	t_{RAN}	Peak-Peak	—	—	.76	ns
Data inputs/Tx disable	V_{il} (5) (6) V_{ih} (5) (6) I_{il} (5) (6) I_{ih} (5) (6)		V_{CC}-1.81 V_{CC}-1.165 -2 —	— — — —	V_{CC}-1.475 V_{CC}-.88 — 400	V V µA µA
Reference output voltage	V_{BB}	—	—	V_{CC}-1.31	—	V
Power supply voltage	V_{CC}	—	4.50	5.00	5.5	V
Supply current	I_{CC} or I_{EE}	—	—	—	150	mA
Operating temperature	T_A	—	0	25	70	°C

(1) Measured using FDDI test signaling format, driven with different ECL.
(3) Limits on optical wavelength, spectral width, output risetime and output falltime are controlled by Figure 2, see page 7032.
(5) Single ended using V_{BB} as reference voltage.
(6) Compatible with 100K ECL logic levels. The parts are 100% compatible with 10K and 10KH series when driven with differential signals.
Note: For pinout view order customer drawing.

SOURCE: Catalog 124002

Specifications subject to change.
1-800-522-6752 Product Information Center/ AMP FAX Service
1-800-722-1111 Tooling/Technical Assistance Center

FSD Multimode Transceiver
(Continued)

Note: For pinout view order customer drawing.

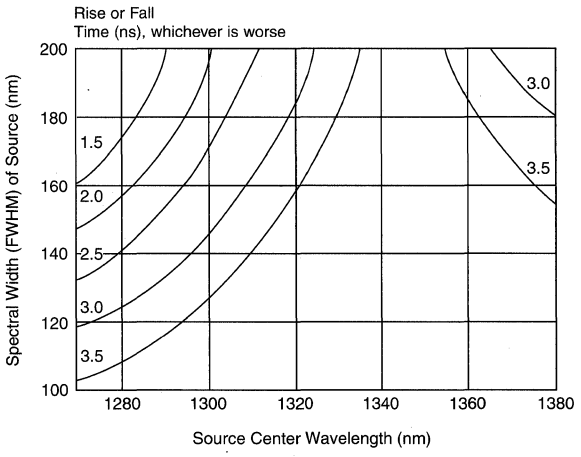
Receiver Section Specifications
(T_A = 0° to 70°C, V_{CC} = 4.5 to 5.5 VDC, V_{EE} = GND)

Parameter	Symbol	Conditions	Min.	Typical	Max.	Unit
Data rate, NRZ	B	—	10	—	125	Mb/s
Optical input avg. (sensitivity)	P_{in}	62.5 µm/.275 NA Fiber B = 125 Mb/s, BER = 2.5×10^{-10} (7)	-33	—	-14	avg. dBm
Optical wavelength	λ_{in}	—	1270	—	1380	nm
Duty cycle	—	—	40	50	60	%
Pulse duration	—	B = 10–125 Mb/s	8	—	100	ns
Output risetime	t_{TLH}	20–80%, 50 ohm to V_{CC}-2V	.5	—	3.0	ns
Output falltime	t_{THL}	80–20%, 50 ohm to V_{CC}-2V	.5	—	3.0	ns
Propagation delay	t_{PLH}	50 ohm to V_{CC}-2V	—	—	20	ns
Propagation delay	t_{PHL}	50 ohm to V_{CC}-2V	—	—	20	ns
Pulse width distortion	—	50 ohm to V_{CC}-2V	—	—	.4	ns
Data dependent jitter	t_{DDJ}	(1)	—	—	.8	ns
Data outputs	V_{OH} V_{OL}	(6) (6)	V_{CC}-1.025 V_{CC}-1.81	— —	V_{CC}-.88 V_{CC}-1.62	V V
Signal detect(6)	V_A	Pin> = P_A, 50 ohm to V_{CC}-2V	V_{CC}-1.025	—	V_{CC}-.88	V
Outputs(6)	V_D	Pin> = P_A, 50 ohm to V_{CC}-2V	V_{CC}-1.81	—	V_{CC}-1.62	V
Pin power levels:						
Deassert(4)	P_D	—	-45 or P_B	—	-33.5	avg. dBm
Assert	P_A	—	—	—	-32	avg. dBm
Hysteresis	—	—	1.5	2.0	—	dB
Signal detect delay(2):						
Deassert	—	—	—	—	350	µs
Assert	—	—	—	—	100	µs
Power supply	V_{CC}	—	4.50	5.00	5.50	V
Current	I_{CC}	—	—	—	150	mA
Operating temperature	T_A	—	0	25	70	°C

(1) Measured using FDDI test signaling format, driven with different ECL.
(2) As specified in FDDI PMD document, ANSI X3.166-1990.
(3) Limits on optical wavelength, spectral width, output risetime and output falltime are controlled by Figure 2.
(4) P_B = power at which BER = .01, whichever is greater.
(5) Single ended using V_{BB} as reference voltage.
(6) Compatible with 100K ECL logic levels. The parts are 100% compatible with 10K and 10KH series when driven with differential signals.
(7) 0ns eye opening, V_{CC} = 5V, 2^{15}-1 PRBS, 25°C.
Note: Case material UL 94V-0 rated.

Absolute Maximum Ratings, Transmitter and Receiver

Parameter	Symbol	Conditions	Min.	Typical	Max.	Unit
Storage temperature	—	—	-40	—	125	°C
Lead soldering limits	—	—	—	—	240/10	°C/s
Supply voltage	V_{CC}-V_{EE}	—	-.2	—	7.00	V



Maximum allowed source spectral width as a function of source center wavelength for the various source rise and fall times. These specifications in conjunction with the fibers S chromatic dispersion and modal bandwidth parameters given in clause 10. ANSI X3.166-1990. Result in an optical risetime of less than 5.0 ns exiting a 2km fiber cable. Curves are shown for source rise and fall time ranging from 1.5 ns to 3.5 ns.

Figure 2

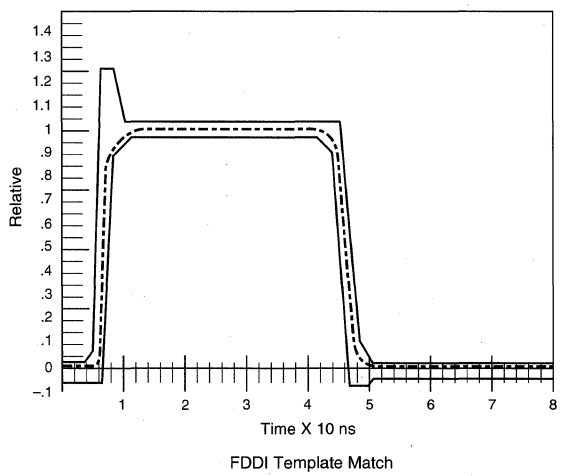
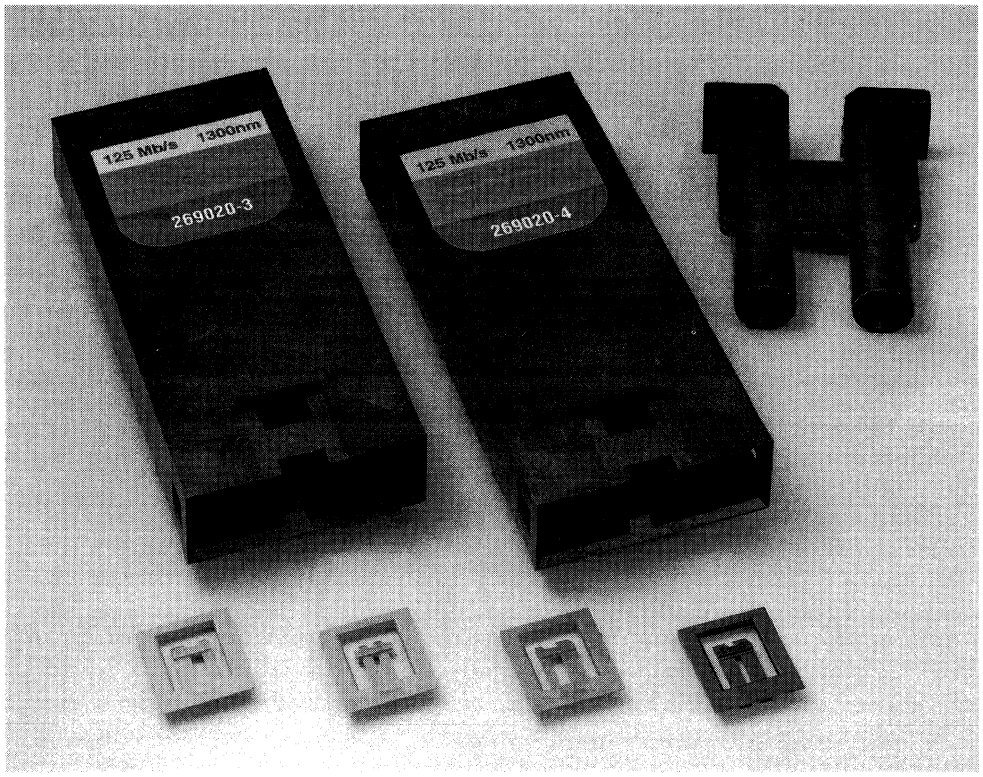


Figure 3

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

Singlemode FDDI Laser Transceiver



Product Facts

- FDDI Category 1 singlemode compliant
- Class 1 laser safe
- 22-pin multisourced package
- Drops in to 22-pin multimode footprint
- AMP Singlemode FSD (Fixed Shroud Duplex) connector interface
- Field keyable case polarized for singlemode connector
- Internally shielded plastic package with low EMI/RFI emission
- Low ESD susceptibility
- Single power supply
- Compatible with all standard FDDI chip sets
- Accepts 10H, 10K and 100K ECL
- Differential ECL single detect
- Utilizes the AMP feedback stabilized 1300 nm laser
- Transmitter and receiver disable functions

The AMP FDDI Laser Transceiver provides logic-to-logic serial data transmission over a singlemode fiber optic transmission path. Part No. 269020-3 transceiver conforms to the Category 1 singlemode Fiber Distributed Data Interface Physical Medium Dependent (FDDI PMD) layer requirements. Part No. 269020-4 transceiver provides for an additional 5 dB of link margin for extended range applications.

Part No. 269020-3 transmitter launches a minimum of -19 dBm 1300 nm laser light into the 9/125 µm singlemode optical fiber. Part No. 269020-4 transmitter launches a minimum of -14 dBm 1300 nm laser light into the 9/125 µm singlemode optical fiber. An internal optical feedback loop is used to stabilize this output. The output has been set below the Class 1 laser safety limits as defined by FDA, IEC and CENELEC standards for both models. The transceivers also continue to meet these safety limits when the FSD connector is removed.

The AMP singlemode transceiver is compatible with Pc boards laid out for the AMP multimode transceiver Part No. 269028-5. This outline allows for drop-in replacement of transceiver for convenient changes in fiber size.

Note: Overall Housing Dim. (Typ.)—3.155 [80.14] L x 1.40 [35.56] W x .500 [12.70] H

Key Type	Part Numbers	
	Category 1	Extended Range
Field Keyable Transceiver A, B, M, S	269020-3	269020-4

SOURCE: Catalog 124002

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

Singlemode FDDI Laser Transceiver

(Continued)

Note: For pinout view order customer drawing.

Performance Specifications 125 Mb/s Transmitter (T_A = 0° – 60°C, V_{CC}–V_{EE} = 4.5 to 5.5 VDC)

Parameter	Symbol	Test Conditions	Min.	Typical	Max.	Unit
Data rate, NRZ	B	—	0	—	125	Mb/s
Optical output (Avg):				—	-14	avg. dBm
269020-3 269020-4	P_{OH}	(11)	-19 -14	—	-14 -9	dBm
Extinction ratio	$(P_{OL}/P_{OH}) \times 100\%$	—	—	—	10	%
Optical wavelength	λ_{out}	Center	1270	—	1340	nm
Spectral width	$\Delta\lambda$	FWHM	—	—	5	nm
Duty cycle	—	B = 0–125 Mb/s	0	—	70	%
Output risetime	t_{TLH}	10–90%	—	—	2.0	ns
Output falltime	t_{THL}	90–10%	—	—	2.0	ns
Pulse width distortion	—	Peak-Peak	—	—	1.0	ns
Data dependent jitter	t_{DDJ}	Peak-Peak(9)	—	—	0.6	ns
Random jitter	t_{RAN}	Peak-Peak	—	—	.76	ns
Data inputs/Tx disable	V_{IL} V_{IH} I_{IL} I_{IH}	(5) (6) (5) (6) (5) (6) (5) (6)	V_{CC}-1.81 V_{CC}-1.165 -2 —	— — — —	V_{CC}-1.475 V_{CC}-.88 — 300	V V µA µA
Disable assert time	—	Disable = V_{IH} –V_{IL}	—	40	500	µs
Disable Deassert time	—	Disable = V_{IL} –V_{IH}	—	120	1000	µs
Reference voltage (output)	V_{EE}	—	—	V_{CC}-1.31	—	V
Power supply voltage	V_{CC}-V_{EE}	—	4.50	5.0	5.5	V
Supply current	I_{CC} or I_{EE}	—	—	—	150	mA
Operating temperature	T_A	—	0	25	60	°C

Performance Specifications, 125 Mb/s Receiver (T_A = 0° - 60°C, V_{CC}-V_{EE} = 4.5 to 5.5 VDC)

Parameter	Symbol	Test Conditions	Min.	Typical	Max.	Unit
Data rate, NRZ	B	—	10	—	125	Mb/s
Optical input (Avg): Sensitivity	P_{IN}	B = 125 Mb/s, BER = 2.5 x 10^{-10} (1), (2), (7), (11), (15)	-31	—	-14	dBm
Optical input (Avg) Sensitivity	P_{IN}	B = 125 Mb/s, BER = 2.5 x 10^{-10} (1), (8), (11), (15)	-33	—	-14	dBm
Optical wavelength	λ_{IN}	—	1270	—	1390	nm
Duty cycle	—	—	30	50	70	%
Pulse duration	—	B = 10-125 Mb/s	8	—	100	ns
Output risetime	t_{TLH}	20-80%, 50Ω to V_{CC}-2V	.5	—	3.0	ns
Output falltime	t_{THL}	80-20%, 50Ω to V_{CC}-2V	.5	—	3.0	ns
Propagation delay	t_{PLH}	50Ω to V_{CC}-2V	—	—	20	ns
Propagation delay	t_{PHL}	50Ω to V_{CC}-2V	—	—	20	ns
Pulse width distortion	—	50Ω to V_{CC}-2V, P_{IN}=31 dBm	—	—	0.4	ns
Data dependent jitter	t_{DDJ}	(1)	—	—	0.8	ns
Data (Output) (5)	V_{OH} V_{OL}	(6)	V_{CC}-1.025 V_{CC}-1.81	—	V_{CC}-.88 V_{CC}-1.62	V
Signal Detect (Output)	V_A V_D	(6) $P_{IN} \geq P_A$, 50Ω to V_{CC}-2V (6) $P_{IN} < P_D$, 50Ω to V_{CC}-2V	V_{CC}-1.025 V_{CC}-1.81	—	V_{CC}-.88 V_{CC}-162	V
Signal Detect (Output)	V_A V_D	(6) $P_{IN} \geq P_A$, 50Ω to V_{CC}-2V (6) $P_{IN} < P_D$, 50Ω to V_{CC}-2V	V_{CC}-1.81 V_{CC}-1.025	— —	V_{CC}-1.62 V_{CC}-.88	V
P_{IN} power levels (Avg):						
Deassert (4)	P_D		-45 or P_B	—	-32	dBm
Assert	P_A	—	—	—	-32	dBm
Hysteresis	—		1.5	2.0	—	dB
Signal detect delay time (2)						
Deassert Assert	— —	—	—	— —	350 100	µm µm
Power supply voltage	V_{CC}-V_{EE}	—	4.50	5.0	5.5	V
Supply current	I_{CC} or VI_{EE}	(12)	—	—	150	mA
Operating temperature	T_A	—	0	25	60	°C

Absolute Maximum Ratings, Transmitter and Reciever

Parameter	Symbol	Conditions	Min.	Typical	Max.	Units
Storage temperature	—	—	-40	—	85	°C
Lead soldering limits	—	—	—	—	240/10	°C/s
Supply voltage	V_{CC}-V_{EE}	—	-.2	—	7.00	V

(1) Measured using FDDI test signaling format with differential termination.
(2) As specified in FDDI singlemode PMD document Category 1.
(3) When not used PINS 16 and 17 may be connected to V_{EE} and PIN 18 to V_{CC}.
(4) P_B= power at which BER = .01, whichever is greater.
(5) Single ended using V_{BB}.
(6) Voltage levels listed are compatible with raised 100K series ECL logic levels. The parts are 100% compatible with raised 10K and 10KH series when driving differential outputs.
(7) Eye opening, 3.3 ns Min. with duty cycle distortion = 1.0 ns P-P. Transmitter active.
(8) Ons eye opening, V_{CC} = 5V, 25°C, 2^{15}-1 PRBS, transmitter active.
(9) Measured using FDDI test signaling format with differential drive.
(10) The bias monitor is a current source that is a function of the laser bias current. For bias currents above 10 mA the monitor current is typically equal to 7 x 10^{-6} + 11 x 10^{-3} (laser bias current). Maximum compliant voltage between PIN 22 and V_{EE} is V_{CC}-2V.
(11) Singlemode fiber 9.5 µm mode field diameter. 50% duty cycle operation.
(12) All outputs unterminated.
(13) If used, this output should be terminated 2.4 Ω to ground. A raised ECL logic 1 indicates a feedback fault in optical power control loop. An ECL logic 0 indicates normal operation.
(14) Shipped with a soldering and cleaning process, seal plug, protecting the optical parts.
(15) A minimum attenuation of 5 dB must be applied between the transmitter output and the receiver input. To avoid receiver saturation for **Part No. 269020-4** only.

SOURCE: Catalog 124002

1.3 µm LED

Product Facts

- **High coupled power, typically 82 µW into 62.5 µm fiber**
- **High reliability MTTW 2.3 x 10^8 hours**
- **Wavelength centered at 1320 nm**
- **Hermetically sealed TO-18 style package installed in industry standard ADMs**
- **Functional over –55°C to 125°C operating temperature range**

The AMP InGaAsP SLED products offer high coupled powers for digital fiber optic transmission applications.

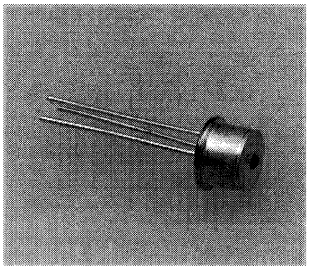
Compatible with industry standards, the AMP LED ADMs consist of hermetically sealed TO-18 style SLEDs which have been actively aligned for maximum coupled power. The devices are permanently fixed in place to provide stable performance over all operating conditions.

The AMP SC and ST-Style connectors are suitable for both panel/bulkhead and Pc board mounting. The FC is panel mount.

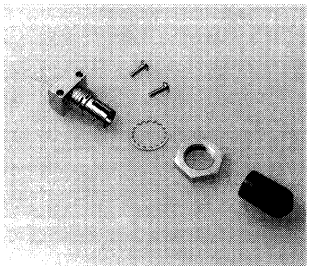
Each unit is burned-in. Coupled power, capacitance, leakage current and spectral characteristics are measured on each unit. No data is supplied with the unit. A date lot code is used for traceability.

For additional information on product qualification, reference Product Specification 108-55008.

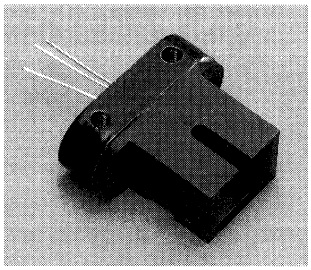
For additional information on product performance, reference Application Note 82924.



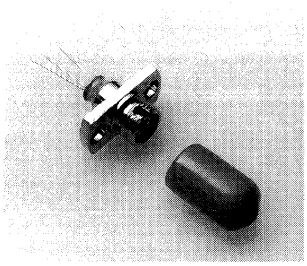
TO Style



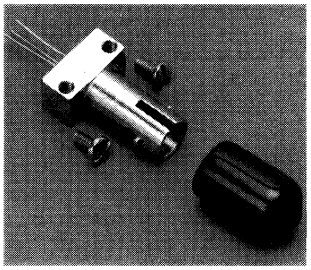
ST-Style



AMP SC Style



FC Type Panel Mount



ST-Style

Specifications: 100 mA Forward Current, 25°C

Parameter	Part No. Suffix	Test Conditions	Units	Min.	Typ.	Max.
Coupled power 50 µm fiber	-1	—	µW dBm	10 -20	25 -16	—
62.5 µm fiber	-1	—	µW dBm	30 -15	45 -13	—
50 µm fiber	-2	—	µW dBm	20 -17	35 -14	—
62.5 µm fiber	-2	—	µW dBm	50 -13	82 -11	—
Wavelength Spectral FWHM	—	—	nm nm	1290 —	— —	1350 170
Forward voltage Capacitance Leakage current	—	f=1 MHz, 0V –2V	V pF µA	— — —	1.4 15 —	1.7 — 2
Rise/fall time	—	100 mA 50% duty cycle 12.5 MHz	ns	—	2.5	4
Bandwidth	—	—	MHz	—	115	—
$\Delta\lambda/\Delta T$ $\Delta P_{out}/\Delta T$	—	-40 to +85°C	nm/°C dB/°C	—	.38 -.03	—
Reliability MTTW	—	-1.5dB EOL	hrs	—	2.3 x 10^8	—

Note: dBm is rounded to nearest integer value.

Absolute Maximum Rating

	Units	Min.	Max.
Operating temperature	°C	-40	85
Storage temperature	°C	-40	125
Reverse voltage	V	—	2
Forward current	mA	—	150

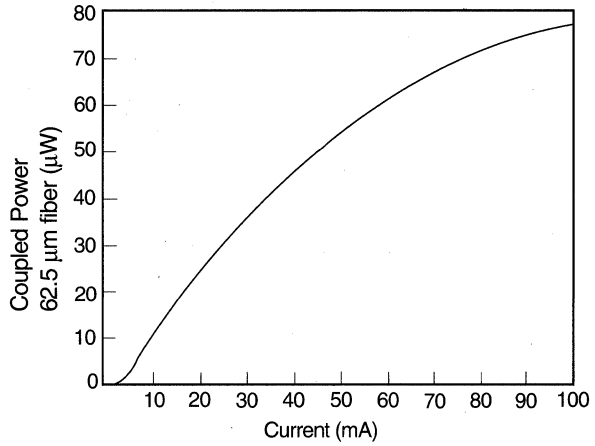
SOURCE: Catalog 124002

Specifications subject to change.
1-800-522-6752 Product Information Center/ AMP FAX Service
1-800-722-1111 Tooling/Technical Assistance Center

1.3 µm LED

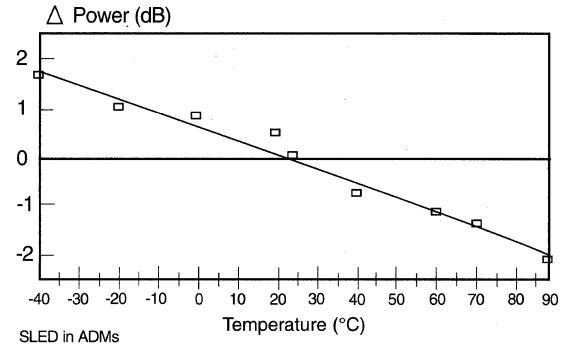
(Continued)

Coupled Power vs. Drive Current



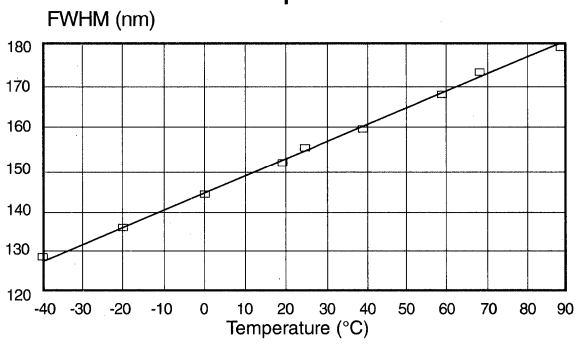
Test Conditions: 25°C

Coupled Power into 62.5 µm Fiber vs. Temperature



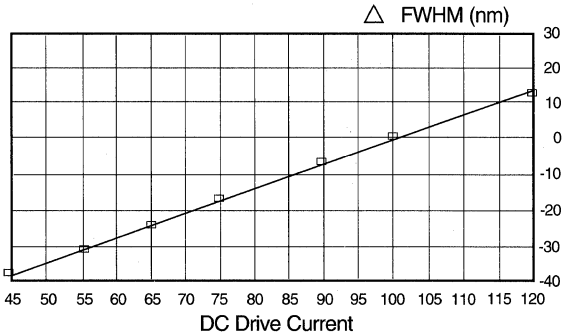
SLED in ADMs

SLED FWHM in ADM over Temperature



Test Conditions: 100 mA DC

SLED FWHM vs. Drive Current normalized to 100 mA DC



Test Conditions: 25°C, units in ADM

Type	Part Numbers			
	Connector Interface			
	TO	FC	AMP SC	ST-Style
Standard	259006-1	259014-1	269067-1	259012-1
Premium	259006-2	259014-2	269067-2	259012-2

Notes: 1. Coupled power in specifications.
2. For mechanical dimensions order customer drawing.

1.3 µm FDDI LED

(Continued)

Product Facts

- **Performance to PMD document**
- **Hermetically sealed TO-18 style package installed in industry standard ADMs**
- **High reliability MTTW 2.3 x 10^8 hours**

The AMP ADMs incorporate high reliability SLEDs emitting in the long wavelength region of 1300 nm.

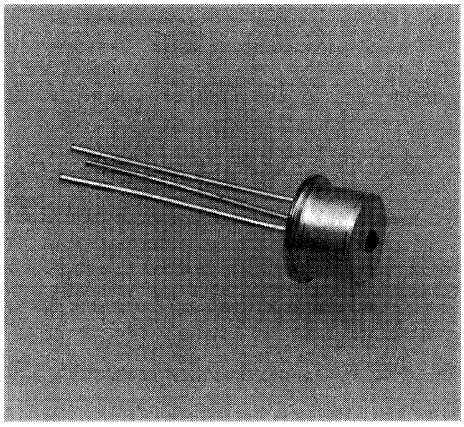
FDDI LED performance is governed by the ANSI X3.166-1990 Physical Layer Medium Dependent (PMD) document. The PMD chart shown on page 7038 represents Figure 9 from the PMD document. From this chart the required relationships between the rise time/fall time, the center wavelength and the FWHM are indicated. FDDI operating conditions call for a modulated square wave at 12.5 MHz, 50% duty cycle. The coupled power is measured using 62.5 µm core fiber.

Compatible with industry standards, the AMP InGaAsP SLED 2.5 mm Bayonet ADM products consist of hermetically sealed TO-18 style SLEDs which have been actively aligned for maximum performance. The devices are permanently fixed in place to provide stable performance over all operating conditions.

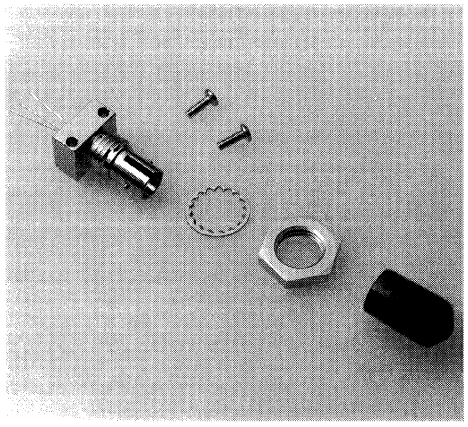
The 2.5 mm Bayonet is suitable for both panel/bulkhead and Pc board mounting.

Each unit is burned-in. Coupled power, capacitance, leakage current and spectral characteristics are measured on each unit. No data is supplied with the unit.

For additional information on product performance, reference Application Note 82924.



TO-18 Style



ST-Style

Specifications: 12.5 MHz, 50% duty cycle, 0°–70°C

Parameter	Part No. Suffix	Test Conditions	Units	Min.	Typ.	Max.
Coupled power 62.5 µm fiber	-3	—	µW dBm	10 -20	—	40 -14
Wavelength Spectral FWHM	—	See PMD Chart See PMD Chart	nm nm	1270 —	—	1380 200
Forward voltage Capacitance Leakage current	— — —	— f=1 MHz, 0V -2V	V pF µA	— — —	1.4 15 —	1.7 — 2
Rise/fall time	—	See PMD Chart	ns	.6	—	3.5
$\Delta\lambda/\Delta T$ $\Delta P_{out}/\Delta T$	—	0–70°C	nm/°C dB/°C	—	.5 -.04	—
Reliability MTTW	—	-1.5 dB EOL	hrs	—	2.3 x 10^8	—

Note: dBm is rounded to nearest integer value.

Absolute Maximum Rating

	Units	Min.	Max.
Operating temperature	°C	-40	85
Storage temperature	°C	-40	125
Reverse voltage	V	—	2
Forward current	mA	—	150

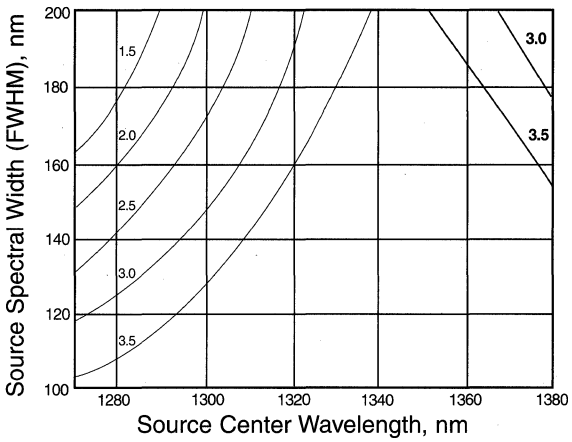
SOURCE: Catalog 124002

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

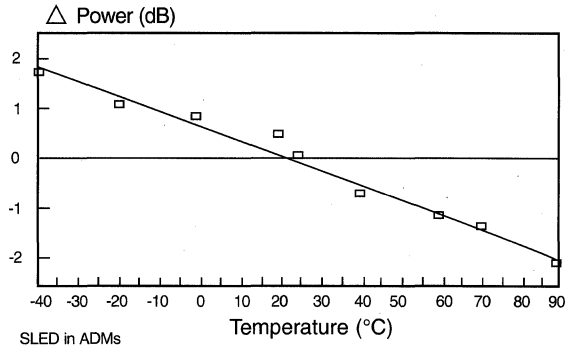
1.3 µm FDDI LED

(Continued)

PMD Chart

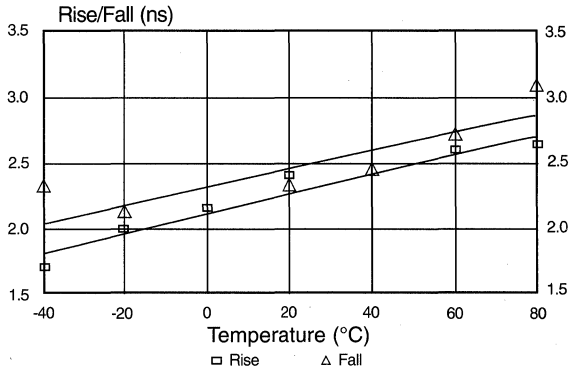


Coupled Power into 62.5 µm Fiber versus Temperature



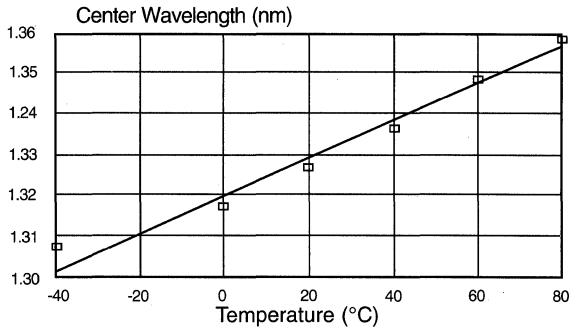
SLED in ADMs

Rise/Fall Time Measured under FDDI Test Conditions



Measured in FDDI test circuit

Wavelength over Temperature Measured under FDDI Test Conditions

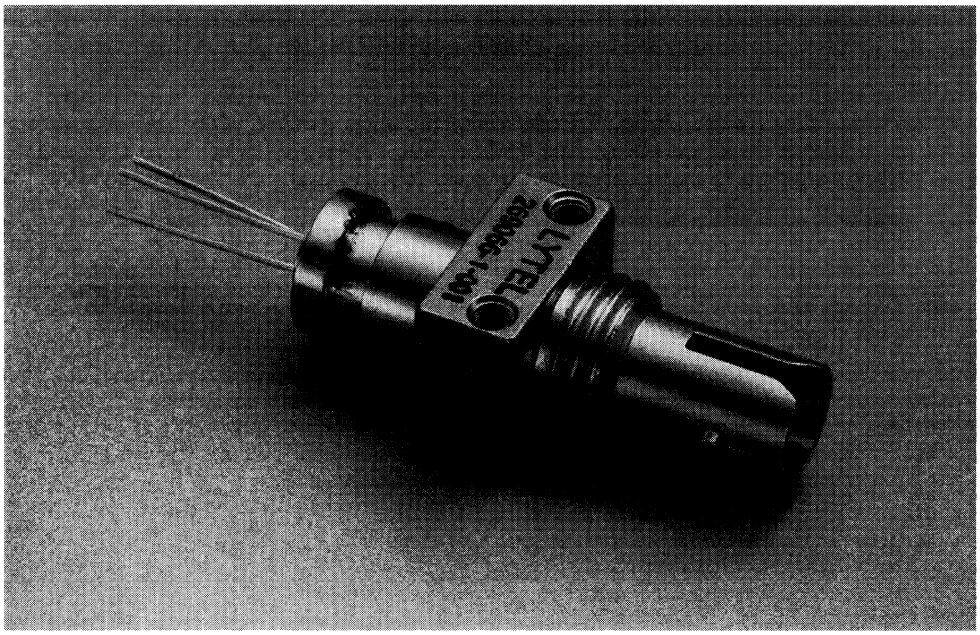


Measured in FDDI test circuit

Style	Part Numbers
TO	259006-3
ST-Style	259012-3

Note: For mechanical dimensions order customer drawing.

1.3 µm ELED



Product Facts

- **High coupled power, typically 40 µW into 9 µm fiber**
- **Wavelength centered at 1310 nm**
- **0° to +65°C operating temperature**
- **Hermetically sealed TO-18 style package installed in industry standard ADMs**
- **High reliability**

The AMP InGaAsP ELED mounted in ST-Style ADM products offer high coupled powers for digital fiber optic transmission applications.

Compatible with industry standards, this AMP device consists of a hermetically sealed TO-18 style which is actively aligned for maximum coupled power. The devices are laser welded in place to provide stable performance over all operating conditions.

The ST-Style assembly is suitable for both panel/ bulkhead and Pc board mounting.

No data is supplied with the unit. A date lot code is used for traceability.

For additional information on product qualification, reference Product Specification 108-55008.

Specifications: 100 mA Forward Current, 25°C

Parameter	Part No. Suffix	Test Conditions	Units	Min.	Typ.	Max.
Coupled power 9 µm fiber	-1	—	µW dBm	10 -20	15 -18	—
Wavelength Spectral FWHM	—	—	nm nm	1270 —	— 65	1330 100
Forward voltage Capacitance Leakage current	—	f=1 MHz, 0V -2V	V pF µA	—	1.4 15	— —
Rise/fall	—	100 mA 50% duty cycle 12.5 MHz	ns	—	2.5	4
$\Delta\lambda/\Delta T$ $\Delta P_{out}/\Delta T$	—	0 to +65°C	nm/°C dB/°C	—	.69 .114	—

Note: dBm is rounded to nearest integer value.

Absolute Maximum Rating

	Symbol	Min.	Typ.	Max.	Units
Operating temperature	T_O	0	—	65	°C
Storage temperature	T_S	-40	—	90	°C
Reverse voltage	V_R	—	—	1	V
Forward current	I_F	—	—	150	mA

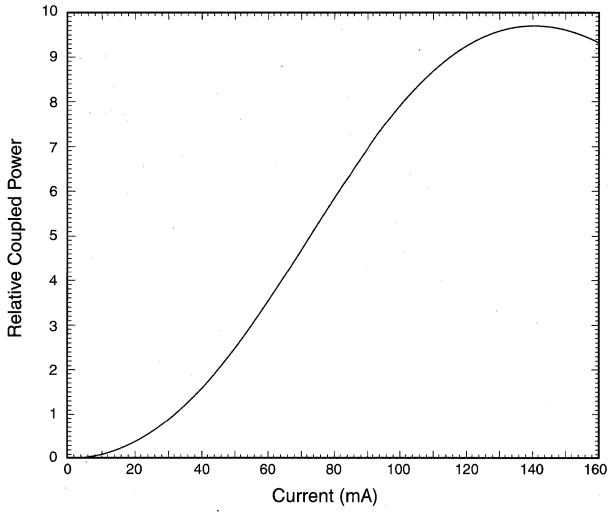
SOURCE: Catalog 124002

Specifications subject to change.
1-800-522-6752 Product Information Center/ AMP FAX Service
1-800-722-1111 Tooling/Technical Assistance Center

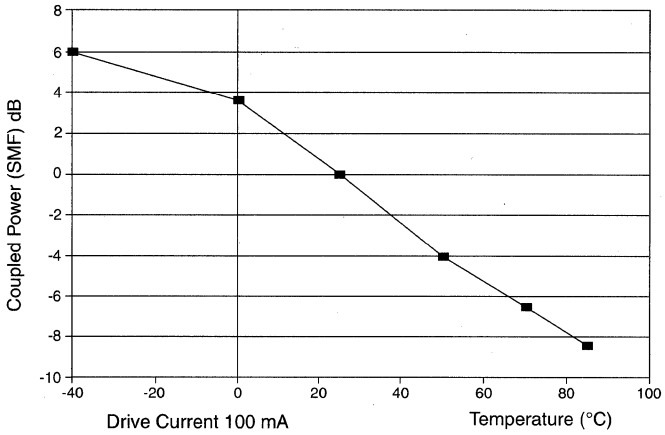
1.3 µm ELED

(Continued)

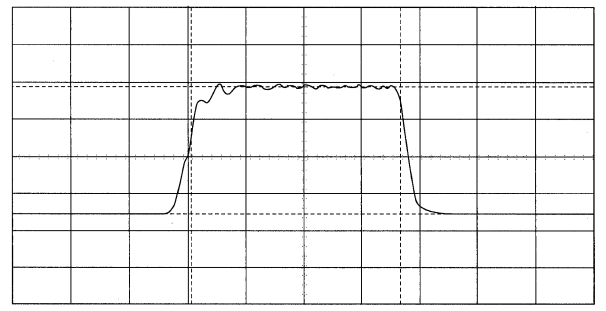
Light vs. Current



Coupled Power over Temperature Relative to 25°C

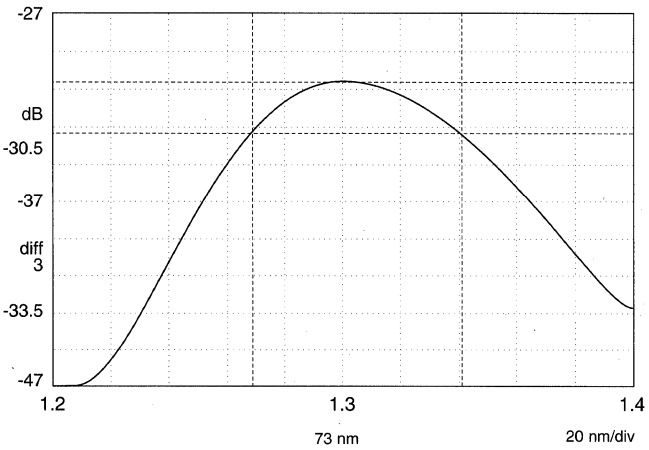


Rise/Fall Measurement



Test Conditions: 0 mA bias, 50 mA p-p using laser driver chip.

Spectral Width



Type	Part Number ST-Style
1.3 µm ELED	269066-1

Note: For mechanical dimensions order customer drawing.

SOURCE: Catalog 124002

1.3 µm Laser Module

Product Facts

- 1300 nm wavelength
- -40°C to 85°C operating temperature
- Hermetically sealed
- High speed (1 GB/s)
- InGaAs monitor detector
- Four-lead package
- Each unit serialized

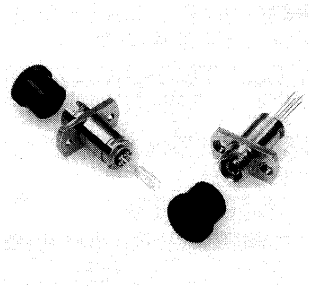
The AMP MQW (Multi Quantum Well) wide temperature coolerless laser module is available in both a pigtailed package and as a connectorized component. The high temperature laser module incorporates a 1300 nm InGaAsP laser diode and InGaAs monitor photodetector for stable tracking over temperature. The electro-optical components are hermetically sealed in a TO-5.6 mm can and are laser welded to an advanced optical assembly. Every device is biased and aged to provide the highest degree of reliability and stability.

The AMP laser module is ideal for most short and medium distance digital loop transmission applications over singlemode fiber. Laser modules are processed to comply with the intent of Bellcore advisory TA-TSY-000983.

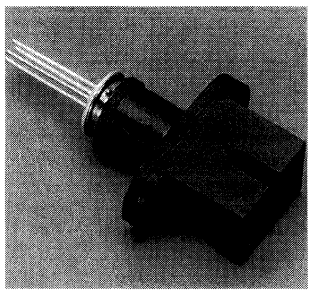
Each unit is temperature cycled and burned in.

Data supplied with each unit includes threshold current, slope efficiency, monitor current and wavelength. A serial number is used for traceability.

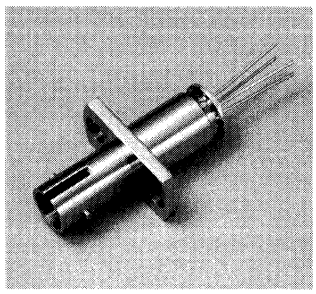
For additional information on product qualification, reference Product Specification 108-55006.



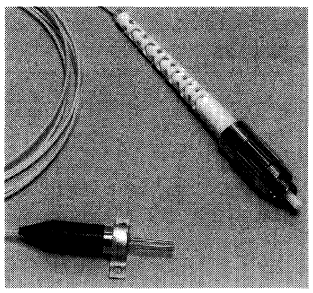
FC/PC Style



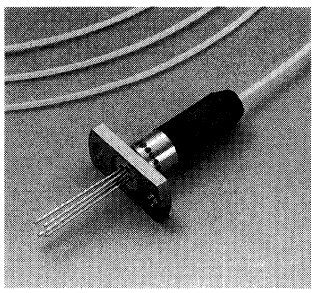
AMP SC/PC Style



ST/PC Style



FC/PC Pigtailed Board Mount Style



FC/PC Pigtailed Panel Mount Style

Specifications: 25°C Unless Otherwise Stated

Parameter	Symbol	Test Conditions	Units	Min.	Typ.	Max.
Threshold current	I_{th}	—	mA	—	9	20
Forward voltage	V_F	P_o	V	—	1.2	1.5
Forward current	I_F	P_o	mA	—	30	50
–4 Optical output power	P_o	—	mW	—	0.1	—
–1 Optical output power	P_o	—	mW	—	0.2	—
–2 Optical output power	P_o	—	mW	—	0.5	—
–3 Optical output power	P_o	—	mW	—	1.0	—
Center wavelength	λ	P_o -40 to 85°C	nm	1290	1310	1330
Spectral width RMS	$\Delta\lambda$	P_o	nm	—	2.0	—
Rise/fall times	T_R, T_F	10–90%	ns	—	0.4	—
–4 Differential efficiency	ξ	P_o	mW/mA	.008	—	—
–1 Differential efficiency	ξ	P_o	mW/mA	.01	—	—
–2 Differential efficiency	ξ	P_o	mW/mA	.02	—	—
–3 Differential efficiency	ξ	P_o	mW/mA	.05	—	—
Tracking error	E_r	-40 to 85°C	dB	—	±0.5	—
Monitor photocurrent	I_{mon}	P_o	mA	0.1	—	0.7
Photodiode cap.	C_t	—	pF	—	15	—

Absolute Maximum Rating

	Symbol	Min.	Typ.	Max.	Units
Forward current	I_F	—	—	80	mA
Reverse voltage	V_R	—	—	2	V
Operating temp.	T_C	-40	—	85	°C
Storage temp.	T_{STG}	-40	—	85	°C

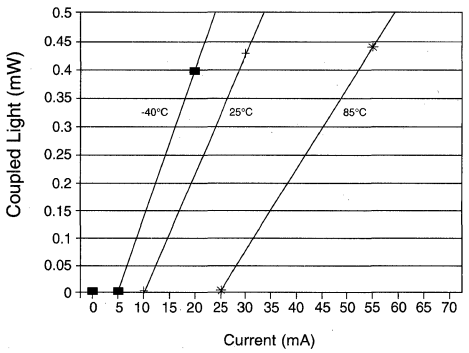
SOURCE: Catalog 124002

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

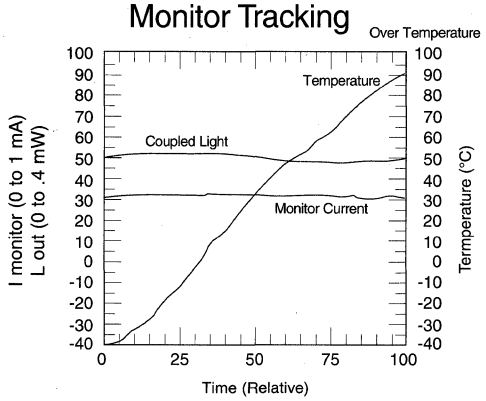
1.3 µm Laser Module

(Continued)

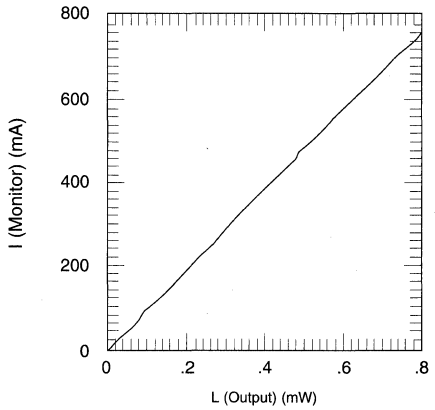
Coupled Optical Power vs. Current



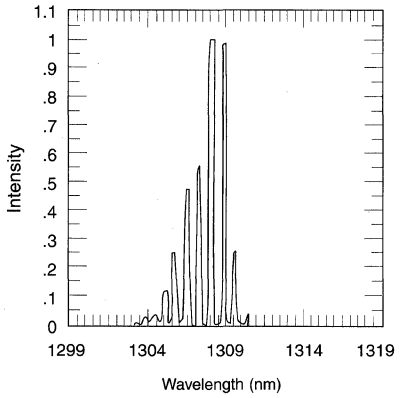
Monitor Tracking



Monitor Current vs. Optical Power



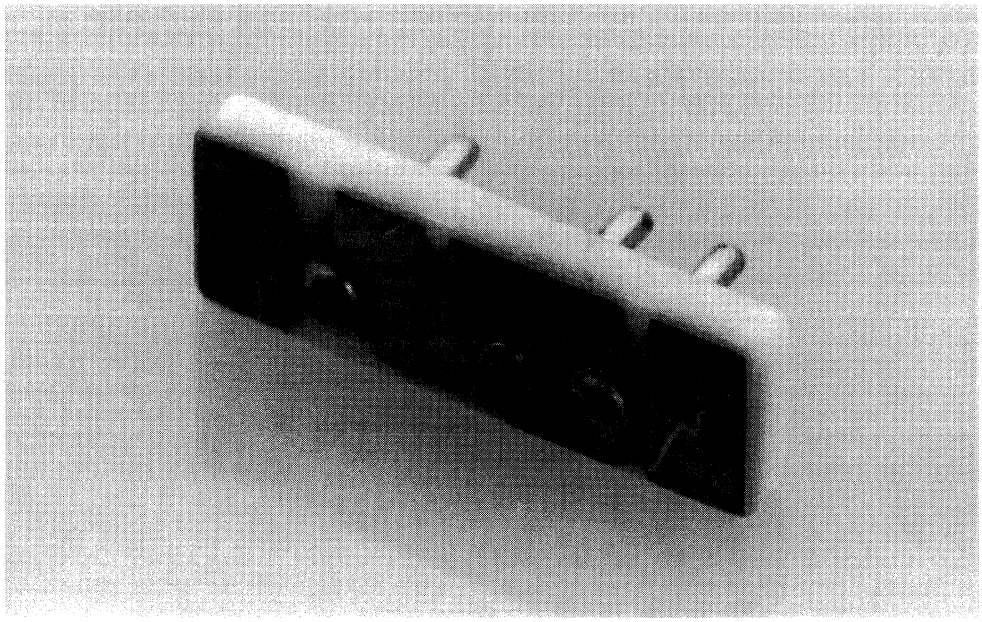
Spectral Measurement



Type	Part Numbers			
	Interface			
	FC/PC	AMP SC/PC	ST/PC Style	Unterminated
Connectorized				
-10 dBm	269026-4	269025-4	269068-4	—
-7 dBm	269026-1	269025-1	269068-1	—
-3 dBm	269026-2	269025-2	269068-2	—
-0 dBm	269026-3	269025-3	269068-3	—
Pigtailed, Board Mount				
-10 dBm	269069-4	269070-4	269071-4	269072-4
-7 dBm	269069-1	269070-1	269071-1	269072-1
-3 dBm	269069-2	269070-2	269071-2	269072-2
0 dBm	269069-3	269070-3	269071-3	269072-3
Pigtailed, Panel Mount				
-10 dBm	269073-4	269074-4	269075-4	269076-4
-7 dBm	269073-1	269074-1	269075-1	269076-1
-3 dBm	269073-2	269074-2	269075-2	269076-2
0 dBm	269073-3	269074-3	269075-3	269076-3

Note: For mechanical dimensions order customer drawing.

Submounted 1.3 µm LED



Product Facts

- **High coupled power**
- **Excellent reliability**
- **Wide operating temperature range**

AMP offers the performance of a high reliability InGaAsP SLED to those designers which have custom packaging requirements. Emitting in the 1300 nm regime, the AMP LED is ideally suited for custom hybrid assembly into modules which address digital fiber optic transmission applications. Operational over a -55°C to 125°C operating temperature range, this AMP SLED is capable of coupling in excess of 100 µW into a 100/140 µm fiber without the use of a lens element.

If your mechanical or functional requirements are different than those presented here, AMP would like the opportunity to review your requirements to collectively identify a solution.

Testing typically completed includes 100% LED burn-in, coupled power, forward voltage, spectral characteristics, leakage current and capacitance. Serial numbers and data can be provided with each unit.

Specifications: 50 mA 50% duty cycle, 23 ± 3°C

Parameter	Symbol	Part No. Suffix	Test Conditions	Units	Min.	Typ.	Max.
Launched Power	P_o	—	100/140 µm fiber	dBm	-11.5	—	—
Center Wavelength	λ_C	—	—	nm	1280	—	1320
Spectral Width	$\Delta\lambda$	—	—	nm	—	—	155
Forward voltage	V_F	—	I_r = 100 mA DC	V	—	—	1.7
Leakage current	I_L	—	V = –2V	µA	—	—	2
Capacitance	C	—	V = 0V, f = 1 MHz	pF	—	15	50
Rise/fall	T_R T_F	—	10-90% 90-10%	ns	0.6	—	3.0
Reliability MTTW		—	-1.5 dB EOL	hrs	—	2.3×10^8	—

Note: dBm is rounded to nearest integer value.

Absolute Maximum Rating

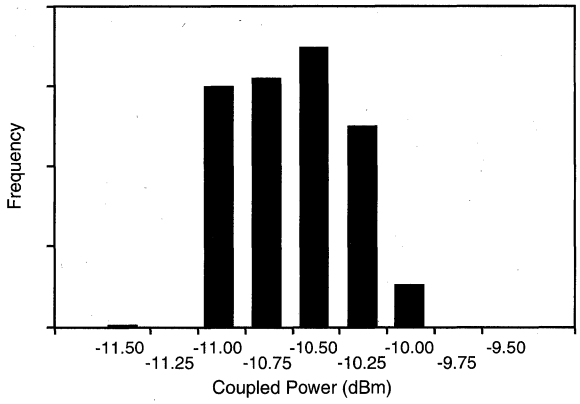
	Symbol	Min.	Typ.	Max.	Units
Operating temperature	T_O	-40	—	110	°C
Storage temperature	T_S	-40	—	165	°C
Reverse voltage	V_R	—	—	2	V
Forward current	I_F	—	—	150	mA

SOURCE: Catalog 124002

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

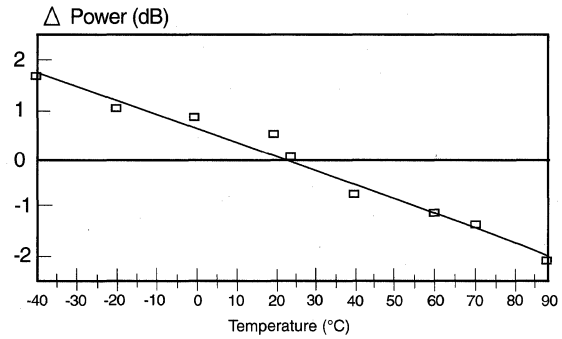
Submounted 1.3 µm LED
(Continued)

Histogram of Coupled Power Fiber 100/140 µm

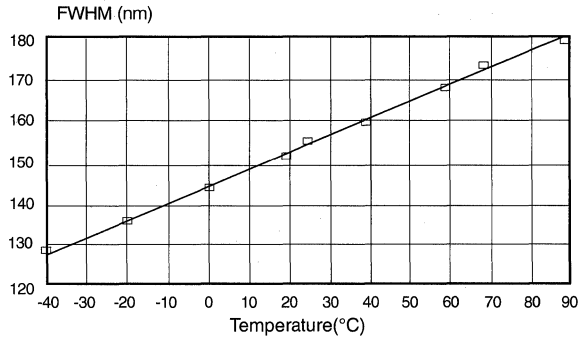


Test Conditions: 50 mA 50% duty cycle 23°C

Coupled Power vs. Temperature

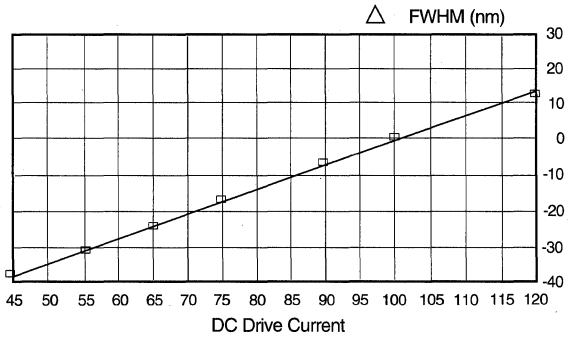


SLED FWHM over Temperature



Test Conditions: 100 mA DC

SLED FWHM vs. Drive Current normalized to 100 mA DC

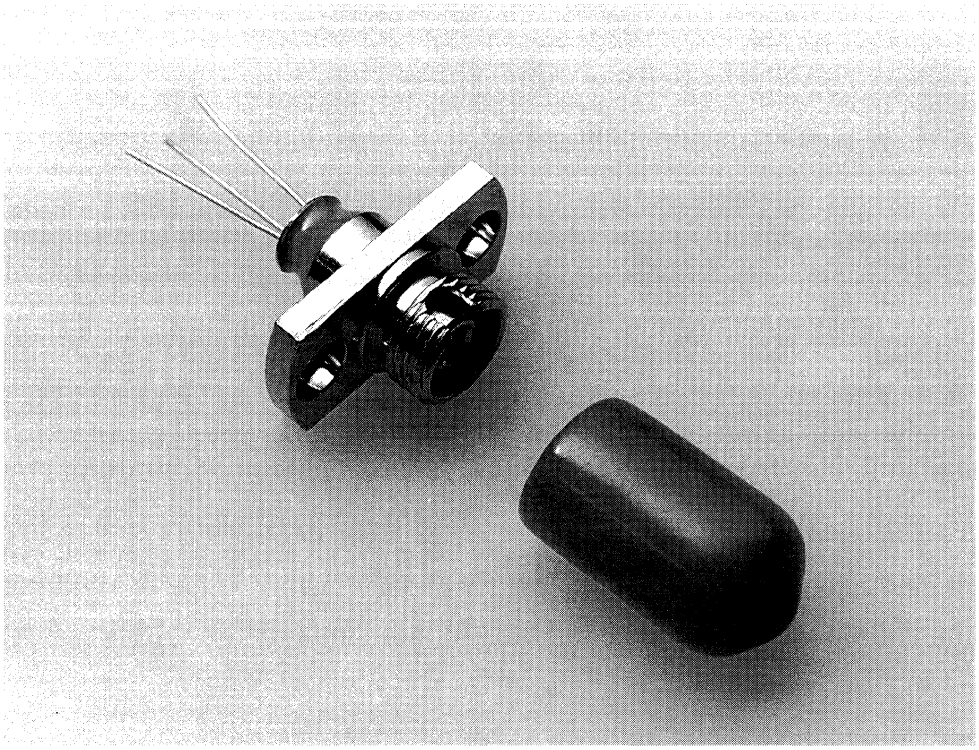


Test Conditions: 25°C, units in ADM

Type	Part Number
1.3 µm LED	269032-1

Note: For mechanical dimensions order customer drawing.

Telecommunications Singlemode InGaAs Photodetector



Product Facts

- **High reliability passivated planar structure**
- **High responsivity**
- **Low dark current**
- **Low capacitance**
- **Hermetically sealed TO-18 style package installed in industry standard ADMs**
- **-40° to +85°C operating temperature**
- **Processed to Bellcore 983**
- **Each unit serialized**

Processed to the intent of Bellcore, the AMP InGaAs PIN photodetectors offer high responsivity for nearly all digital fiber optic applications. The unique design balances high-speed performance with noise-free linear output. Spectral response has been optimized for the long wavelength region of 1150 nm to 1600 nm. Every component delivered has passed extensive high-temperature screening to ensure long-term reliability.

Compatible with industry standards, these Active Device Mount components incorporate hermetically sealed TO-18 style PIN packages which have been actively aligned for optimal performance. The FC Type connector is suitable for panel mounting.

Each unit is temperature cycled and burned in. Responsivity, dark current and capacitance are measured on each unit. No data is supplied with the unit.

For additional information on product qualification, reference Product Specification 108-55009.

Specifications: 25°C, -5 Volts

Parameter	Part Number Suffix	Test Conditions	Units	Min.	Typ.	Max.
9 µm fiber	-5	Laser source of 10 µW	A/W	.60	.71	—
Spectral Response	—	—	nm	1150	—	1600
Capacitance	-5	f=1 MHz	pF		.9	2.0
Dark current	-5		nA		1	5
Rise/fall	-5		ns			.5
Reliability	—	I_D>5 nA	hrs	—	2.0 x 10^8	—

Absolute Maximum Rating

	Units	Min.	Max.
Operating temperature	°C	-40	85
Storage temperature	°C	-40	125
Reverse voltage	V	—	20
Forward current	mA	—	1

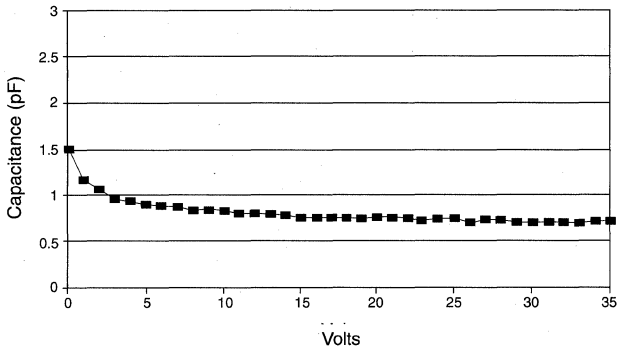
SOURCE: Catalog 124002

Specifications subject to change.
1-800-522-6752 Product Information Center/ AMP FAX Service
1-800-722-1111 Tooling/Technical Assistance Center

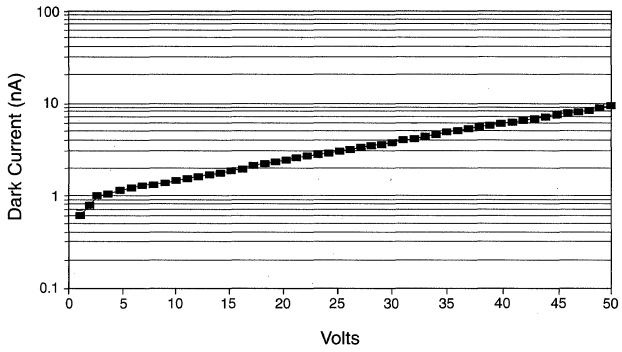
Telecommunications Singlemode InGaAs Photodetector

(Continued)

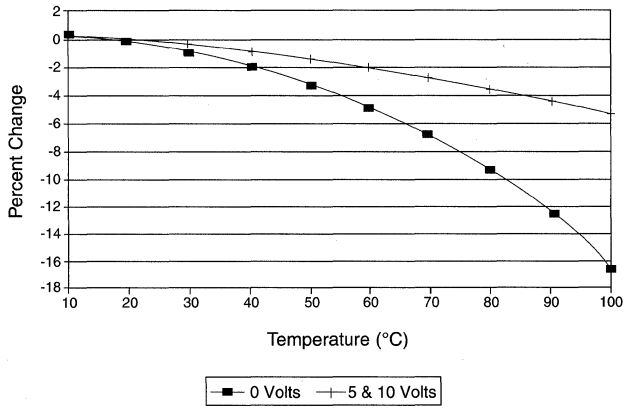
Capacitance



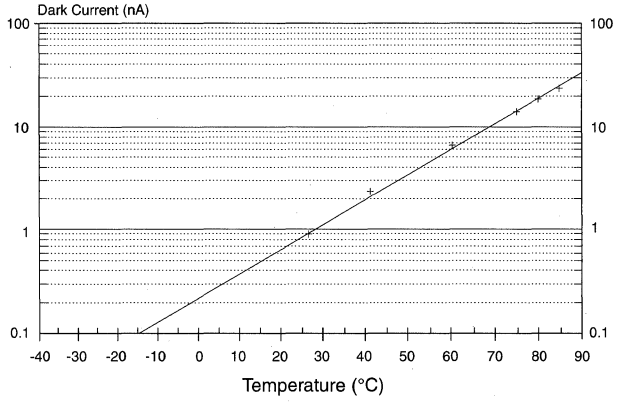
Dark Current



Responsivity vs. Temperature



Dark Current vs. Temperature



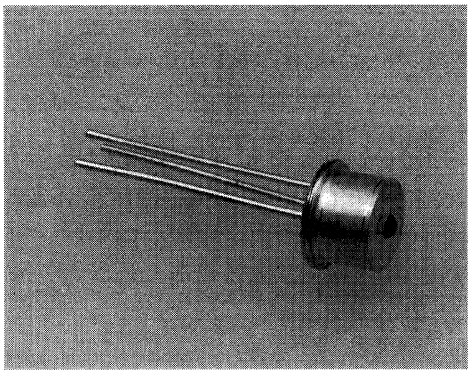
Connector Interface	Part Number
FC	259015-5

Note: For mechanical dimensions order customer drawing.

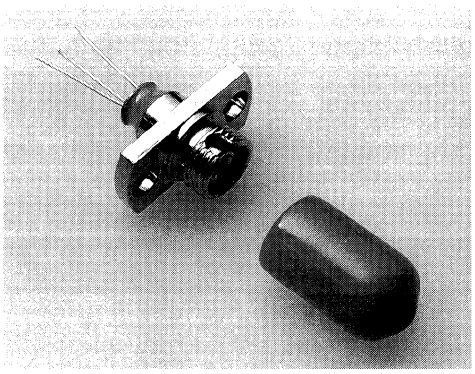
Singlemode InGaAs Photodetector

Product Facts

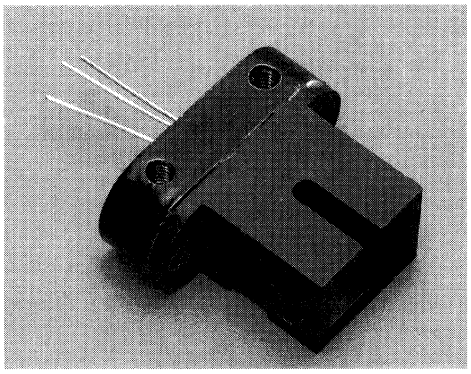
- **High reliability passivated planar structure**
- **High responsivity**
- **Very low dark current**
- **Low capacitance**
- **Hermetically sealed TO-18 style package installed in industry standard ADMs**
- **-40° to +85°C operating temperature**



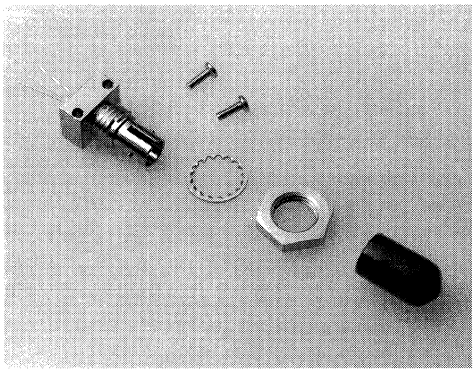
TO Style



FC Style



AMP SC Style



ST-Style

The AMP singlemode design uses an InGaAs PIN photodetector to offer high responsivity for nearly all digital and analog fiber optic applications. The AMP unique design balances high-speed performance with noise-free linear output. Spectral response has been optimized for the long wavelength region of 1150 nm to 1600 nm. Every component delivered has passed extensive high-temperature screening to provide long-term reliability.

Compatible with industry standards, the AMP Active Device Mount components incorporate hermetically sealed TO-18 style PIN packages which have been actively aligned for optimal performance.

Products available include a TO-18 can, FC, AMP SC or ST-Style active device mounts.

Each unit is burned-in. Responsivity, dark current and capacitance are measured on each unit. No data is supplied with the unit. A date lot code is used for traceability.

For additional information on product qualification, reference Product Specification 108-55009.

Specifications: 25°C, -5 Volts

Parameter	Part Number Suffix	Test Conditions	Units	Min.	Typ.	Max.
9 µm fiber	-3	Laser source of 10 µW	A/W	.75	.86	—
Spectral Response	—	—	nm	1150	—	1600
Capacitance	-3	f=1 MHz	pF	—	.9	1.1
Dark current	-3	—	nA	—	1.0	5.0
Rise/fall	-3	—	ns	—	—	.5
Bandwidth	—	—	GHz	—	2.5	—
Reliability	—	I_D>5 nA	hrs	—	2.0×10^8	—

Absolute Maximum Rating

	Units	Min.	Max.
Operating temperature	°C	-40	85
Storage temperature	°C	-40	125
Reverse voltage	V	—	20
Forward current	mA	—	1

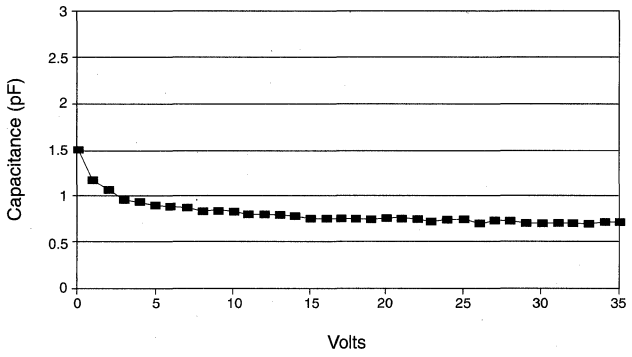
SOURCE: Catalog 124002

Specifications subject to change.
1-800-522-6752 Product Information Center/ AMP FAX Service
1-800-722-1111 Tooling/Technical Assistance Center

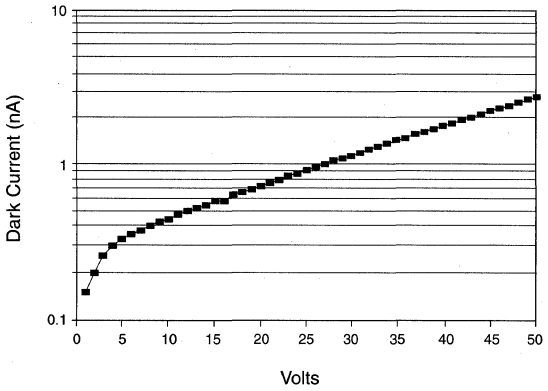
Singlemode InGaAs Photodetector

(Continued)

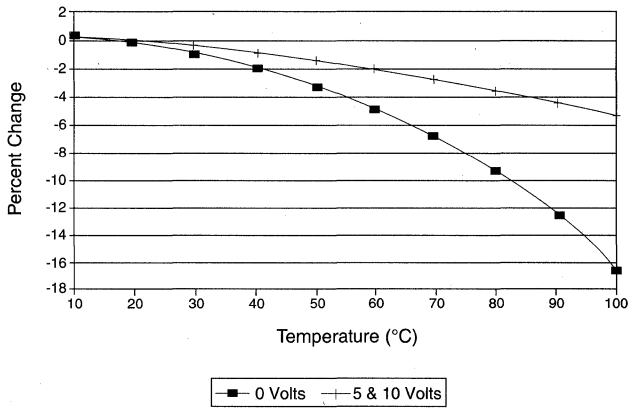
Capacitance



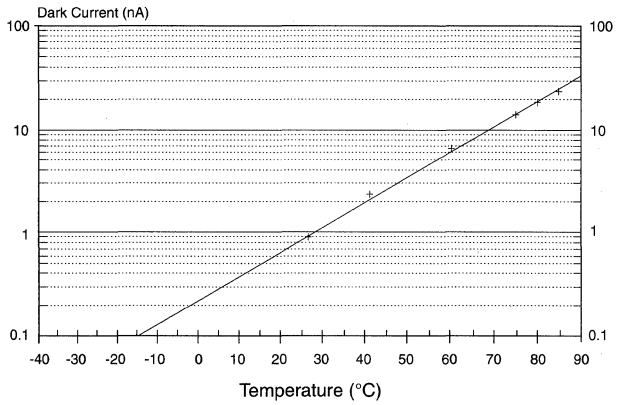
Dark Current



Responsivity vs. Temperature



Dark Current vs. Temperature



Type	Part Numbers			
	Connector Interface			
	TO	FC	AMP SC	ST-Style
Elite	259007-3	259015-3	269027-3	259013-3

Note: For mechanical dimensions order customer drawing.

Multimode InGaAs Photodetector

Product Facts

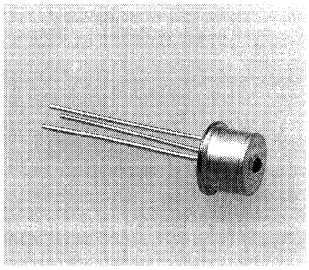
- **High reliability passivated planar structure**
- **High responsivity**
- **Low dark current**
- **Low capacitance**
- **Hermetically sealed TO-18 style package installed in industry standard ADMs**
- **-40° to +85°C operating temperature, functional over -55°C to 125° temperature range**

The AMP multimode design using InGaAs PIN photodetectors offer high responsivity for nearly all digital and analog fiber optic applications. The unique design balances high-speed performance with noise-free linear output. Spectral response has been optimized for the long wavelength region of 1150 nm to 1600 nm. Every component delivered has passed extensive high-temperature screening to provide long-term reliability.

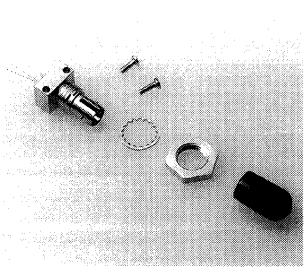
Compatible with industry standards, AMP Active Device Mount components incorporate hermetically sealed TO-18 style PIN packages which have been actively aligned for optimal performance. Modules that are suitable for both panel/bulkhead and Pc board mounting include the AMP SC and ST-Style. Each unit is burned-in.

Responsivity, dark current and capacitance are measured on each unit. No data is supplied with the unit. A date lot code is used for traceability.

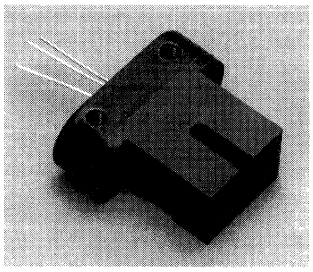
For additional information on product qualification, reference Product Specification 108-55009.



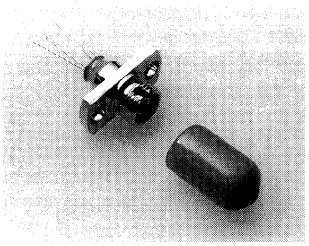
TO Style



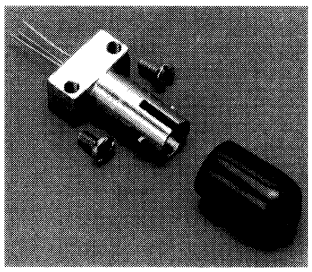
ST-Style



AMP SC Style



FC Style



ST-Style

Specifications: 25°C, –5 Volts

Parameter	Part Number Suffix	Test Conditions	Units	Min.	Typ.	Max.
Responsivity						
50 µm	-1	LED source	A/W	.60	.71	—
62.5 µm	-1	of 10 µW	A/W	.50	.61	
50 µm	-2	LED source	A/W	.75	.83	—
62.5 µm	-2	of 10 µW	A/W	.65	.80	
9 µm fiber	-7	Laser source of 10 µW	A/W	.70	.87	—
Spectral Response	—	—	nm	1150	—	1600
Capacitance	-1, -2, -7	f=1 MHz	pF	—	1.5	1.7
Dark current	-1, -2, -7	—	nA	—	1.2	5
Rise/fall	-1, -2, -7		ns	—		1
Bandwidth	-1, -2, -7	—	GHz	—	1.5	—
Reliability	—	I_D>5 nA	hrs	—	2.0×10^8	—

Absolute Maximum Rating

	Units	Min.	Max.
Operating temperature	°C	-40	85
Storage temperature	°C	-40	125
Reverse voltage	V	—	20
Forward current	mA	—	1

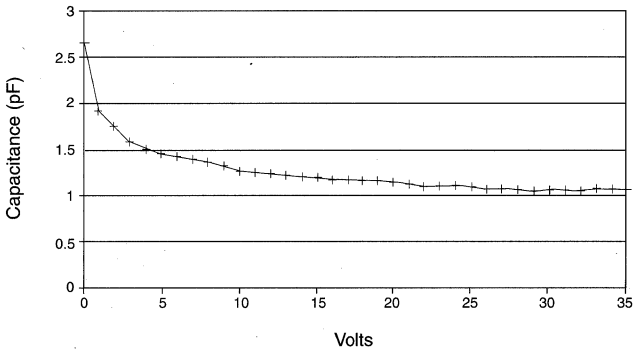
SOURCE: Catalog 124002

Specifications subject to change.
1-800-522-6752 Product Information Center/ AMP FAX Service
1-800-722-1111 Tooling/Technical Assistance Center

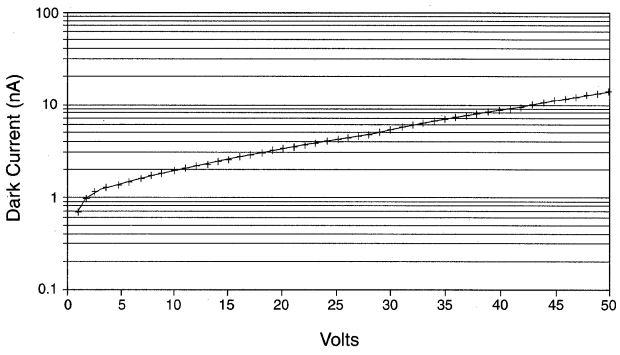
Multimode InGaAs Photodetector

(Continued)

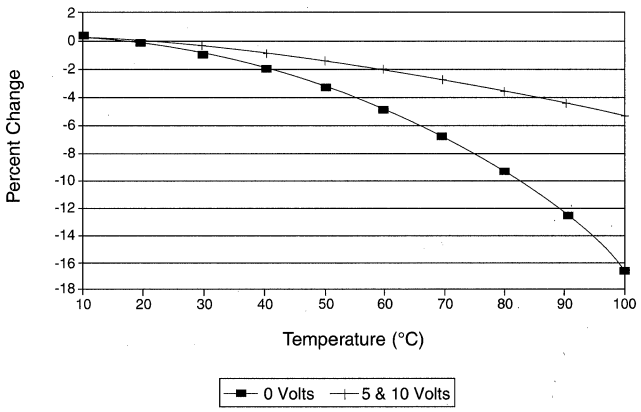
Capacitance



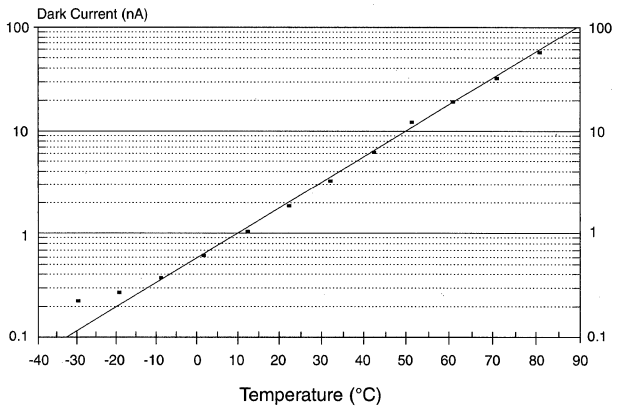
Dark Current



Responsivity vs. Temperature



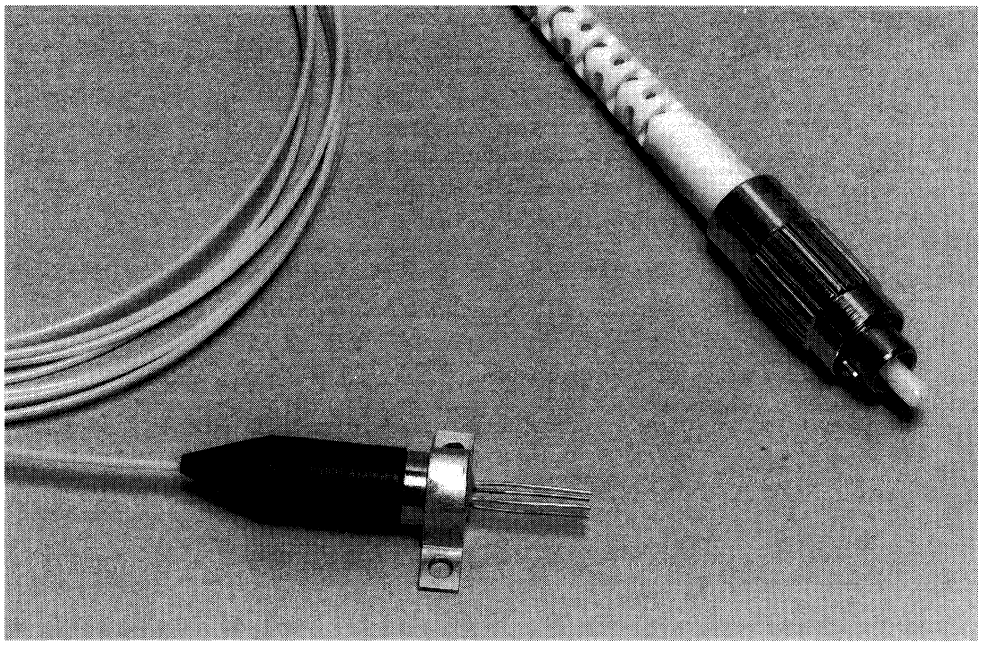
Dark Current vs. Temperature



Type	Part Numbers			
	Connector Interface			
	TO	FC	AMP SC	ST-Style
Standard	259007-1	259015-1	269027-1	259013-1
Premium	259007-2	259015-2	269027-2	259013-2
Singlemode	N/A	N/A	N/A	259013-7

Note: For mechanical dimensions order customer drawing.

Pigtailed InGaAs Photodetector



Product Facts

- **High reliability passivated planar structure**
- **High responsivity**
- **Low dark current**
- **Low capacitance**
- **Hermetically sealed TO-18 style package installed in industry standard ADMs**
- **-40° to +85°C operating temperature**
- **Each unit serialized**

AMP pigtailed InGaAs PIN photodetectors offer high responsivity for nearly all digital and analog fiber optic applications. The unique design balances high-speed performance with noise-free linear output. Spectral response has been optimized for the long wavelength region of 1150 nm to 1600 nm. Every component delivered has passed extensive high-temperature screening to provide long-term reliability.

Compatible with industry standards, AMP components incorporate hermetically sealed TO-18 style PIN packages which have been actively aligned for optimal performance. The modules are designed for board mounting.

Each unit is temperature cycled and burned-in. Responsivity, dark current and capacitance are measured on each unit. No data is supplied with the unit. A six digit serial number is used for traceability.

Specifications: 25°C, –5 Volts

Parameter	Part Number	Test Conditions	Units	Min.	Typ.	Max.
Responsivity 50 μm fiber pigtail	 269059 269046	 Laser source of 10 μW	 A/W	 .70 .75	 .80 .87	 — —
Spectral Response	—	—	nm	1150	—	1600
Capacitance	269059 269046	f=1 MHz f=1 MHz	pF pF	—	1.5 .9	1.7 1.1
Dark current	269059 269046	—	nA nA	—	2 1	5 5
Rise/fall	269059 269046	—	ns ns	—	—	1 .5
Bandwidth	269059 269046	—	GHz GHz	—	1.5 2.0	—
Reliability	—	I_D>5 nA	hrs	—	2.0 x 10^8	—

Absolute Maximum Rating

	Units	Min.	Max.
Operating temperature	°C	-40	85
Storage temperature	°C	-40	85
Reverse voltage	V	—	20
Forward current	mA	—	1

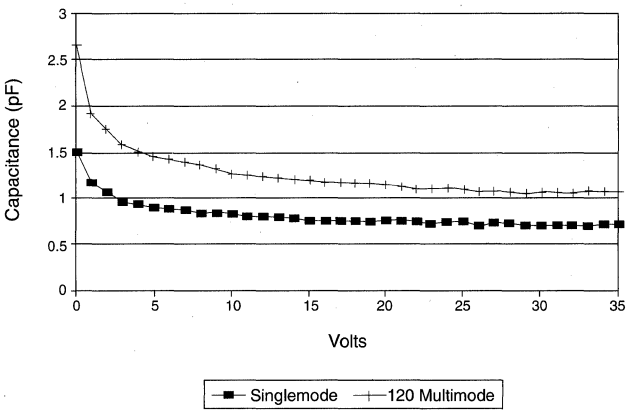
SOURCE: Catalog 124002

Specifications subject to change.
1-800-522-6752 Product Information Center/ AMP FAX Service
1-800-722-1111 Tooling/Technical Assistance Center

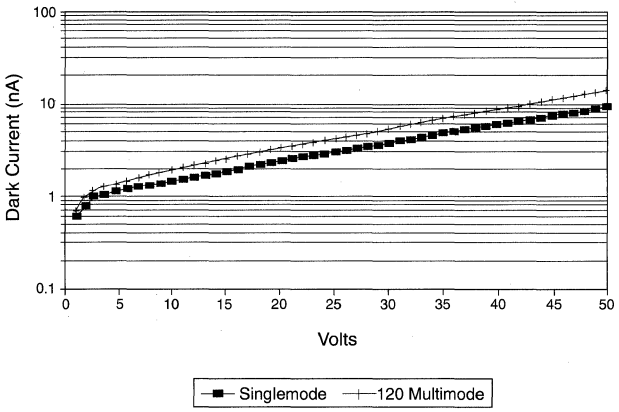
Pigtailed InGaAs Photodetector

(Continued)

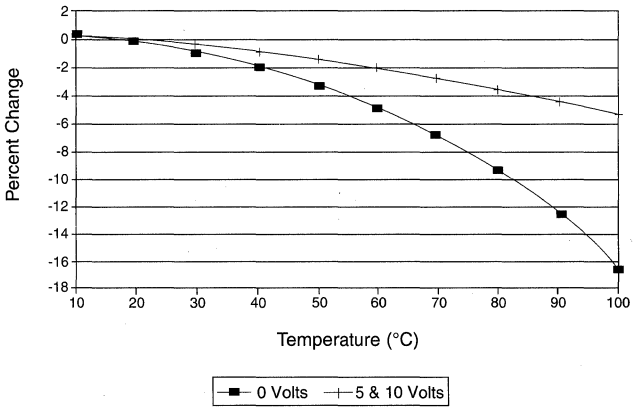
Capacitance



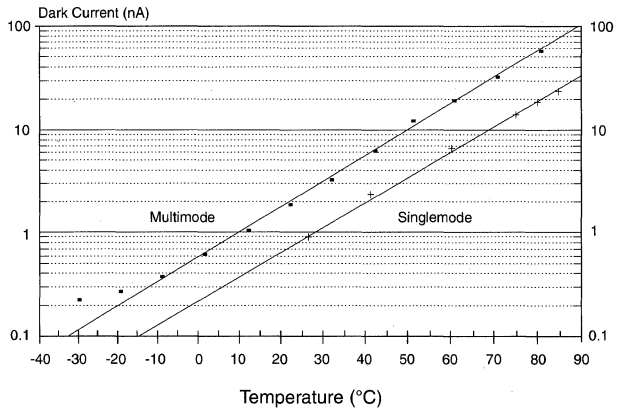
Dark Current



Responsivity vs. Temperature



Dark Current vs. Temperature

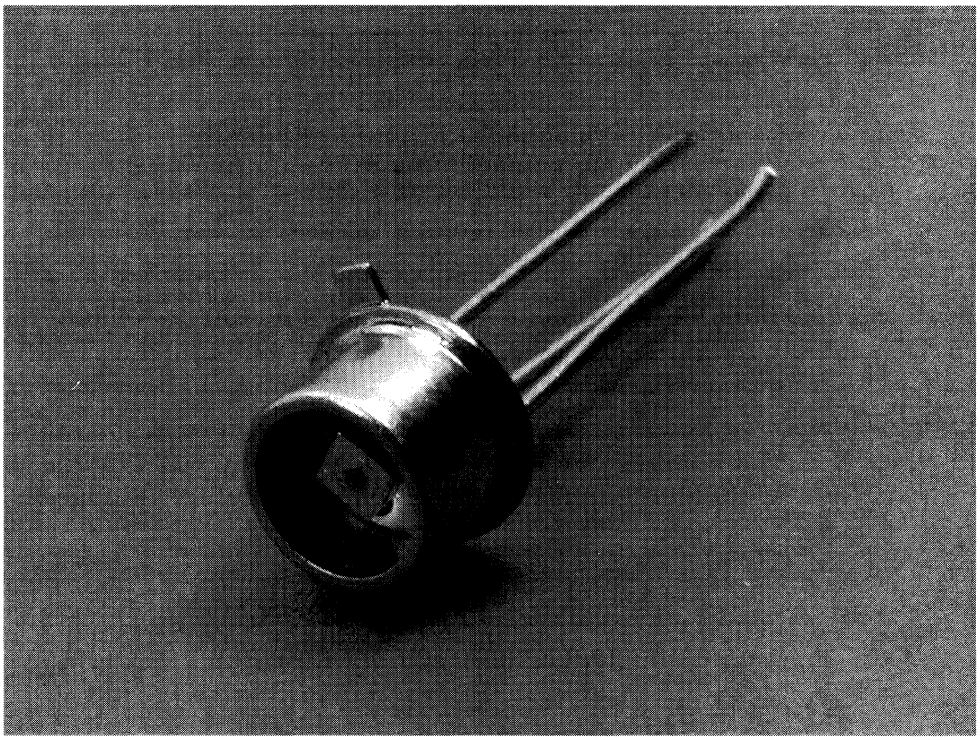


Type	Part Numbers			
	Interface			
	FC	AMP SC	ST-Style	Unterminated
Multimode application	269059-2	269059-3	269059-4	269059-1
Singlemode application	269046-2	269046-3	269046-4	269046-1

Note: For mechanical dimensions order customer drawing.

SOURCE: Catalog 124002

Wide Area InGaAs Photodetector



Product Facts

- **500 µm active area**
- **High reliability passivated planar structure**
- **High responsivity**
- **Hermetically sealed TO-18 style package**
- **-40° to +85°C operating temperature**

The AMP large area InGaAs PIN photodetectors offer high responsivity for analog instrumentation applications. Spectral response has been optimized for the long wavelength region of 1150 nm to 1600 nm. Every component delivered has passed extensive high-temperature screening to provide long-term reliability.

The AMP TO-18 style PIN is hermetically sealed and has been actively aligned and tested to provide maximum responsivity in your application.

Responsivity, dark current and capacitance are measured on each unit. All units are burned-in. No data is supplied with the unit.

For additional information on product qualification, reference Product Specification 108-55008.

Specifications: 25°C, –5 Volts

Parameter	Part Number Suffix	Test Conditions	Units	Min.	Typ.	Max.
Responsivity 50 µm 62.5 µm	-5	LED source of 10 µW	A/W A/W	.5 .3	.65 .45	—
9 µm fiber	-5	Laser source of 10 µW	A/W	—	.8	—
Spectral Response	—	–3 dB	nm	1150	—	1600
Capacitance	-5	f=1 MHz	pF	—	11	25
Dark current	-5	—	nA	—	25	100
Bandwidth	-5	—	MHz	—	352	—
Reliability	-5	—	hrs	—	—	—

Absolute Maximum Rating

	Units	Min.	Max.
Operating temperature	°C	-40	85
Storage temperature	°C	-40	125
Reverse voltage	V	-20	—
Forward current	V	—	0.5

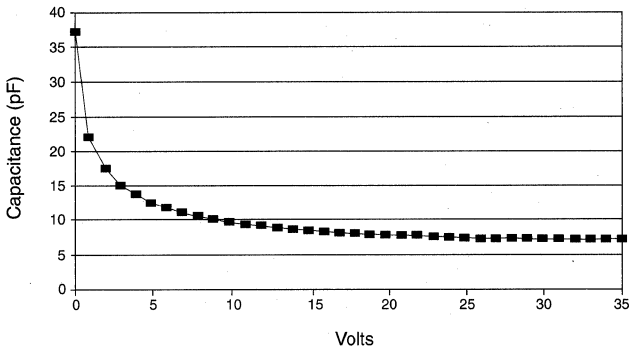
SOURCE: Catalog 124002

Specifications subject to change.
1-800-522-6752 Product Information Center/ AMP FAX Service
1-800-722-1111 Tooling/Technical Assistance Center

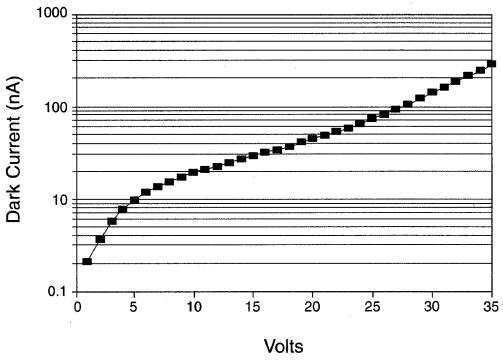
Wide Area InGaAs Photodetector

(Continued)

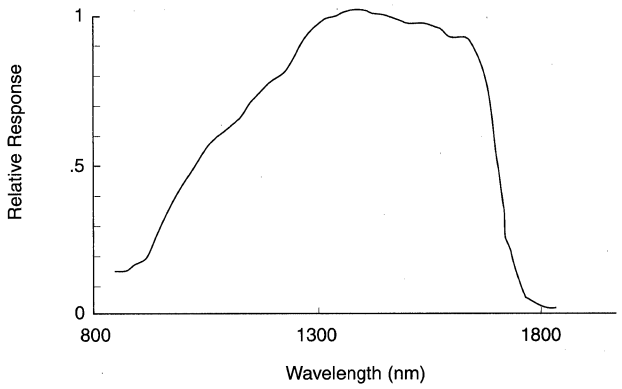
Capacitance



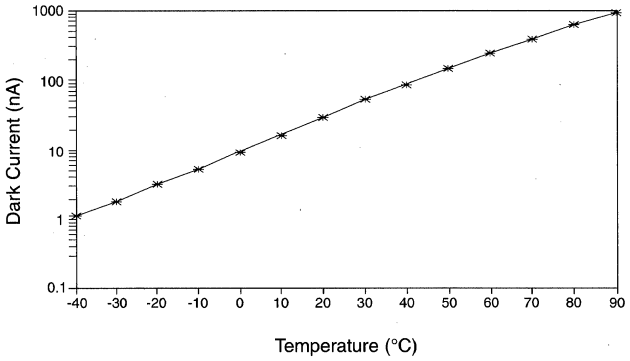
Dark Current



Spectral Response



Dark Current vs. Temperature



Style	Part Number
TO Package	259007-5

Note: For mechanical dimensions order customer drawing.

OC-1 PIN/Preamp Modules

Product Facts

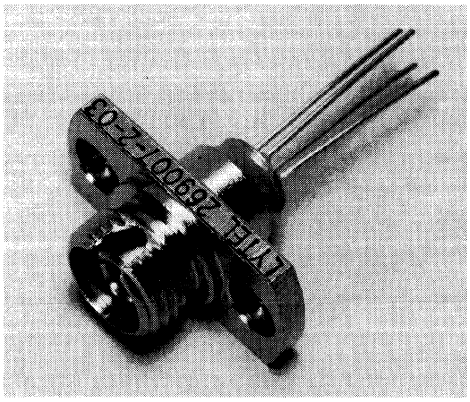
- **50 MHz analog bandwidth**
- **Low noise**
- **–43 dBm sensitivity**
- **Automatic gain control**
- **Industry standard ADM**
- **Each unit serialized**
- **Choice of pinout configuration**

The AMP PIN/Preamp module offers an InGaAs PIN photodetector coupled with a GaAs transimpedance amplifier. Mounted in a hermetically sealed TO-18 package, each unit is actively aligned for maximum coupling. The module also includes on chip AGC for wide dynamic range (40 dB optical) as well as low noise, wide bandwidth operation. The PIN/Preamp module is ideally suited for data rates ranging from 1 Mb/s up to SONET OC-1 fiber optic receiver applications. AMP processes PIN/Preamp modules to comply to the intent of Bellcore advisory TA-TSY-000983.

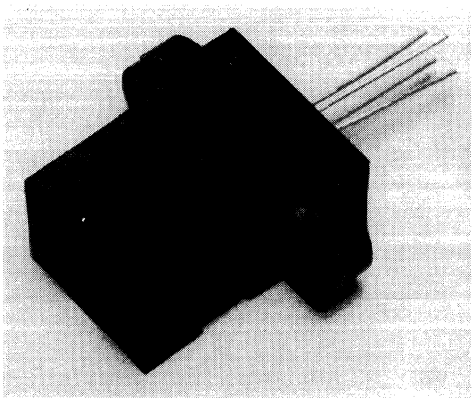
Each unit is temperature cycled and burned in. Bandwidth, gain, input noise and power supply current are measured on each unit. No data is supplied with the unit.

For additional information on product qualification, reference Product Specification 108-55005.

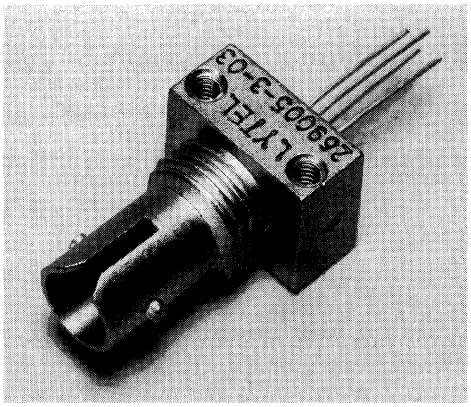
For additional information on performance and circuit layout, reference Application Note 124009.



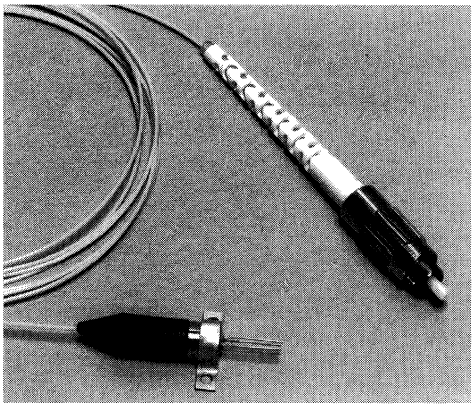
FC Style



AMP SC Style



ST-Style



FC Board Mount Style

Specifications: Dual Power Supply (V_{DD} = +5V ± 5%, V_{PIN} = -5V. T_A = -40° to +85°C)
Single Power Supply (V_{DD} = +5V ± 5%)

Parameter	Minimum	Typical	Maximum	Units
Bandwidth (-3 dB)	40	65	—	MHz
Gain	10.5	17.5	—	mV/µW
RMS input noise power	—	8	24	nW
Power supply current	—	—	55	mA
Sensitivity	—	-43	—	dBm
Reliability	—	2.2	—	FITS

Absolute Maximum Rating

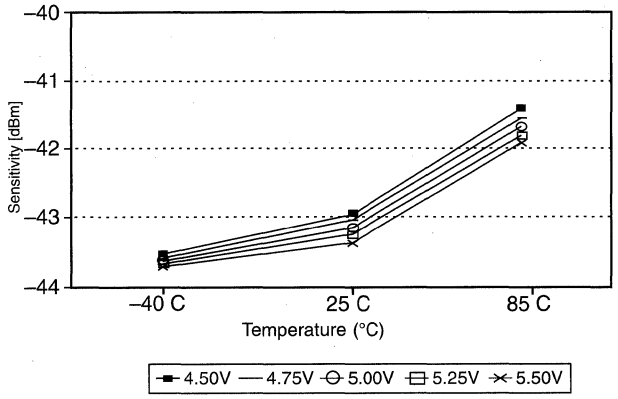
Parameter	Minimum	Typical	Maximum	Units
Operating temperature	-40	—	85	°C
Storage temperature	-40	—	85	°C
Operating voltage	4.5	—	6.0	V
Optical input (Avg)	—	—	-3	dBm
PIN bias (Dual Supply)	-20	—	0	V

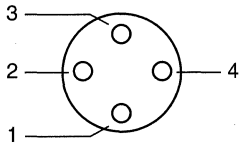
SOURCE: Catalog 124002

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

OC-1
PIN/Preamp Modules
(Continued)

Estimated Sensitivity vs.Temperature and Voltage





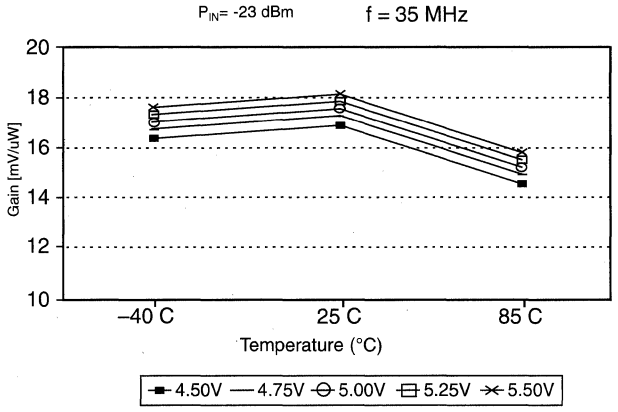
Pinout A—Single Power Supply

Pin 1: GND internally grounded
Pin 2: +5 Volt V_{DD}, requires 60 mA maximum current
Pin 3: GND case ground
Pin 4: V_{out} is the TIA output, should be ac coupled (0.1 µF) to a 50Ω (minimum) load

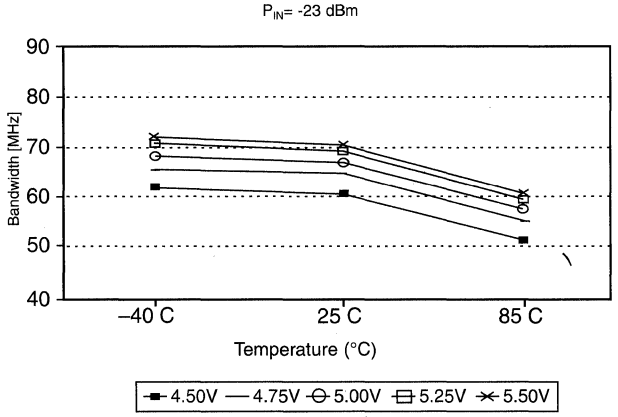
Pinout B—Dual Power Supply

Pin 1: -5 Volt photodiode bias, allows monitoring of the photodiode current
Pin 2: +5 Volt V_{DD}, requires 60 mA maximum current
Pin 3: GND case ground
Pin 4: V_{out} is the TIA output, should be ac coupled (0.1 µF) to a 50Ω (minimum) load

Gain vs. Temperature and Voltage



Bandwidth vs. Temperature and Voltage



Type	Part Numbers			
	Interface			
	FC	AMP SC	ST-Style	Unterminated
Connectorized				
Dual Power Supply	269007-1	269006-1	269005-1	N/A
Single Power Supply	269034-1	269035-1	269036-1	N/A
Board Mount Pigtailed (50 µm)				
Dual Power Supply	269043-2	269043-3	269043-4	269043-1
Single Power Supply	269045-2	269045-3	269045-4	269045-1

Note: For mechanical dimensions order customer drawing.

OC-3 PIN/Preamp Modules

Product Facts

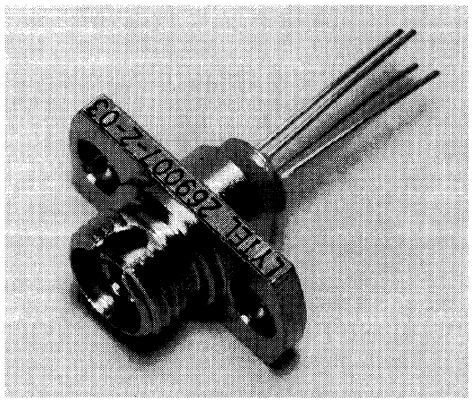
- 150 MHz analog bandwidth
- Low noise
- –38 dBm sensitivity
- Automatic gain control
- Industry standard ADM
- Each unit serialized
- Choice of pinout configurations

The AMP PIN/Preamp module offers an InGaAs PIN photodetector coupled with a GaAs transimpedance amplifier. Mounted in a hermetically sealed TO-18 package, each unit is actively aligned for maximum coupling. The module also includes on chip AGC for wide dynamic range (35 dB optical) as well as low noise, wide bandwidth operation. The AMP PIN/Preamp module is ideally suited for SONET OC-3 and other fiber optic receiver applications. AMP processes PIN/Preamp modules to comply to the intent of Bellcore advisory TA-TSY-000983.

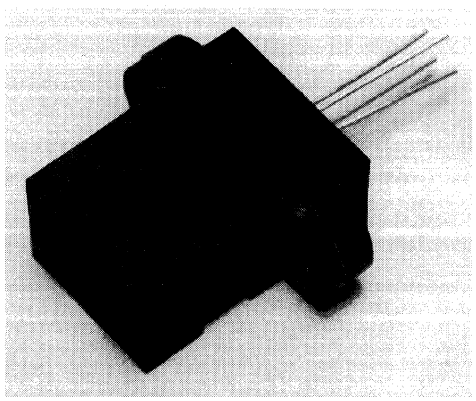
Each unit is temperature cycled and burned-in. Bandwidth, gain, input noise and power supply current are measured on each unit. No data is supplied with the unit.

For additional information on product qualification, reference Product Specification 108-55005.

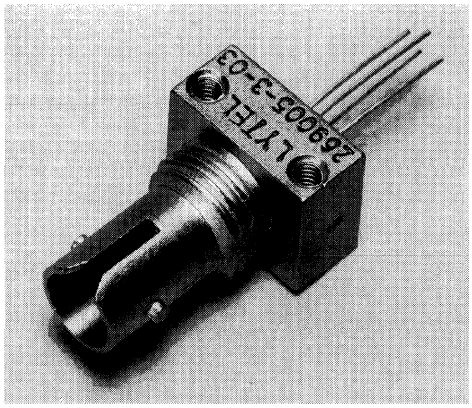
For additional information on performance and circuit layout, reference Application Note 124009.



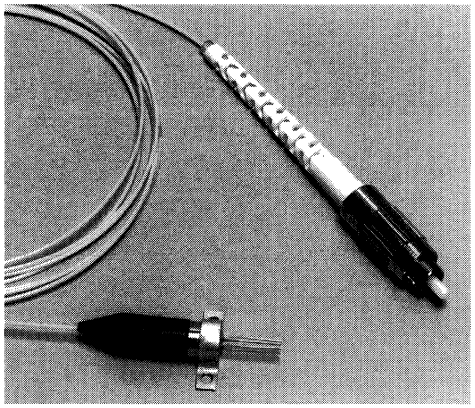
FC Style



AMP SC Style



ST-Style



FC Board Mount Style

Specifications: Dual Power Supply (V_{DD} = +5V ± 5%, V_{PIN} = -5V. T_A = -40° to +85°C)
Single Power Supply (V_{DD} = +5V ± 5%)

Parameter	Minimum	Typical	Maximum	Units
Bandwidth (-3 dB)	110	220	—	MHz
Gain	3.2	6	—	mV/µW
RMS input noise power	—	22	50	nW
Power supply current	—	—	55	mA
Sensitivity	—	-38	—	dBm
Reliability	—	2.2	—	FITS

Absolute Maximum Rating

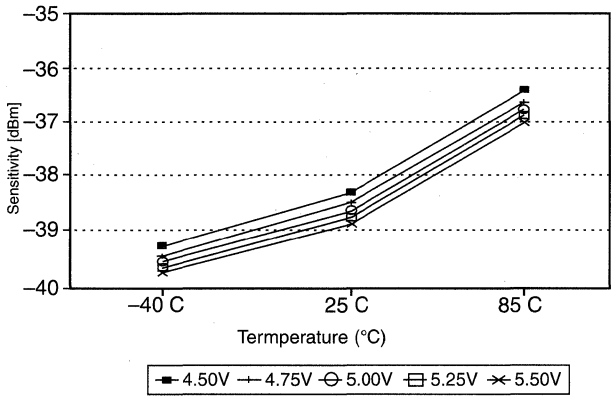
Parameter	Minimum	Typical	Maximum	Units
Operating temperature	-40	—	85	°C
Storage temperature	-40	—	85	°C
Operating voltage	4.5	—	6.0	V
Optical input (Avg)	—	—	-3	dBm
PIN bias (Dual Supply)	-20	—	0	V

SOURCE: Catalog 124002

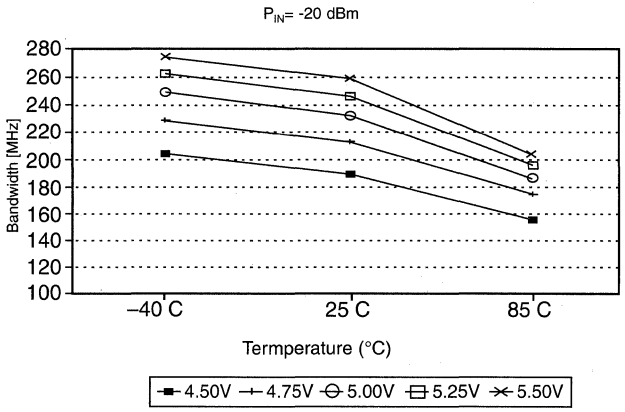
Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

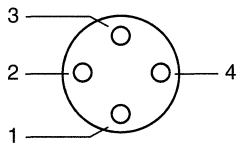
OC-3
PIN/Preamp Modules
(Continued)

Estimated Sensitivity vs. Temperature and Voltage

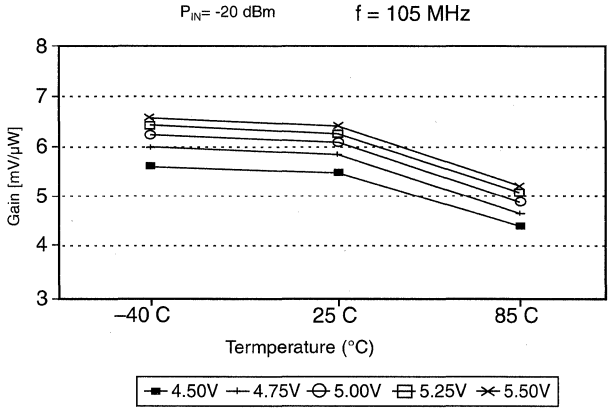


Bandwidth vs. Temperature and Voltage





Gain vs. Temperature and Voltage



Pinout A—Single Power Supply

Pin 1: GND internally grounded
Pin 2: +5 Volt V_{DD} requires 60 mA maximum current
Pin 3: GND case ground
Pin 4: V_{out} is the TIA output, should be ac coupled (0.1 µF) to a 50Ω (minimum) load

Pinout B—Dual Power Supply

Pin 1: -5 Volt photodiode bias, allows monitoring of the photodiode current
Pin 2: +5 Volt V_{DD} requires 60 mA maximum current
Pin 3: GND case ground
Pin 4: V_{out} is the TIA output, should be ac coupled (0.1 µF) to a 50Ω (minimum) load

Type	Part Numbers			
	Interface			
	FC	AMP SC	ST-Style	Unterminated
Connectorized				
Dual Power Supply	269007-2	269006-2	269005-2	N/A
Single Power Supply	269034-2	269035-2	269036-2	N/A
Board Mount Pigtailed (50 µm)				
Dual Power Supply	269056-2	269056-3	269056-4	269056-1
Single Power Supply	269058-2	269058-3	269058-4	269058-1

Note: For mechanical dimensions order customer drawing.

OC-12 PIN/Preamp Modules

Product Facts

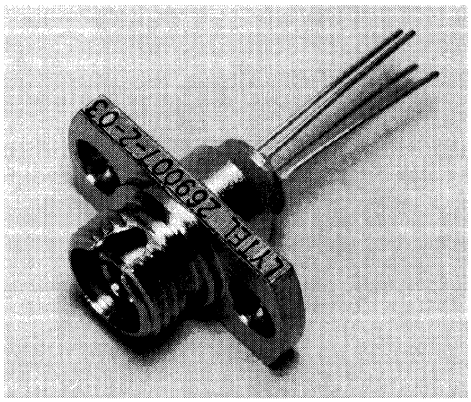
- 450 MHz analog bandwidth
- Low noise
- –32 dBm sensitivity
- Automatic gain control
- Industry standard ADM
- Each unit serialized

The AMP PIN/Preamp module offers an InGaAs PIN photodetector coupled with a GaAs transimpedance amplifier. Mounted in a hermetically sealed TO-18 package, each unit is actively aligned for maximum coupling. The module also includes on chip AGC for wide dynamic range (28 dB optical) as well as low noise, wide bandwidth operation. The AMP PIN/Preamp module is ideally suited for SONET OC-12 fiber optic receiver applications. AMP processes PIN/Preamp modules to comply to the intent of Bellcore advisory TA-TSY-000983.

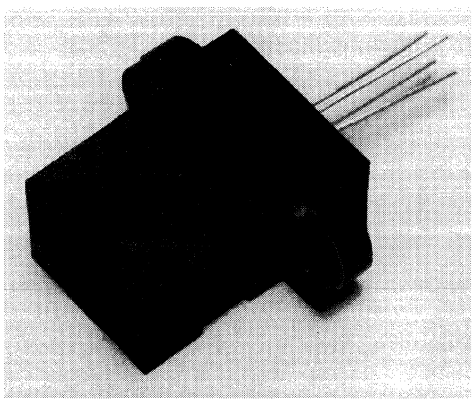
Each unit is temperature cycled and burned in. Bandwidth, gain, input noise and power supply current are measured on each unit. No data is supplied with the unit.

For additional information on product qualification, reference Product Specification 108-55005.

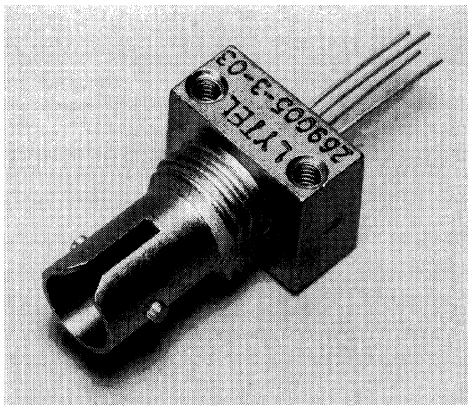
For additional information on performance and circuit layout, reference Application Note 124009.



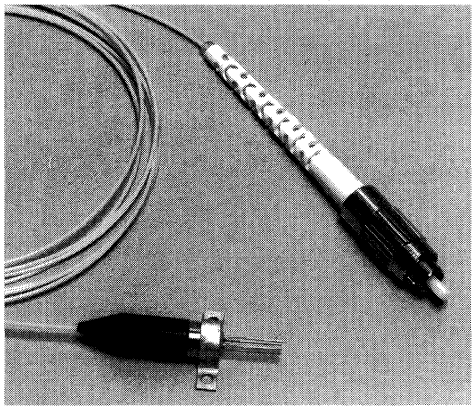
FC Style



AMP SC Style



ST-Style



FC Board Mount Style

Specifications: (V_{DD} = +5V ± 5%, V_{PIN} = -5V. T_A = -40° to +70°C)

Parameter	Minimum	Typical	Maximum	Units
Bandwidth (-3 dB)	440	450	—	MHz
Gain	1.5	2	—	mV/µW
RMS input noise power	—	100	200	nW
Power supply current	—	—	55	mA
Sensitivity	—	-32	—	dBm
Reliability	—	2.2	—	FITS

Absolute Maximum Rating

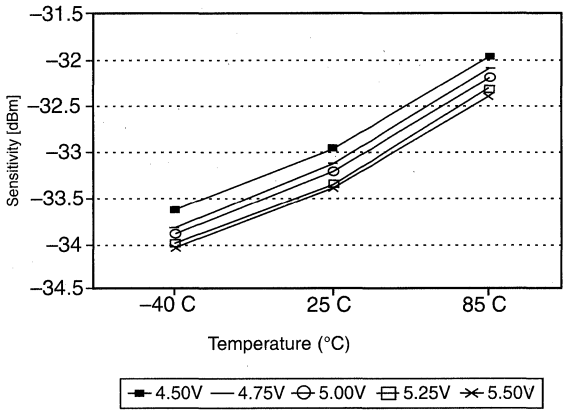
Parameter	Minimum	Typical	Maximum	Units
Operating temperature	-40	—	85	°C
Storage temperature	-40	—	85	°C
Operating voltage	4.5	—	6.0	V
Optical input (Avg)	—	—	–3	dBm
PIN bias	-20	—	0	V

SOURCE: Catalog 124002

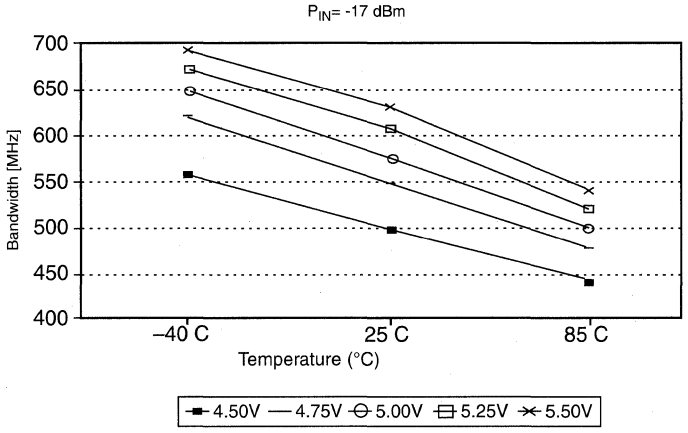
Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

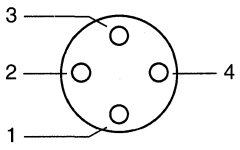
OC-12
PIN/Preamp Modules
(Continued)

Estimated Sensitivity vs. Temperature and Voltage



Bandwidth vs. Temperature and Voltage

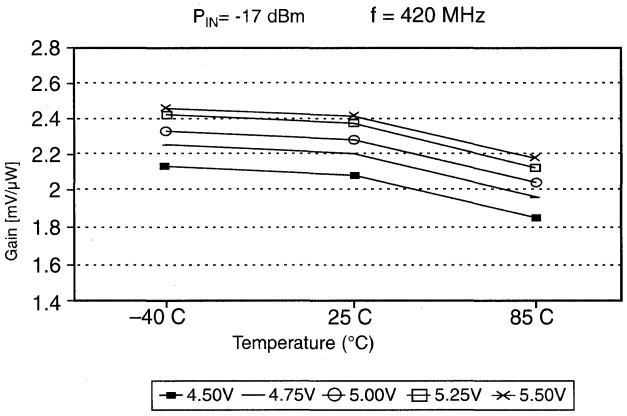




Pinout B—Dual Power Supply

Pin 1: -5 Volt photodiode bias, allows monitoring of the photodiode current
Pin 2: +5 Volt V_{DD}, requires 60 mA maximum current
Pin 3: GND case ground
Pin 4: V_{out} is the TIA output, should be ac coupled (0.1 µF) to a 50Ω (minimum) load

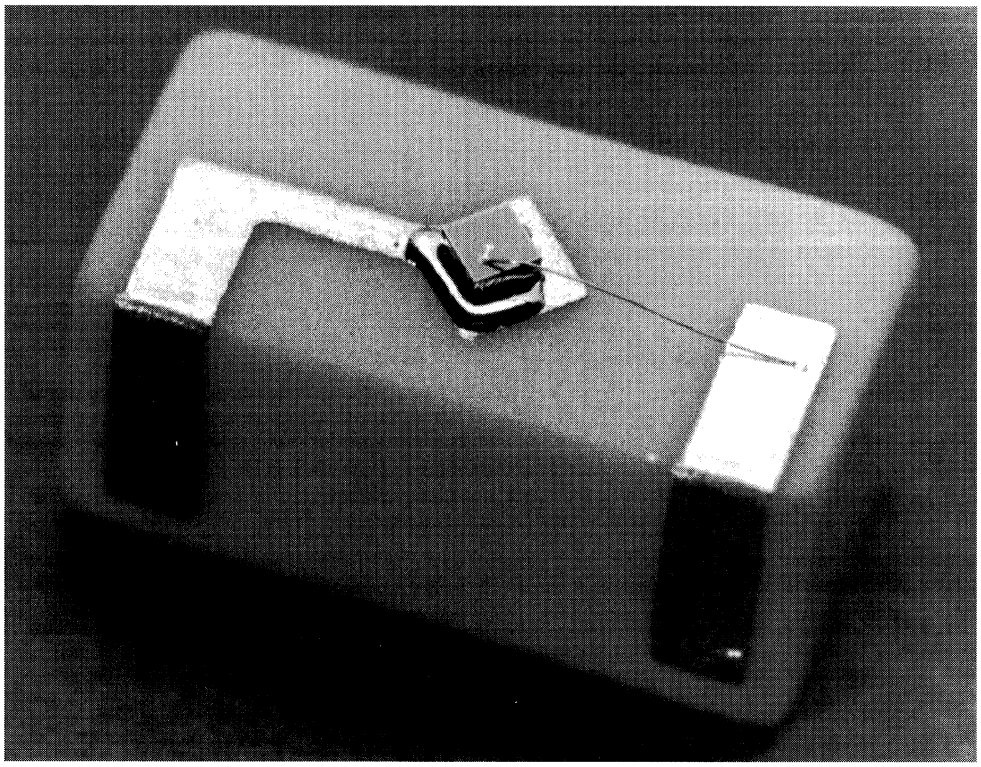
Gain vs. Temperature and Voltage



Type	Part Numbers			
	Interface			
	FC	AMP SC	ST-Style	Unterminated
Connectorized				
Dual Power Supply	269007-3	269006-3	269005-3	N/A
Board Mount Pigtailed (50 µm)				
Dual Power Supply	269057-2	269057-3	269057-4	269057-1

Note: For mechanical dimensions order customer drawing.

Submounted InGaAs PIN



Product Facts

- **High reliability passivated planar structure**
- **High responsivity**
- **Low dark current**
- **Low capacitance**
- **-40° to +85°C operating temperature**

AMP offers the performance of a high reliability InGaAs PIN to those designers which have custom packaging requirements. With a special response optimized from 1100 nm to 1600 nm, the AMP PIN is ideally suited for custom hybrid assembly into modules which address digital fiber optic transmission applications. Operational over a –55°C to 125°C operating temperature range, the PIN is suitable for both multimode and singlemode applications. Submounted PINs are available in a variety of active areas ranging from 50 µm to 500 µm.

If your mechanical or functional requirements are different from those presented here, AMP would like the opportunity to review your requirements to collectively identify a solution.

Testing typically completed on 100% of the product includes burn-in, responsivity, leakage current and capacitance. Serial numbers and data can be provided with each unit.

Specifications: 25°C, -5 Volts

Parameter	Part Number Suffix	Test Conditions	Units	Min.	Typ.	Max.
Responsivity						
9 µm fiber	-1	Laser source	A/W	.8	.9	—
9 µm fiber	-2	of 10 µW		.8	.9	—
Spectral Response	—	—	nm	1150	—	1600
Capacitance	-1	f=1 MHz	pF	—	.7	.9
	-2	f=1 MHz	pF		.50	.8
Dark current	-1	—	nA	—	1	4
	-2		nA		.44	2
Rise/fall	-1	—	ns	—	—	.5
	-2		ns			.5
Bandwidth	-1	—	GHz	—	3.5	—
	-2		GHz		4.4	
Reliability	—	I_D>2 nA	hrs	—	1.1 x 10^{10}	—

Absolute Maximum Rating

	Units	Min.	Max.
Operating temperature	°C	-40	85
Storage temperature	°C	-40	85
Forward current	mA	—	5

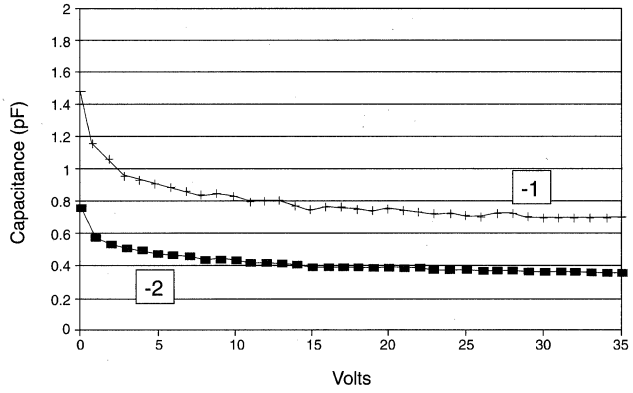
SOURCE: Catalog 124002

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

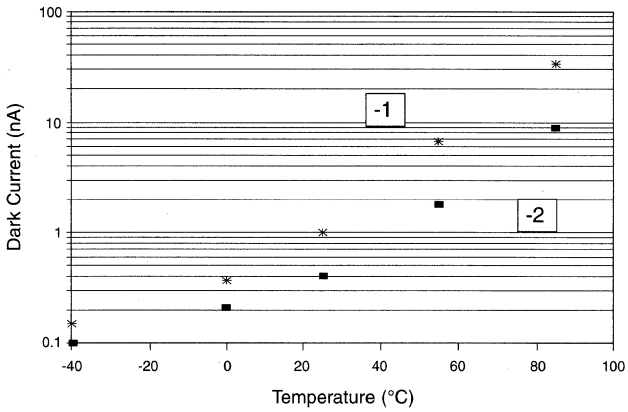
Submounted InGaAs PIN

(Continued)

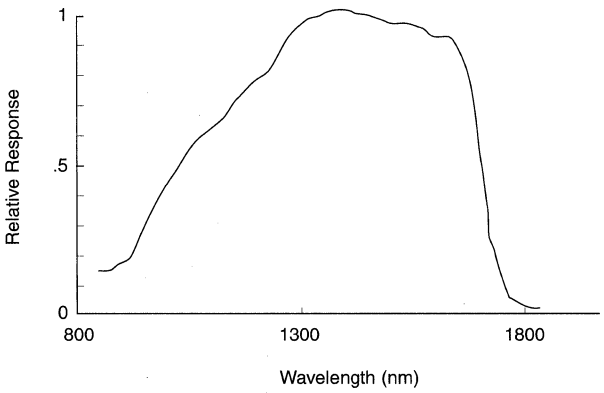
Capacitance



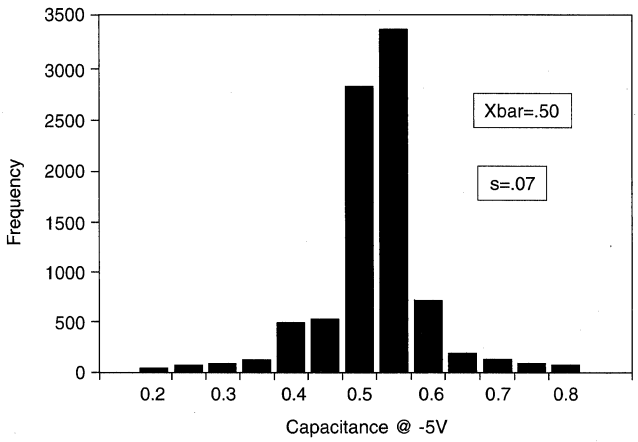
Dark Current vs. Temperature



Spectral Response



Capacitance of 50 µm PIN Submounted



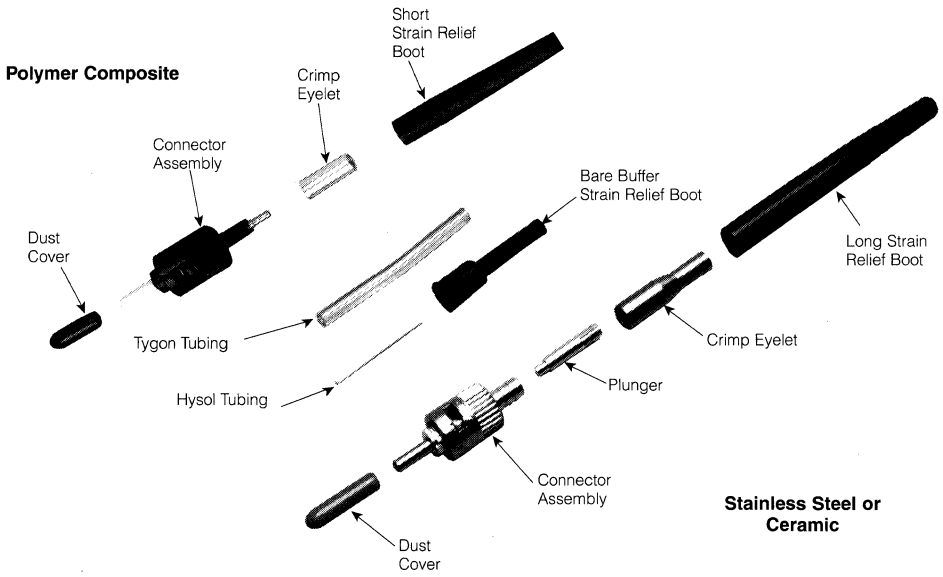
Type	Part Numbers
Submounted InGaAs PIN	259035-1
	259035-2

Note: For mechanical dimensions order customer drawing.

LightCrimp XTC Epoxyless ST-Style Connectors

Product Facts

- **Singlemode or multimode**
- **Just crimp it on the fiber**
- **No epoxy**
- **2 minute termination**



Performance Characteristics

		Multimode	Multimode	Multimode	Singlemode
Ferrule		Polymer Composite	Stainless Steel	Ceramic	Ceramic
Body		Polymer	Aluminum	Aluminum	Aluminum
Coupling Nut		Polymer	Die Cast Zinc	Die Cast Zinc	Die Cast Zinc
Nominal Fiber Size, µm		125	125, 140	125	126
Performance Specifications					
Insertion Loss	dB, Avg.	0.6	0.4	0.3	0.2
Back Reflection	dB	—	—	—	<40
Storage Temperature Range	C	-40° to +85°	-40° to +85°	-40° to +85°	-40° to +85°
Operating Temperature Range	C	-20° to +60°	-10° to +65°	-40° to +65°	-40° to +65°
Durability	cycles change (dB)	500 < .20	500 < .20	1,000 < .20	1,000 < .20
Part Numbers					
	125 µm	503453-1	504034-1	504001-1	504000-1
	140 µm	—	504034-3	—	—

LightCrimp XTC Termination Kits

For all LightCrimp XTC Connectors

Tool Kit: Part No. 503330-1

Tool Kit w/Premium microscope: Part No. 503330-2

Tool Kit w/Economy microscope: Part No. 503330-3

Accessories: All are included in termination kit.

Cleave tool (for LightCrimp connectors only): **Part No. 502700-2**

Polishing tool: **Part No. 503337-1**

Termination Kit: All the tools required to prepare and terminate all LightCrimp XTC connectors.

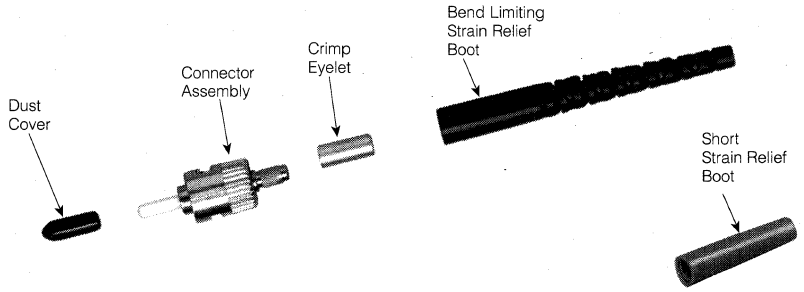
SOURCE: Catalog 124003

Specifications subject to change.
1-800-522-6752 Product Information Center/ AMP FAX Service
1-800-722-1111 Tooling/Technical Assistance Center

ST-Style Connectors

Product Facts

- **High performance multimode and singlemode ST compatible connectors**
- **Quick cure epoxy type**
- **Pre-radiused PC finish**



Performance Characteristics

		Multimode	Multimode	Multimode	Multimode	Multimode	Singlemode
Ferrule Material		Composite Polymer	Stainless Steel	Ceramic	Stainless Steel	Ceramic	Ceramic
Body Material		Polymer	Polymer	Polymer	Aluminum	Ni. Br.	Ni. Br.
Coupling Nut Material		Polymer	Polymer	Polymer	Die Cast	Die Cast	Die Cast
Connector Type		**1**	**1**	**1**	**2**	**2**	**2**
Nominal Fiber Size, µm		125	125, 140	125	125 to 1,000	125, 140	126*, 127
Performance Specifications							
Insertion Loss	dB, Avg.	0.3	0.3	0.4	0.3	0.3	0.3
Back Reflection	dB	—	—	—	—	—	< -40
Storage Temp. Range	C	-40° to +85°	-40° to +85°	-40° to +85°	-40° to +85°	-40° to +85°	-40° to +85°
Operating Temp. Range	C	-20° to +75°	-20° to +75°	-20° to +75°	-30° to +70°	-30° to +70°	-20° to +75°
Durability	cycles change (dB)	500 < .20	500 < .20	1,000 < .20	500 < .20	1,000 < .20	1,000 < .20

* Recommended part number

Part Number Information

Multimode Zirconia Ceramic Ferrule

Part Numbers

Hole Size µm		Connector Type	Boot Type & Color	Max. Cable Diameter
125	140			
501380-1	501380-6	2	Bend Limiting/Black	3.0
1-501380-5	—	2	Short/Black	3.0
502588-6	—	2	Bend Limiting	3.8
503571-1		1	Short/Black	3.0

Multimode Stainless Steel Ferrule

Part Numbers

Hole Size µm		Connector Type	Boot Type & Color	Max. Cable Diameter
125	140			
504008-3	504008-7	2	Long/Black	3.1
503416-1	503416-2	1	Short/Black	3.0

Multimode Polymer Composite Ferrule

Part Numbers

Hole Size 125 µm	Connector Type	Boot Type & Color	Max. Cable Diameter
503415-1	1	Short/Black	3.0

Note: Bulk packaged epoxy style components and kits are available with other strain relief colors. Contact AMP.

ST-Style Connectors
(Continued)

Singlemode Zirconia Ceramic Ferrule

Part Numbers

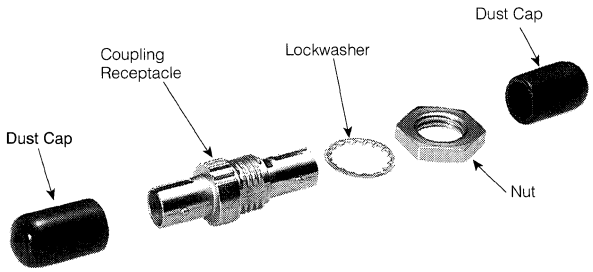
Hole Size µm		Connector Type	Boot Type & Color
126	127		
502579-2	502579-3	2	Bend Limiting/Yellow
502580-2	502580-3	2	Short/Yellow

Tools and Accessories for all epoxy type ST-Style Connectors

Description	Part Numbers
Termination Kit	503746-1
Crimp Tool (included in termination kit)	58433-4
Polishing Tool for Polymer Composite	503304-2
Polishing Tool for Stainless Steel and Ceramic	503304-1 or 503337-1

Coupling Receptacles

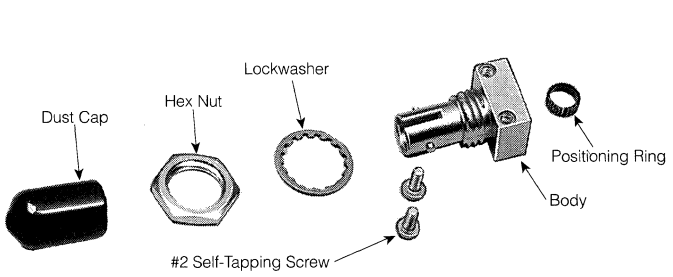
- Free-hanging or panel mount design
- Singlemode and multimode



Alignment Sleeve Material	Application	Packaging	Part Numbers
Polymer Composite	Multimode	Single	501381-1
Metal	Singlemode/Multimode	Single	504021-1
		Bulk (50)	504021-2
Zirconia Ceramic	Singlemode/Multimode	Single	502750-1

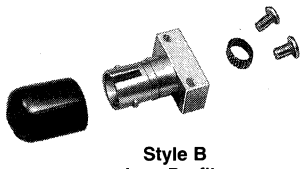
Active Device Mounts

- Designed to accept multimode TO-18, TO-46, and TO-52 active devices
- Nickel plated, die cast zinc
- Mount to Pcb or through panel
- Includes positioning ring



Style A

Style C



Style B
Low Profile

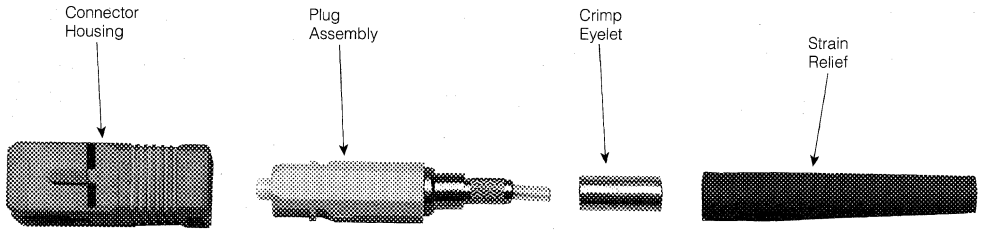
Description	Packaging	Style	Height	Part Numbers
Standard height	Single	A	**.410** [10.41]	501474-1
Low profile	Single	B	**.280** [7.11]	502585-2
Low profile	Single	C	**.314** [7.98]	504022-2
Low profile	Bulk (50)	C	**.314** [7.98]	504022-3

SOURCE: Catalog 124003

AMP SC Connectors

Product Facts

- Multimode and singlemode
- Compliant with Bellcore 326
- Field installable
- PC finish
- Compatible with all SC connectors
- Zirconia Ceramic Ferrule
- Compliant with:
  JIS C-5973 Standard
  TIA 568 Fiber Channel

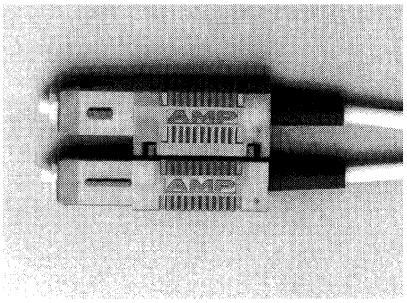


AMP SC Simplex Connectors

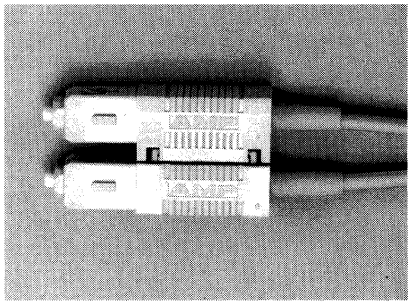
Fiber Diameter	Part Numbers	
	Singlemode	Multimode
125 µm	502882-1	502883-1
126 µm	502882-2	—
Color	Blue	Beige

Note: 126 µm hole size connectors are recommended for most singlemode 125 µm fiber diameters.
125 µm hole size connectors are for experienced users where best performance is desired.

All AMP SC Simplex connectors are compatible with NTT SC connectors and are made under license of NTT. AMP SC connector products provide high performance and ease of use. All allow simple field or factory termination in a minimal amount of time. A pre-radiused tip makes PC polishing simple, without expensive polishing equipment.



AMP SC Singlemode Duplex



AMP SC Multimode Duplex

AMP SC Duplex Connectors

Fiber Diameter	Part Numbers	
	Singlemode	Multimode
125 µm	—	503553-1
126 µm	503554-1	—
Color	Blue	Beige

Note: 126 µm hole size connectors are recommended for most singlemode 125 µm fiber diameters.
125 µm hole size connectors are for experienced users where best performance is desired.

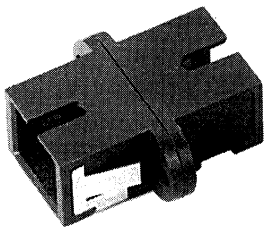
Tools and Accessories for all AMP SC Connectors

Description	Part Numbers
Termination Kit	503746-5
Crimp Tool (included in termination kit)	58433-4
Polishing Tool (included in termination kit)	502631-1

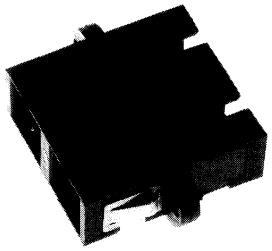
AMP SC Receptacles

Product Facts

- Use with all SC type connectors
- The Duplex Receptacle will accept either two individual connectors or one duplex connector
- Multimode or singlemode with same part
- Mounting screws available



AMP SC Simplex Coupling Receptacle



AMP SC Duplex Coupling Receptacle

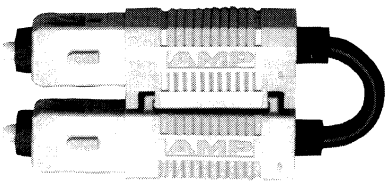
AMP SC Simplex Coupling Receptacles	Part Numbers		
Metal Alignment Sleeves	**Black**	**Blue**	**Beige**
with dust covers	502632-7	502632-8	502632-9
Ceramic Alignment Sleeves			
with dust covers	1-502632-0	1-502632-1	1-502632-2

AMP SC Duplex Coupling Receptacles	Part Numbers		
Metal Alignment Sleeves	**Black**	**Blue**	**Beige**
with dust covers	502776-7	502776-8	502776-9
Ceramic Alignment Sleeves			
with dust covers	1-502776-0	1-502776-1	1-502776-2

Note: Package of 100 mounting screws, **Part No. 503663-1.**

AMP SC Low Loss Loopback Connector

Part No. 503141-1



Product Facts

- Multimode
- Use for equipment testing
- 0.6 dB insertion loss
- 0.5″ ferrule centerline

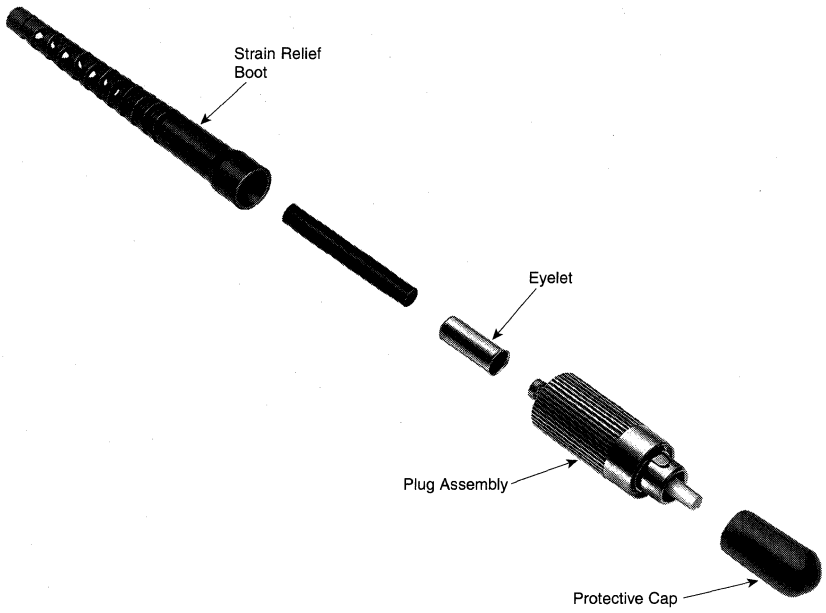
SOURCE: Catalog 124003

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

FC Type Connectors

Product Facts

- Singlemode
- Compliant with Bellcore 326
- Pre-radiused ferrule for PC (physical contact) or SPC (super physical contact) polishers
- Terminates up to 3.00 mm dia. cable jacket
- Compatible with NTT-FC and JIS FC connectors
- May be tuned for minimum loss
- Simple field assembly
- Zirconia Ceramic Ferrule



Hole Diameter (µm)	Part Numbers	
	Long Strain Relief	Short Boot
125	1-501505-2	503161-1
126	1-501505-3	503161-2

Notes: 126 µm hole size connectors are recommended for most singlemode 125 µm fiber diameters.
125 µm hole size connectors are for experienced users where best performance is desired.

Tools and Accessories

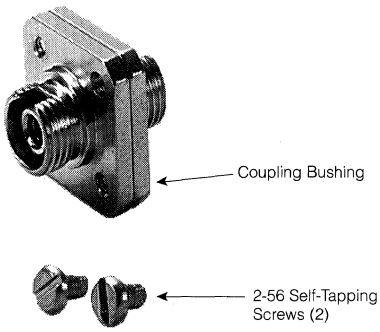
Description	Part Numbers
Termination Kit	503746-3
Crimp Tool (included in termination kit)	58433-4
Polishing Tool (included in termination kit)	501861-1

Receptacles

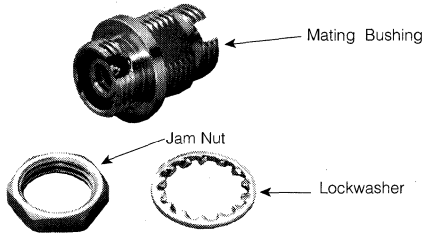
Product Facts

- For Singlemode or multimode
- Kit includes dust covers (not shown)

Square Flange
Part No. 501506-1
(Ceramic Sleeve)
Part No. 501506-2
(Metal Sleeve)



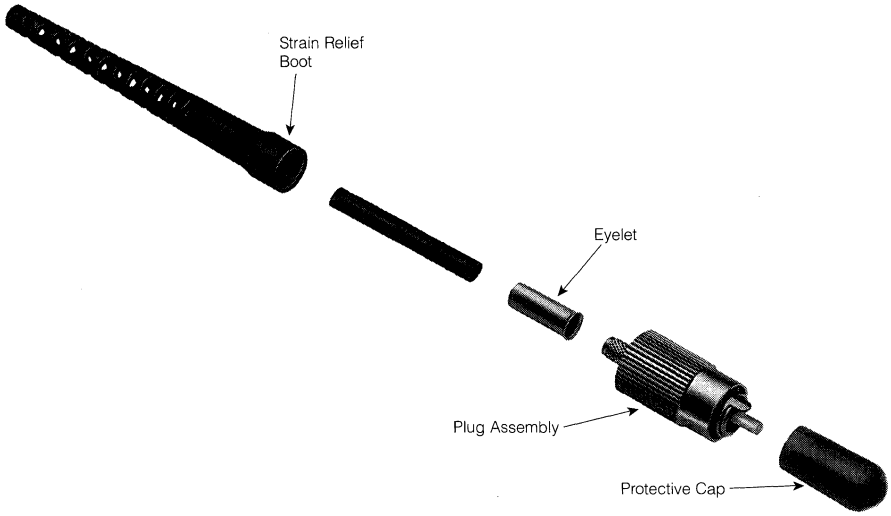
Round Flange
(fits ST-style cutout)
Part No. 504407-3
(Ceramic Sleeve)
Part No. 504407-1
(Metal Sleeve)



D4 Connectors

Product Facts

- Singlemode
- Terminates up to 3.00 mm dia. cable jacket
- Compatible with NEC-D4 and JIS connectors
- May be tuned for minimum loss
- Zirconia Ceramic Ferrule
- Easily applied in the field



Hole Diameter (µm)	Part Numbers	
	Long Strain Relief	Short Boot
125	501508-2	502736-1
126	501508-3	502736-2

Notes: 126 µm hole size connectors are recommended for most 125 µm fiber diameters.
125 µm hole size connectors are for experienced users where best performance is desired.

Tools and Accessories

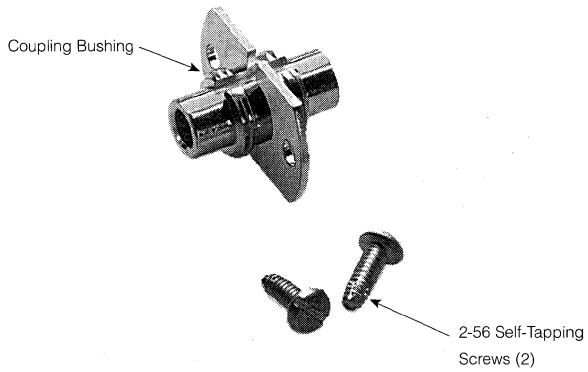
Description	Part Numbers
Termination Kit	503746-4
Crimp Tool (included in termination kit)	58433-4
Polishing Tool (included in termination kit)	501867-1

Receptacles

Product Facts

- Singlemode
- Kit includes dust covers (not shown)
- Nickel plated, die cast body

Part No. 501509-1
(Ceramic Sleeve)
Part No. 501509-2
(Metal Sleeve)



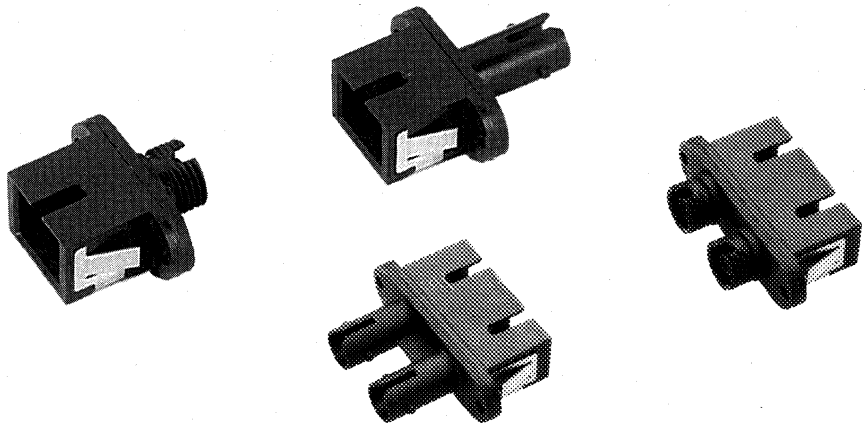
SOURCE: Catalog 124003

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

Hybrid Adapters

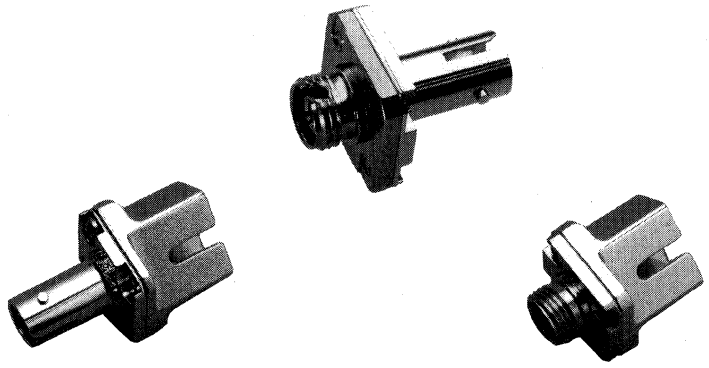
Product Facts

- Use for multimode or singlemode
- Available with mounting screws
- Adapt various connector interfaces



Description	Part Numbers			
Housing Material/Color	Plastic/Black	Plastic/Blue	Plastic/Beige	Nickel Plated Die Cast
AMP SC to ST-Style				
Metal Alignment Sleeve	502780-1	502780-2	502780-3	503638-1
Ceramic Alignment Sleeve	502780-4	502780-5	502780-6	503638-2
AMP SC to FC				
Metal Alignment Sleeve	502781-1	502781-2	502781-3	503480-1
Ceramic Alignment Sleeve	502781-4	502781-5	502781-6	503480-2
FC to ST-Style				
Metal Alignment Sleeve	—	—	—	503640-1
Ceramic Alignment Sleeve	—	—	—	503640-2
Duplex				
AMP SC to ST-Style				
Metal Alignment Sleeve	503137-1	503137-2	503137-3	—
Ceramic Alignment Sleeve	503137-4	503137-5	503137-6	—
AMP SC to FC				
Metal Alignment Sleeve	503135-1	503135-2	503135-3	—
Ceramic Alignment Sleeve	503135-4	503135-5	503135-6	—

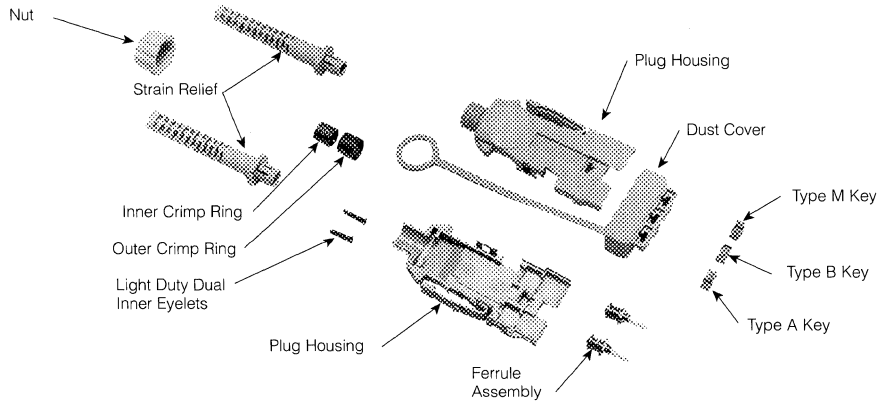
Note: Package of 100 mounting screws, **Part No. 503663-1.**



FSD Plug

Product Facts

- **Multimode**
- **Meets Specifications of FDDI PMD – ANSI X3.166**
- **Ceramic or Polymer Composite Ferrules**
- **Designed in polarization and user defined keying**



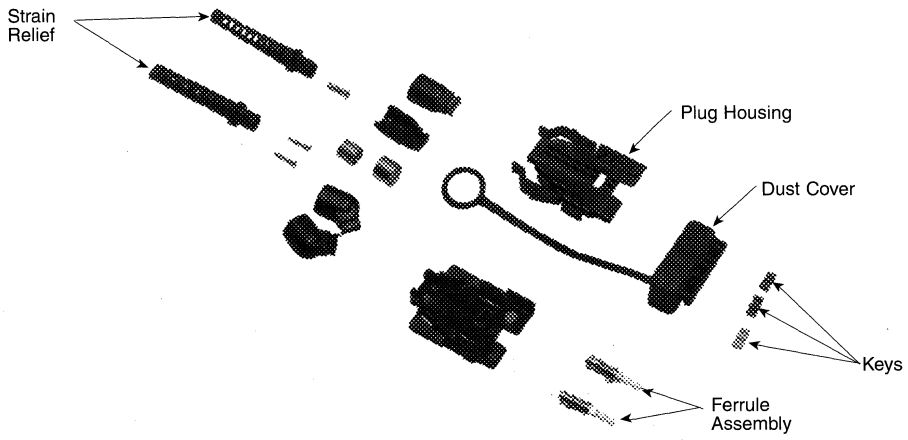
FSD Plug Part Numbers

Diameter (µm)	Cable Type				Replacement Ferrules*
	DUALAN		Light Duty Dual		
Ceramic Ferrules	**Single Packed**	**Bulk Packed**	**Single Packed**	**Bulk Packed**	
125	501780-1	501780-3**	502015-1	502015-3**	501779-1
140	501780-2	—	502015-2	—	501779-3
Polymer Composite					
125	503347-1	503347-4**	503347-5	503347-7**	502653-4
140	503347-2	—	503347-6	—	502653-5

*Part number is for a single ferrule.
** Bulk packed, 250 per package
Termination Kit, **Part No. 503746-6**
Assembly Fixtures Kit (included in termination kit)
with Polishing Tool, **Part No. 501795-1;**
without Polishing Tool, **Part No. 502023-1**

FSD–MC Connector Plug

The FDDI compatible FSD MC (multi-exit connector) is a lower profile version of the original FSD product. It allows tighter spacing, and the cable can exit at 45° or 180°. Both singlemode and multimode connectors are available.



FSD-MC Plug Part Numbers

Description	Exit Housing	Cable Type		Replacement Ferrules*
		Zipcord	DUALAN	
Singlemode (Black Components)	45°	503345-4	503345-3	503300-2
	180°	503345-2	503345-1	
Multimode (Beige Components)	45°	503343-4	503343-3	503299-1
	180°	503343-2	503343-1	

Termination Kit, **Part No. 503746-6**
Assembly Fixture Kits (included in termination kit): with Polishing Bushing, **Part No. 503366-1;** without Polishing Bushing **Part No. 503366-2.**

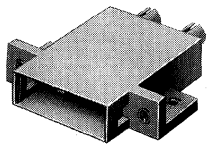
*Part number is for a single ferrule.

SOURCE: Catalog 124003

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

Fixed Key FSD Receptacles

FSD ST-Style Bulkhead Adapter

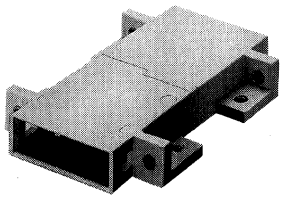


Product Facts

- Multimode
- Conforms to the FDDI–PMD requirements
- Connects FDDI connector to two ST-Style connectors

Housing Material	Threaded Insert Size	Part Numbers Keying Type A	B	M	S
Plastic	4-40	501798-1	501798-2	501798-3	501798-4
Plastic	M3	501933-1	501933-2	501933-3	501933-4

FSD Duplex-to-Duplex Receptacle

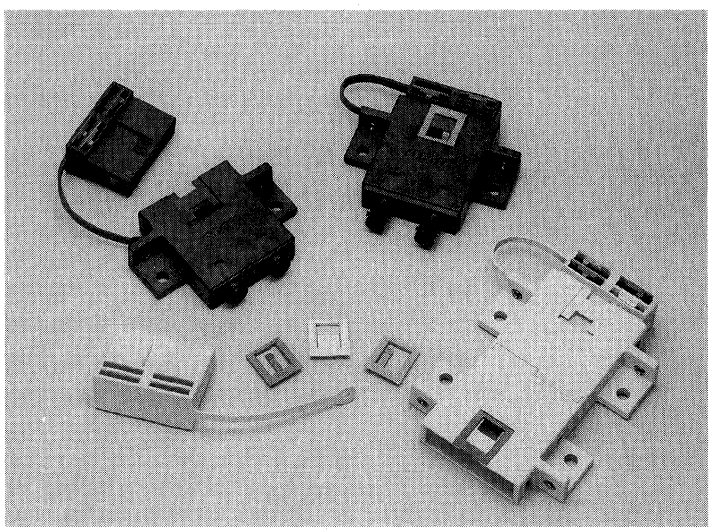


Product Facts

- Multimode
- Allows mating of two FDDI plugs, available with and without mounting ears
- Conforms to the FDDI-PMD requirements

Style	Threaded Insert Size	Part Numbers Keying Type A to B	M to S
With Mounting Ears	4-40	501926-1	501926-2
	M3	501931-1	501931-2
Without Mounting Ears	—	501805-1	501805-2

Field Keyable FSD Receptacles



Product Facts

- Singlemode and multimode
- Keys can be inserted and changed by the user
- Conforms to FDDI–PMD
- FDDI to FDDI
  FDDI to ST-Style
  FDDI to FC Type

Multimode Receptacles (Color—Beige)

Description	Part Numbers Sleeve Material Metal	Ceramic
FSD — FSD	502806-2	502806-4
FSD — ST-Style	502808-2	502808-4
FSD — FC Type	502873-2	502873-4

Field Key Extraction Tool: **Part No. 503679-1**

Singlemode Receptacles (Color—Black)

Description	Part Numbers Sleeve Material Ceramic
FSD — FSD	502807-1
FSD — ST-Style	502809-1
FSD — FC Type	502874-1

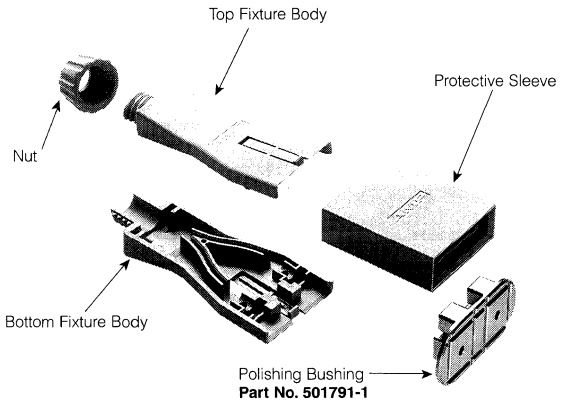
SOURCE: Catalog 124003

FSD Duplex Assembly Fixture Kit (Included in Termination Kit)

With polishing bushing
For FSD: Part No. 501795-1
For FSD–MC: Part No. 503366-1

Without polishing bushing
For FSD: Part No. 502023-1
For FSD–MC: Part No. 503366-2

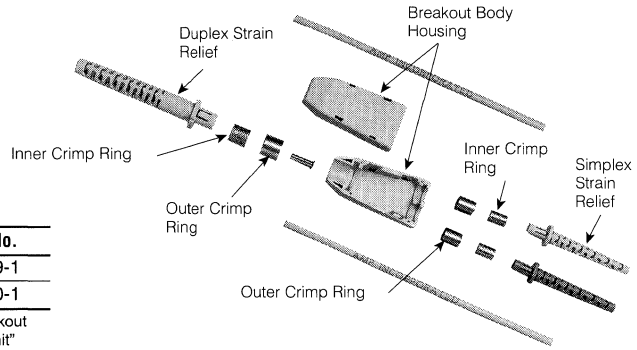
- **Used to hold ferrules during assembly, epoxy curing and polishing**
- **Allows simultaneous polishing of both ferrules**



FSD DUALAN Cable Breakout Kit

Part No. 502020-1

For use with AMP DUALAN Cable or similar dual fiber cables to provide rugged protection for fibers at transition between duplex and simplex cables.



Tooling	Part No.
Hand Tool with die set	58519-1
Die Set Only	58510-1

Kit also includes 1 meter length of breakout tubing and 1 each "receive" and "transmit" labels.

FSD Multimode Loopback Connector 5 ±5 dB

Part No. 502789-1

The AMP FSD loooback connector connects the transmit side of the FDDI transceiver to the receive side. The device has a positive latch feature similar to the standard AMP FSD connector. Its components include lower cost plastic ferrules, fiber, and housing. The attenuation is 5±5 dB.

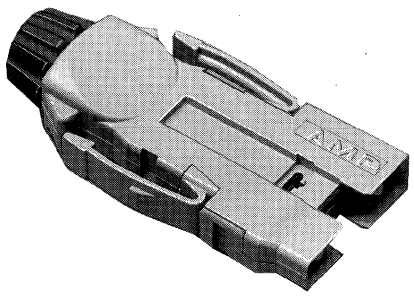
The device is used to test a FDDI station.

FSD Low Loss Multimode Loopback Connector 1.5 dB Max.

Part No. 502556-1

Similar to Part No. 502789-1, but with lower loss. The ceramic ferrules and glass fiber provide a maximum loss of 1.5 dB.

This device is used as a test unit in a fiber-to-fiber application (for example, patch panel, wall outlet or wiring closet).

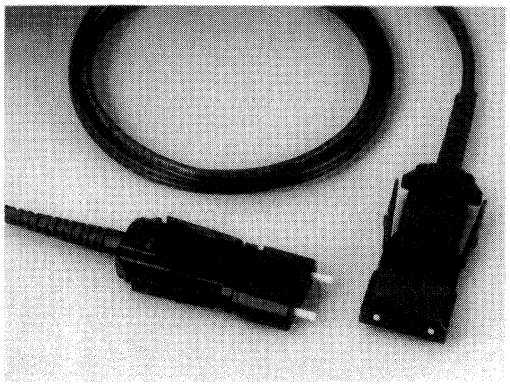


SOURCE: Catalog 124003

RSD (Retractable Shroud Duplex) Connector Plug

Product Facts

- **Multimode**
- **Compatible with IBM ESCON connector system**
- **Simple field assembly**



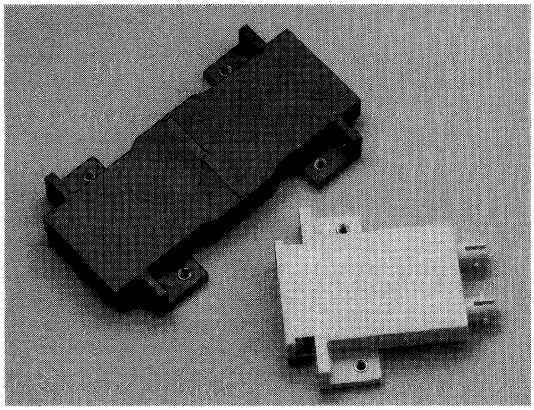
Fiber Size (µm)	Cable Type	Part Numbers Black
125	LDD	503002-6
	DUALAN	503002-5

Termination Kit: **Part No. 503746-6.**

RSD Receptacles

Product Facts

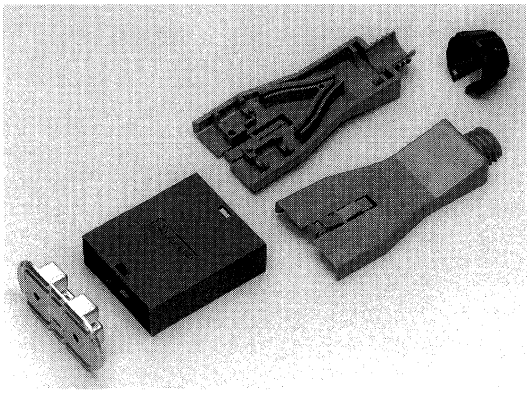
- **Multimode**
- **Intermateable with IBM ESCON type connectors**



Description	Part Numbers Black
RSD–RSD	502825-2
RSD–ST-Style	502826-2

RSD Assembly Fixture Kit

Used to hold ferrules during assembly, epoxy curing, and polishing. Allows simultaneous polishing of both ferrules.



Description	Part Numbers
Without polishing bushing	503001-2
With polishing bushing	503001-1

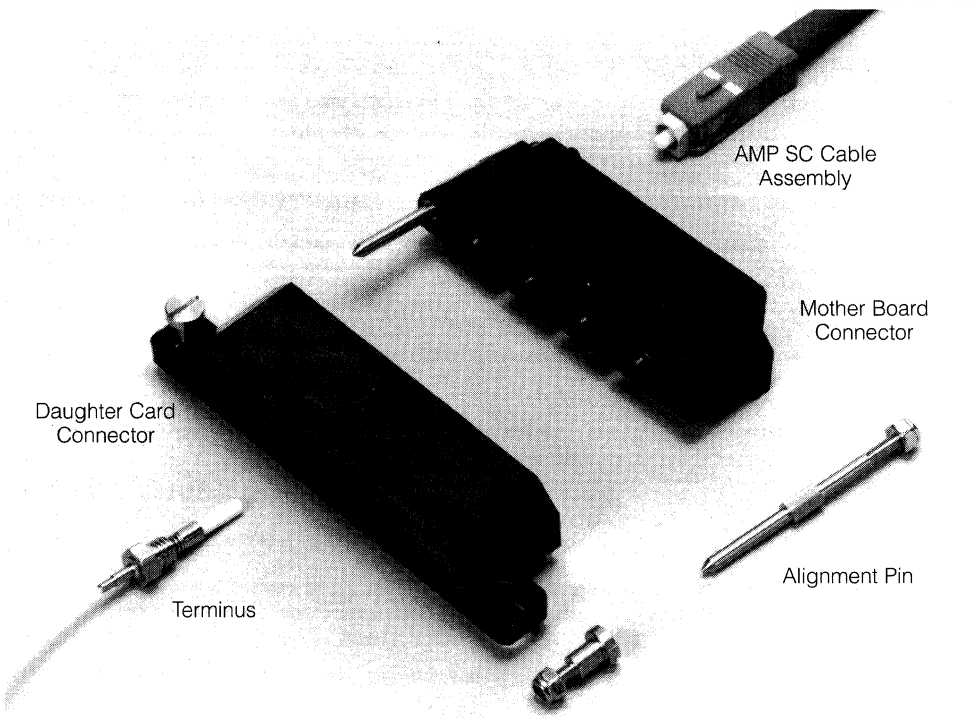
LightPlane Connector System

(Fiber Optic Backplane Connector)

METRIC

Product Facts

- **Optical interconnection of daughter cards to mother board**
- **SC interface from mother board**
- **2 to 8 positions**
- **Centerline spacing 12.5 mm [0.492 in.]**
- **Singlemode and multimode versions**
- **Daughter card floats and alignment pins on mother card assist mating**



Description	Size/No. of Positions	Part Numbers
Daughter Card Connector	2	503185-3
	4	503185-2
	8	503185-1
Mother Board Connector (Metal Alignment Sleeves, No Polarization Key)	2	503184-3
	4	503184-2
	8	503184-1
Mother Board Connector (Ceramic Alignment Sleeves, with Polarization Key)	2	503682-3
	4	503682-2
	8	503682-1
Description	**Type/Fiber Hole Dia. (µm)**	**Part Numbers**
Daughter Card Terminus for 900 µm buffered fiber	Singlemode/125	503186-1
	Singlemode/126	503186-2
	Singlemode/127	503186-3
	Multimode/125	503412-1
Pre-Assembled Cable Assembly Daughter Card Terminus on both ends-2 meters–Singlemode	—	503683-1

Mother card dust cover.
Allows for remote removal.

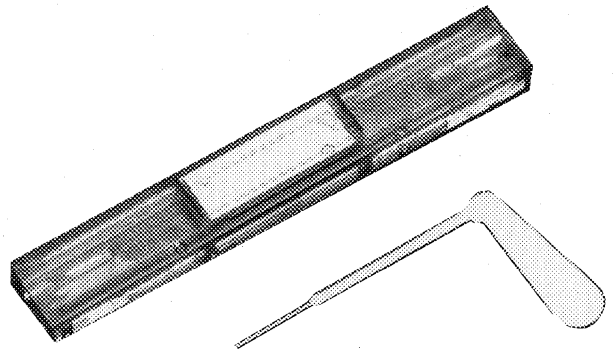
SOURCE: Catalog 124003

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

CORELINK Splice

The CORELINK splice is an easy to use, high performance mechanical splice for 125 µm singlemode and multimode fibers. Its unique clamping mechanism is activated with a simple key; no other tooling is required. The transparent material allows the craftsperson to both see and feel the fiber position. The CORELINK splice is remateable - either fiber can be removed and replaced in the splice at any time.

The CORELINK splice has been tested to Bellcore TR-765, and it exceeds specifications for torsional strain relief, insertion loss, and return loss. It can be housed in a variety of splice trays for placement in closures, ONUs, and fiber enclosures.



Description	Part Numbers
CORELINK splices - 12 pack - Includes 2 keys	503577-1
2 Replacement keys in key holder with instruction sheet	503681-1
Holder for up to 6 CORELINK splices - Mount on splice trays or in distribution boxes	559066-1
Splice Tray - Holds up to 12 CORELINK splices - for use in AMP closures and distribution boxes	559067-1

Specifications

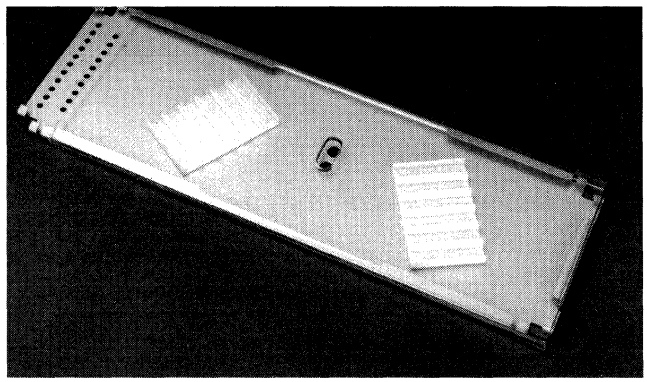
Mean Splice Loss	<0.10 dB
Mean Return Loss	-55 dB
Temperature Range	-40° to 80° C
Dimensions	2 x .3 x .13 [50.8 x 7.62 x 3.30]

Product Facts

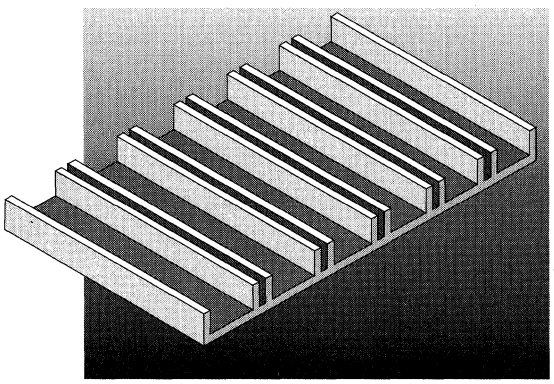
- **Permanent, easy to use fiber splice**
- **Re-usable and tool-less**
- **High performance for singlemode and multimode**
- **Tested to Bellcore TR-765**
- **Clamping mechanism prevents torsional failure**
- **Accommodates both 250 µm and 900 µm buffers**

Applications

- **Outside Plant**
- **Fiber-in-the-Loop**
- **Fiber-to-Jumper Splicing**
- **Premise Networks**
- **Testing**
- **Emergency Restoration**



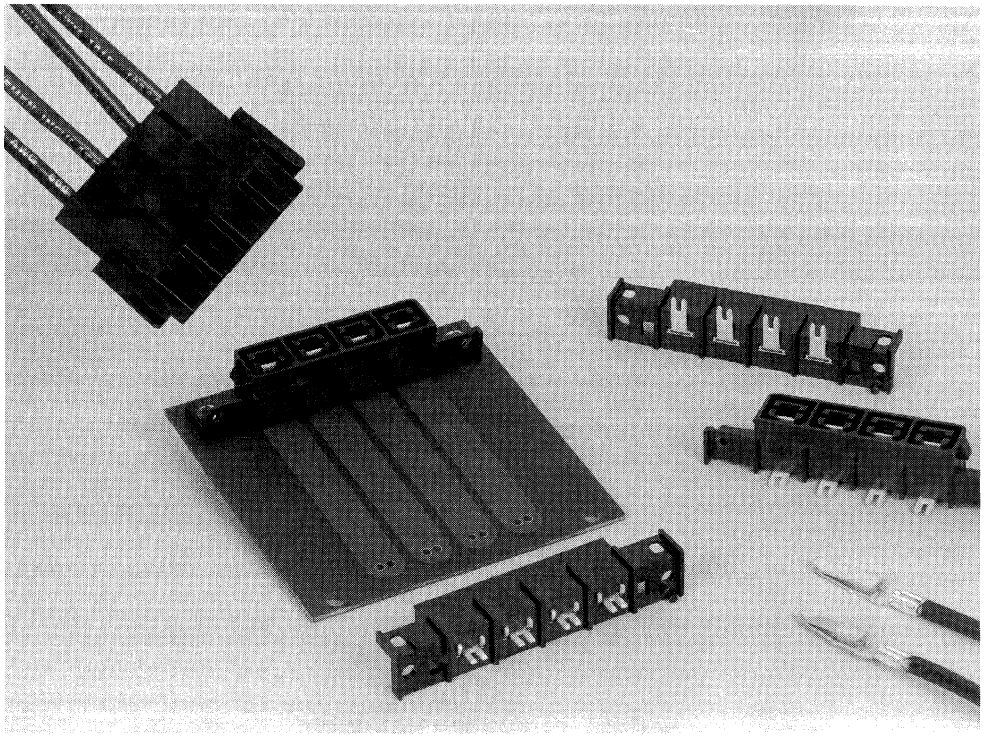
Splice tray—holds 12 splices



1.5 [38.1] x 2.4 [60.96] elastomer holder for 6 CORELINK splices. Mount on splice trays or in distribution boxes.

SOURCE: Catalog 124003

AMPINNERGY Wire-to-Board Connectors

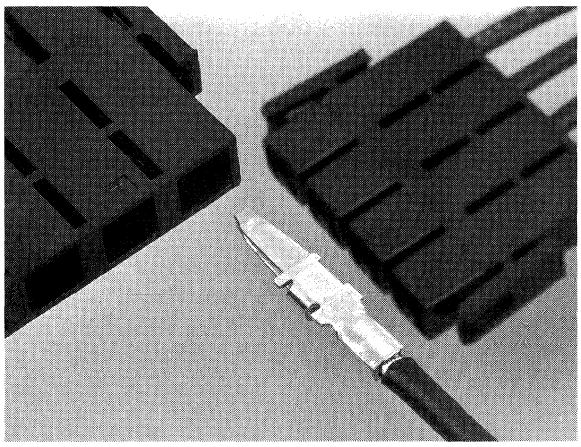


Product Facts

- Ratings 600 VAC (RMS)
- Receptacles polarized to plug
- Receptacles and plugs available in contact configurations of 2 through 8 positions
- Vertical receptacle polarized to pcb
- Receptacle contacts have dual solder posts for efficient heat dissipation, low millivolt drop and mechanical strength
- Receptacles may be mounted on pcb .062 to .125 inches thick
- Plugs have positive latching to receptacles
- Removable crimped contacts latch firmly in plug
- Plugs are one piece design
- Two ranges of crimped contacts accommodate either 10-12 AWG or 14-16-18 AWG conductors
- Recognized under the Component Program of Underwriters Laboratories Inc., File No. E28476
- Certified by Canadian Standards Association, File No. LR7189-239

AMPINNERGY Wire-to-Board (WTB) Connectors provide a convenient and efficient means of delivering up to 600 VAC to component printed circuit boards and other power distribution devices in computers and peripherals, telephone systems, and appliances. The WTB connectors also have automotive and industrial applications.

Crimped Contacts



Wire barrel accepts one 10 or 12 AWG stranded copper conductor

Wire Size: 12 or 10 AWG
Part Number 556880-2
(Reel 2,000)

Wire barrel accepts one 14, 16 or 18 AWG stranded copper conductor

Wire Size: 14, 16 or 18 AWG
Part Number 556883-2
(Reel 2,000)

SOURCE: Catalog 82832

Specifications subject to change.

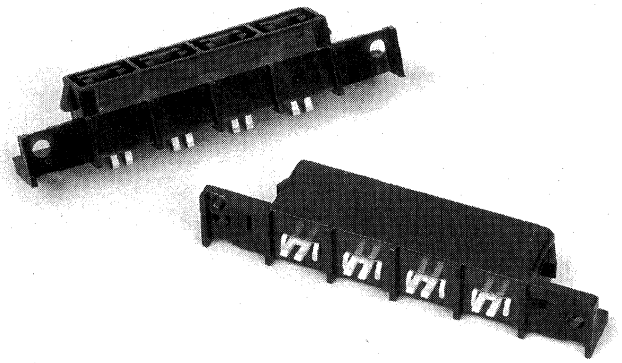
1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

Vertical Receptacle

Note: 4 Pos. Housing Dim. (Typ.)—
2.715 [68.97] L x .501 [12.73] W x .568 [14.43] H

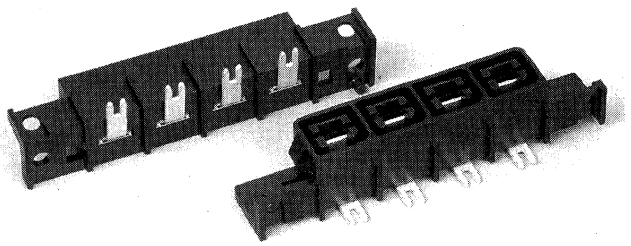
No. of Pos.	Part Numbers
2	556881-2
3	556881-3
4	556881-4
5	556881-5
6	556881-6
7	556881-7
8	556881-8



Right-Angle Receptacle

Note: 4 Pos. Housing Dim. (Typ.)—
2.715 [68.97] L x .568 [14.43] W x .501 [12.73] H

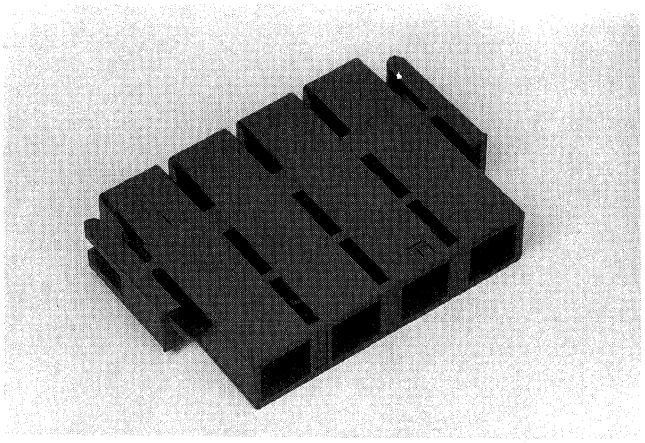
No of Pos.	Part Numbers
2	556882-2
3	556882-3
4	556882-4
5	556882-5
6	556882-6
7	556882-7
8	556882-8



Plug Housing

Note: 4 Pos. Housing Dim. (Typ.)—
2.073 [52.66] L x 1.443 [36.66] W x .371 [9.43] H

No. of Pos.	Part Numbers
2	556879-2
3	556879-3
4	556879-4
5	556879-5
6	556879-6
7	556879-7
8	556879-8



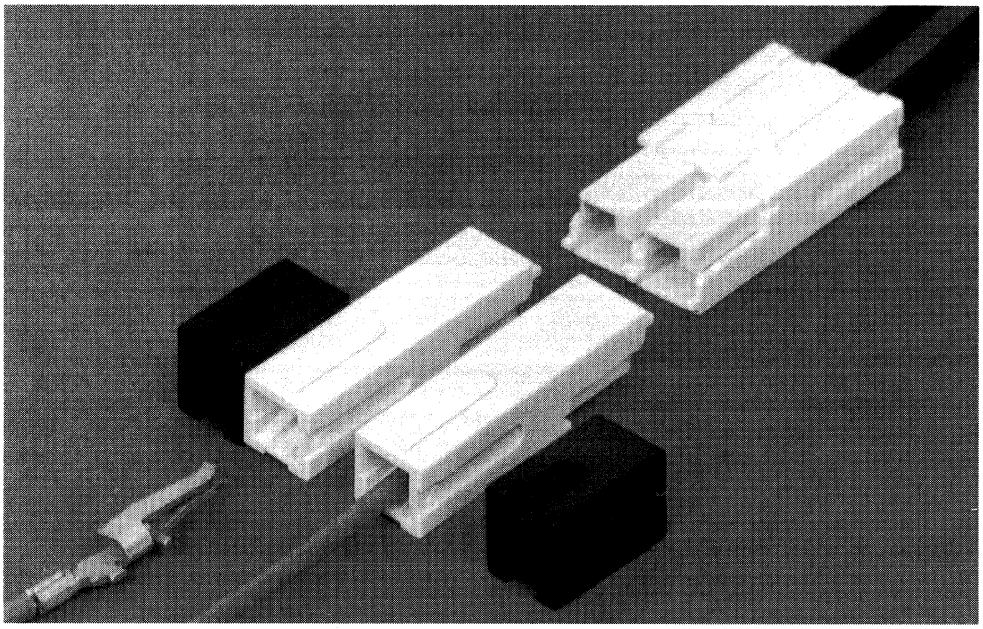
SOURCE: Catalog 82832

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

AMPINNERGY Wire-to-Wire Connectors

Product Facts

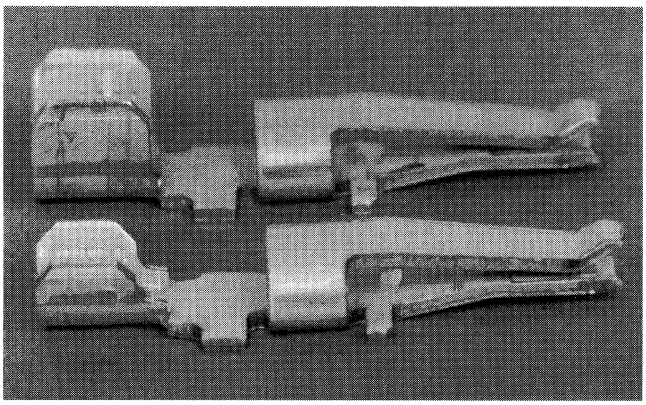
- Rated to 600 VAC (RMS)
- Flame retardant housings 94V-0
- Housings, adapters, and power terminals keyed to assure proper assembly
- Stackable housings provide easy wire routing and neat wire dressing
- Built-in interlocking features resist shock and vibration
- Usable as in-line connector, or as panel and surface mount connector
- Available in eight different colors for circuit coding and identification
- Choice of two power terminals accommodates 10-12 AWG and 14-16-18 AWG conductors
- Meets appropriate portions of UL 498
- Recognized under the Component Program of Underwriters Laboratories Inc., File No. E28476
- Certified by Canadian Standards Association, File No. LR7189



AMPINNERGY Wire-to-Wire (WTW) Connectors provide a reliable and efficient means of interconnecting conductors employed to carry up to 600 VAC in power circuits or networks of all descriptions.

The WTW Connectors consist of mating hermaphroditic, flame retardant polycarbonate housings into which customer terminated power contacts are inserted. Stackable in four directions through the use of molded interlocking keyways, the connectors make wire routing and dressing orderly and easy to accomplish. More importantly, the built-in interlocking features on the connectors and the accessory mounting adapters provide resistance to the effects of shock and vibration, keeping the interconnect stable and secure.

Power Contacts



Wire Size
12-10 AWG
Part No. 556136-2
(Loose Piece - 200/Box)
Part No. 556136-1
(Strip - 2,000/Reel)

Wire Size
18-16-14 AWG
Part No. 556135-2
(Loose Piece - 200/Box)
Part No. 556135-1
(Strip - 2,000/Reel)

SOURCE: Catalog 65211

Specifications subject to change.

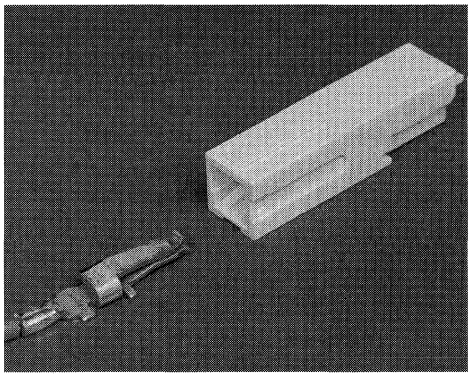
1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

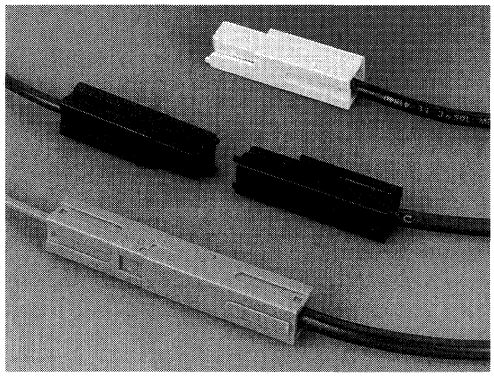
Connector Housings

Color	Part No.
White	556137-1
Black	556137-2
Green	556137-3
Red	556137-4
Yellow	556137-5
Blue	556137-6
Orange	556137-7
Gray	556137-8

Note: Single Circuit Housing Dim. (Typ.)—1.453 [36.91] L x .386 [9.81] W x .386 [9.81] H



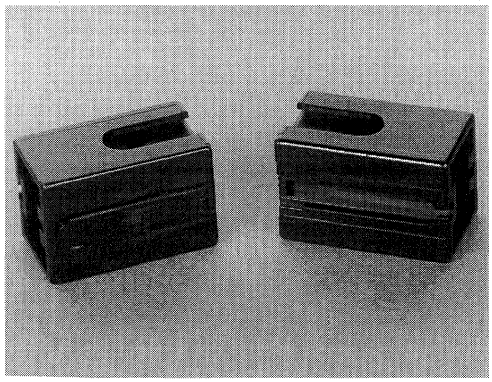
Customer terminated power contacts are inserted into housings



Free-Hanging Interconnections

Mounting Adapters

Two mounting adapters can be used with one or more connector housings to provide thru-panel or horizontal surface mounting capability of the completed assembly.

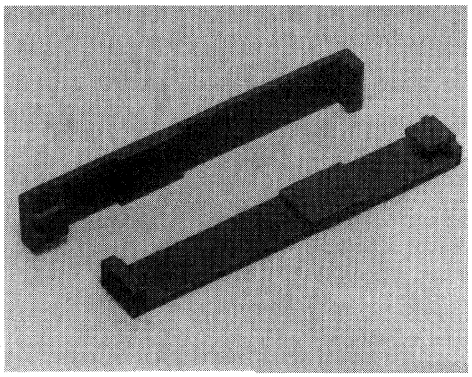


Part No. 557313-1

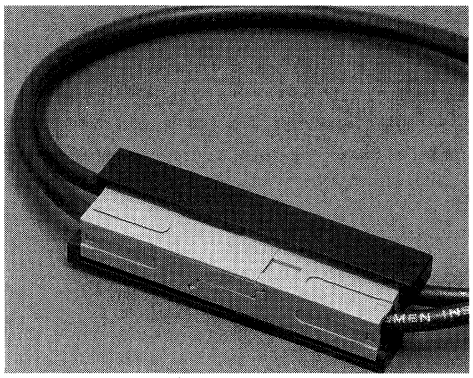
External Locking Latch Clip

Part No. 557640-1

AMPINNERGY Wire-to-Wire connector housings have an integral locking feature designed to keep housings mated in most applications. However, the External Locking Latch Clip may be used as needed in applications where severe vibration or tension may pull mated housings apart.



AMPINNERGY Wire-to-Wire Clips

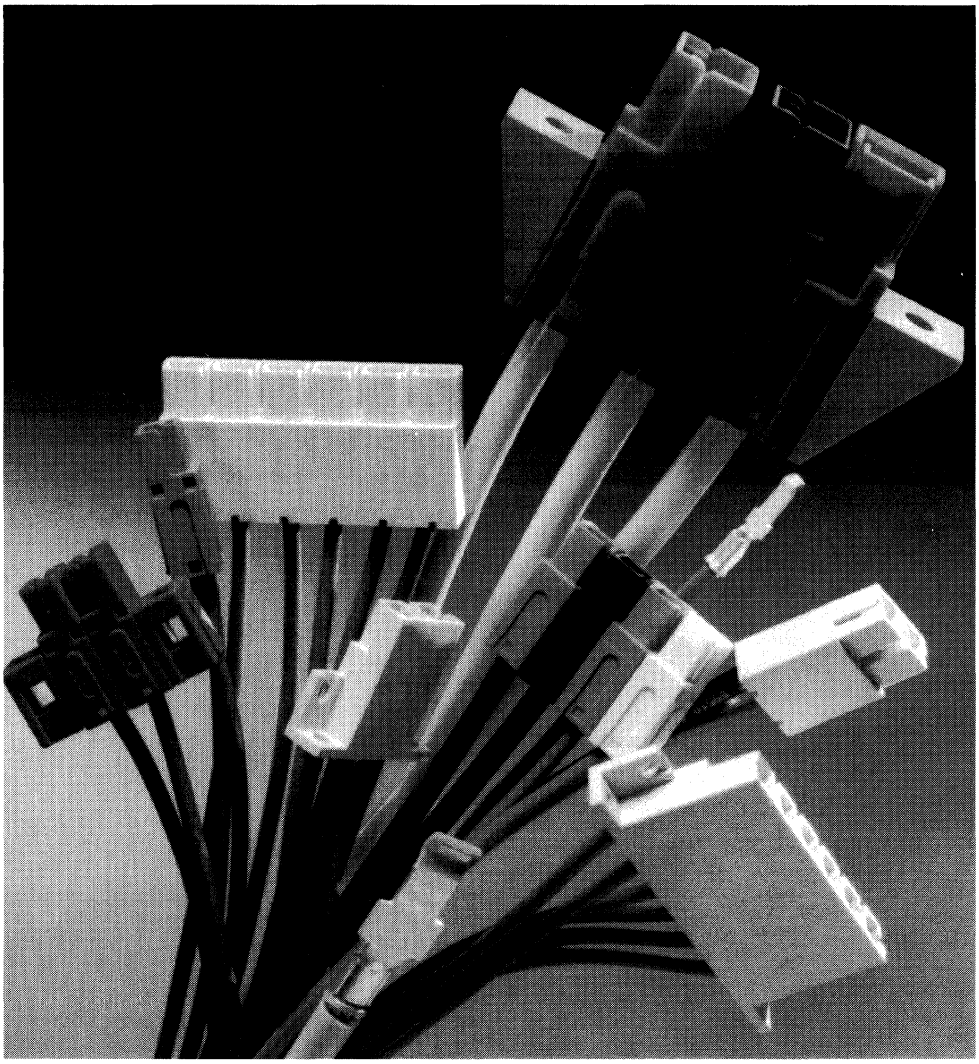


AMPINNERGY Wire-to-Wire Clips (Installed)

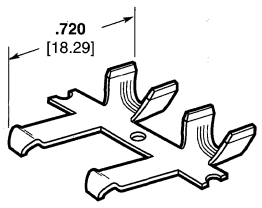
AMP Power Lock Connectors

Product Facts

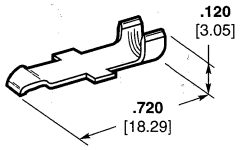
- High current handling capability: 20 or 60 amperes maximum depending on application
- Modular housings for multiple connector applications
- Assortment of mounting accessories available
- Interlock between adjacent housings to assist assembly
- Precision formed contacts available in strip form for high speed automatic machine application or loose piece for hand tool application
- Integral stainless steel locking spring in housing for contact retention and reliable contact performance
- Choice of silver- or gold-plated copper contacts
- Housing of impact resistant thermoplastic
- Accepts wire size range 18–6 AWG
- Positive electrical continuity provided by self-cleaning wiping action of mated contacts
- Recognized under the Component Program of Underwriters Laboratories Inc., File No. E28476
- Certified by Canadian Standards Association, File No. LR 7189



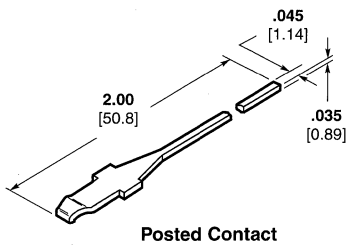
Series I Contacts



Crimp Contact



Solder Contact



Posted Contact

Type	Wire Range AWG	Plating	Part Numbers	
			Strip Form	Loose Piece
Crimp Contact	18-12	Silver	53892-2	53892-4
		Gold*	53892-8	53892-7
Solder Contact	12 Max.	Silver	—	54329-1
Posted Contact	—	Silver	—	54326-2
		Gold*	—	54326-1

*.000030 [0.00076] gold over .000050 [0.00127] nickel

SOURCE: Catalog 65864

Specifications subject to change.

1-800-522-6752
Product Information Center/ AMP FAX Service

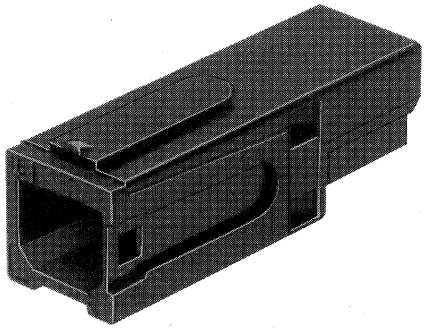
1-800-722-1111
Tooling/Technical Assistance Center

Series I Connectors

Single Circuit Connector Housing Assembly

Color	Part Numbers
White	53894-1
Black	53894-2
Green	53894-3
Red	53894-4
Yellow	53894-5
Blue	53894-6
Natural*	53894-7

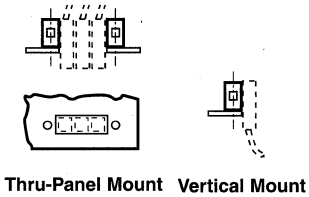
*Polyester thermoplastic material



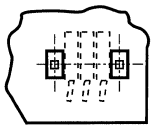
Note: Single Circuit Housing Dim. (Typ.)—.965 [24.51] L x .312 [7.92] W x .312 [7.92] H

Adapters

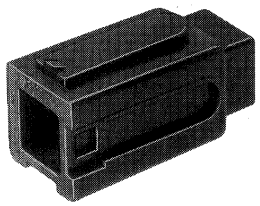
Typical Mounting Configuration



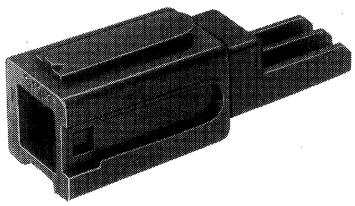
Thru-Panel Mount Vertical Mount



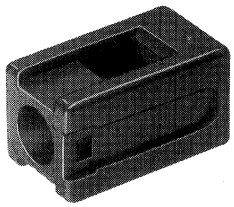
Surface Mount



Spacer
Part No. 53899-2



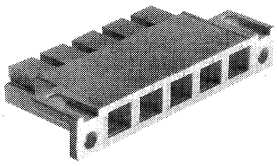
Key
Part No. 53899-1



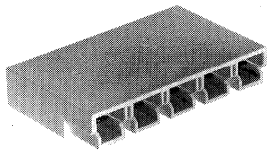
Mounting Adapter
Part No. 54315-1

In-Line Housings

Mates with— Single Circuit Connector Housing Assembly



With Mounting Flanges



Without Mounting Flanges

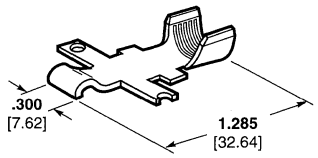
Note: 5 Pos. Housing Dim. (Typ.)—With flange— 2.060 [52.34] L x .965 [24.51] W x .312 [7.92] H;
Without flange— 1.560 [39.62] L x .965 [24.51] W x .312 [7.92] H

No. of Positions	Part Numbers	
	With Flanges	Without Flanges
2	54489-2	54483-2
3	54489-3	54483-3
4	54489-4	54483-4
5	54489-5	54483-5
6	54489-6	54483-6

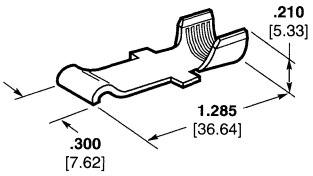
SOURCE: Catalog 65864

Series II Connectors

Contacts



Crimp Contact

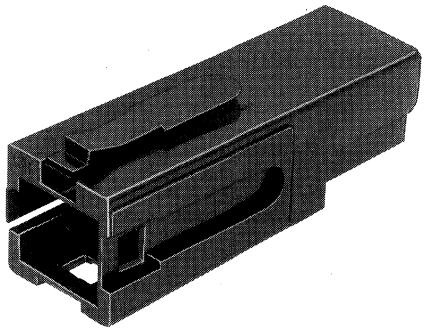


Solder Contact

Type	Wire Range AWG	Plating	Part Numbers	
			Strip Form	Loose Piece
Crimp Contact	10-6	Silver	53880-2	53880-4
Solder Contact	6 Max.	Silver	—	54330-1

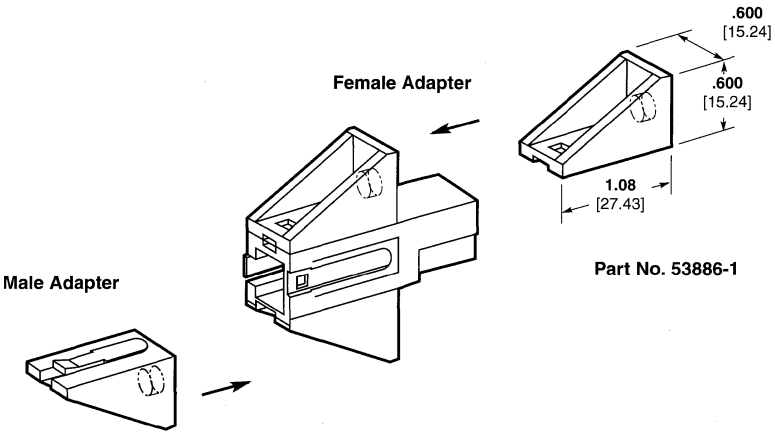
Single Circuit Connector Housing Assembly

Color	Part Nos.
Blue	53884-1
Black	53884-3
Red	53884-4



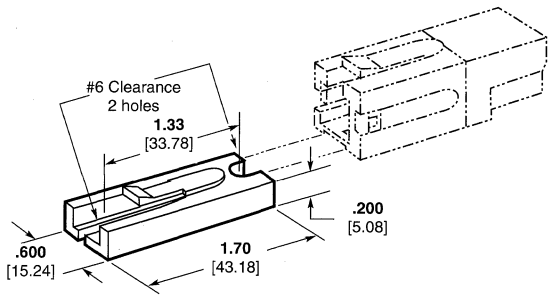
Note: Single Circuit Housing Dim. (Typ.)—1.900 [48.26] L x .630 [16.0] W x .630 [16.0] H

Panel Mounting Adapters



Surface Mounting Adapter

Part No. 53885-1



SOURCE: Catalog 65864

Specifications subject to change.

1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

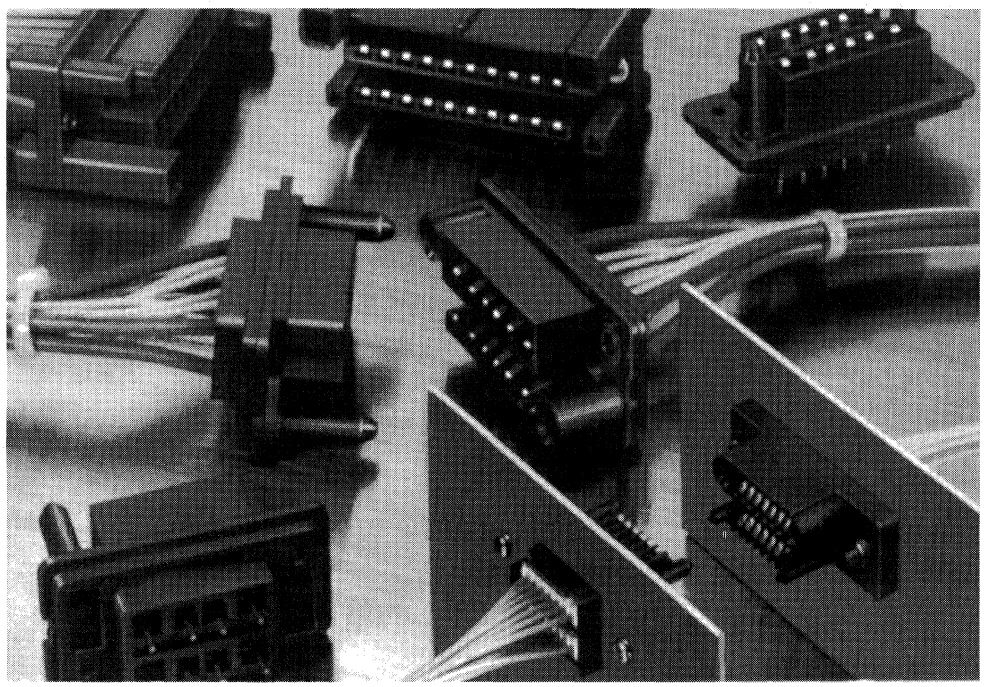
METRIC

AMP Drawer Connectors

Special Connectors

Product Facts

- **Used for rack and panel applications**
- **Highly durable, withstanding repeated matings and unmatings**
- **Hermaphroditic contact design**
- **Has sufficient length for wire outlet**
- **Has an integrated guide mechanism to ensure and facilitate mating of the housing**
- **Designed to provide face-to-face contact, hermaphroditic contacts assure reliable electrical connection**



AMP Drawer Connectors are designed to provide an economical means of connection in rack and panel applications such as in copying machines, control boards, industrial equipment, electronics-based equipment and power supply systems.

A major feature of these connectors is the ability to withstand repeated engagement and withdrawals. They can be used smoothly with low insertion and extraction force.

Contacts are hermaphroditic and designed to provide reliable electrical contact despite low contact force; the mating section is leaf-shaped to ensure positive contact with proper resilience.

The housing has an integrated guide pin and socket to facilitate mating of the connector halves. Provision is also made to prevent dust entering from outside.

AMP Drawer Connectors are available in the following three types depending on application:

- Mini-Drawer Connector
- Standard Drawer Connector
- High Current Drawer Connector

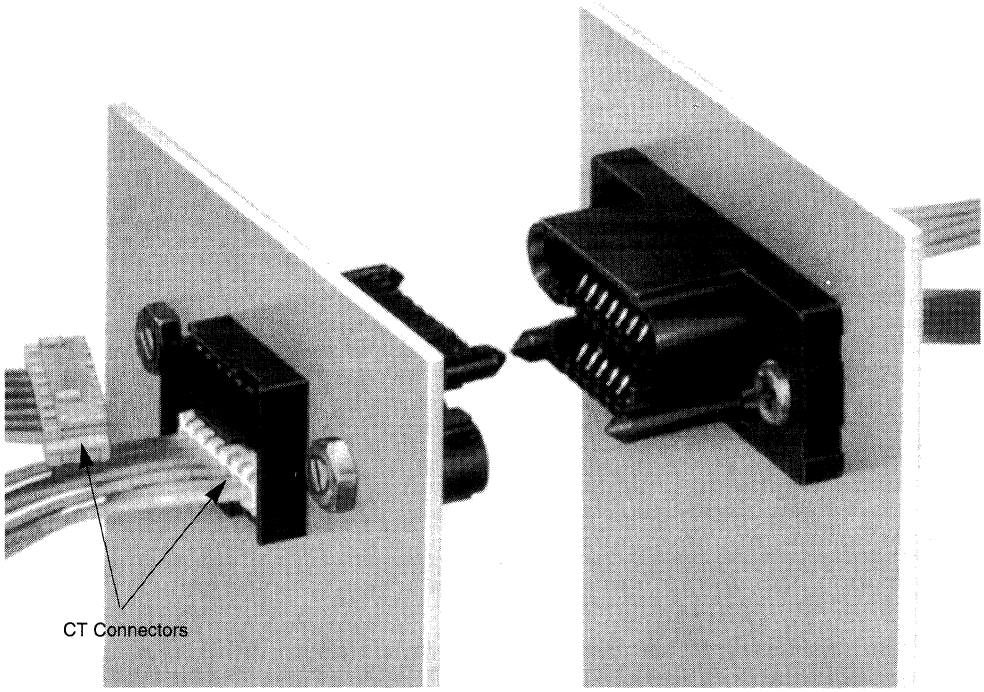
SOURCE: Catalog 124962

Mini-Drawer Connectors

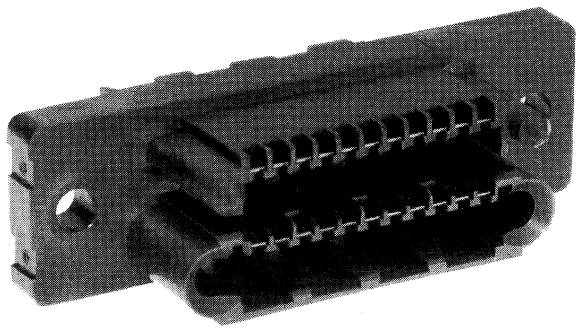
METRIC

Product Facts

- **The connector halves are mated in the front and the assembly accepts a pre-terminated CT receptacle connector in the back**
- **Hermaphroditic housings**
- **14- and 22-position**
- **Loaded with hermaphroditic contacts**
- **The CT connector mated in the back is available either in insulation displacement crimp type or crimping termination type (see page 8010)**



Mini-Drawer Connectors are designed so that the connector halves are mated in the front end and accept CT Connectors in the back.



Extraction Tool
Part No. 915144-1
(for 14-pos. connector)
Part No. 915143-1
(for 22-pos. connector)

Note: 22 Pos. Housing Dim. (Typ.)—49.0 [1.93] L x 23.2 [.913] W x 15.0 [.591] H

No. of Pos.	Mini-Drawer Connector Part No.	Screw Hole Diameter	Mounting Side	Corner Cut	Mating CT Connectors*
14	176496-1	**3.4** [.134]	Fixed	—	7 pos. (2)
	5-176496-1	**4.4** [.173]	Movable	Cut	
22	176445-1	**3.4** [.134]	Fixed	—	11 pos. (2)
	5-176445-1	**4.4** [.173]	Movable	Cut	

*See page 8010 for mating CT Receptacle Connector.

SOURCE: Catalog 124962

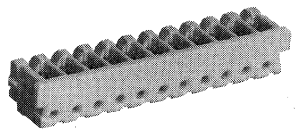
Specifications subject to change.

1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

METRIC

MT Connector (Insulation Displacement Crimp) Receptacle Assembly (CT Connector)

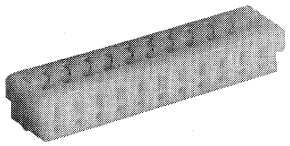


Note: 7 Pos. Housing Dim. (Typ.)—16.0 [.630] L x 4.6 [.181] W x 5.1 [.201] H

No. of Pos.	Receptacle Assembly Part Numbers			
	Natural*	Blue*	Yellow*	Black*
7	173977-7	2-173977-7	4-173977-7	6-173977-7
11	1-173977-1	3-173977-1	5-173977-1	7-173977-1

* Housing color
Note: Number of positions other than those listed are available, see page 3225.

Crimp-Type Connector Receptacle Housing (CT Connector)



Note: 7 Pos. Housing Dim. (Typ.)—16.0 [.630] L x 4.6 [.181] W x 5.1 [.201] H

No. of Pos.	Receptacle Assembly Part Numbers			
	Natural*	Blue*	Yellow*	Black*
7	175778-7	2-175778-7	4-175778-7	6-175778-7
11	1-175778-1	3-175778-1	5-175778-1	7-175778-1

* Housing color
Note: Number of positions other than those listed are available, see page 3225.

CT Connector Crimp, Snap-In Type Receptacle Contact

Part No. 1-175102-1
(Strip Form)

Part No. 175161-1
(Loose Piece)

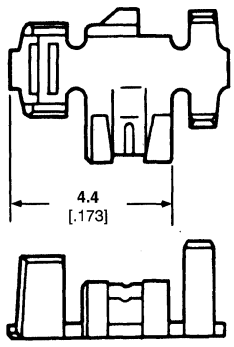
Wire Range—0.12-0.35 mm² [26-22 AWG]

Insulation Diameter—1.0-1.5 [0.04-0.06]

Note: Loose-piece contacts are supplied in the form of a comb with 10 pieces on 6 mm pitch. There is a slit at the root of each contact which can be snapped off easily.

Hand Tool
Part No. 914571-1

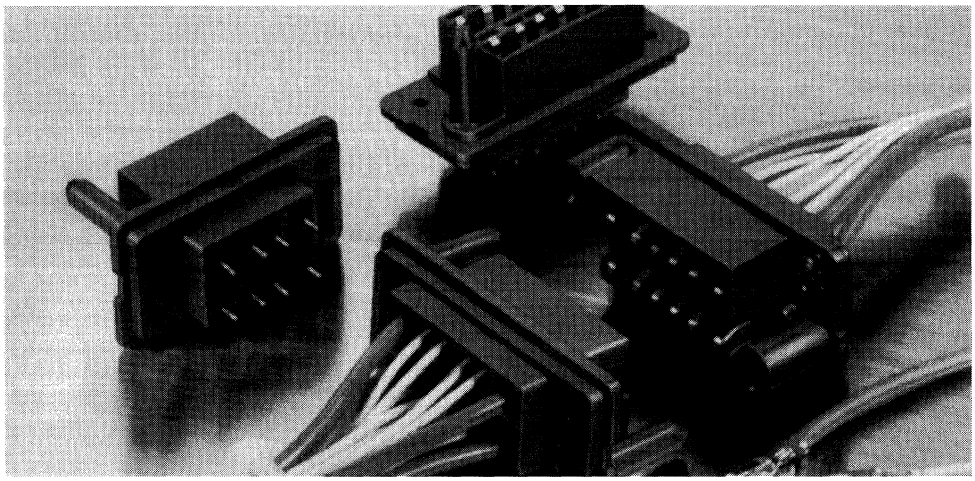
AMP-O-LECTRIC
Model K Applicator
Part No. 567427-2



SOURCE: Catalog 124962

METRIC

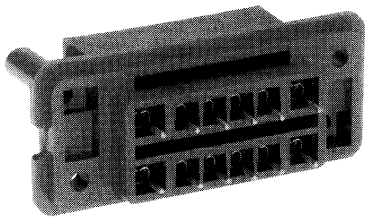
Standard Drawer Connectors



Product Facts

- Signal circuits and power circuits can be mixed in the same connector
- The product line includes receptacle and plug housings for wire application and plug connectors for printed circuit board mounting
- The pcb-mounting type is pre-loaded with solder dipping contacts
- Applicable wire range—0.22-2.18 mm² [24-14 AWG] with insulation diameter of 1.5 to 3.9 [0.06 to .153]

Plug Connector (for Pc Board Mount)



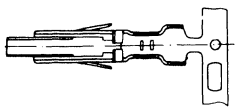
Note: 12 Pos. Housing Dim. (Typ.)—61.2 [2.409] L x 32.5 [1.280] W x 26.3 [1.035] H

No. of Pos.	Plug Connector Part No.
8	172653-2
12	172653-3
16	172653-1

Note: When mounting on the board, solder the dummy connector as it is mated. For the dummy connector, contact our Sales Department.

Crimp, Snap-In Contacts (Hermaphroditic)

Notes:
1. Contacts for 0.86-2.18 mm² [18-14 AWG] wire are used at the four corners of the connector as power contacts (8 required per assembly).
2. For applicable wire, use wire specified in UL 1015 or 1007.

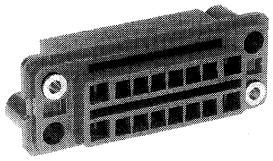


Wire Range AWG	Wire Range mm²	Insulation Diameter	Contact Part No. Strip Form	Contact Part No. Loose Piece	Hand Tool Part No.	AMP-O-LECTRIC Model K Applicator
24-20	0.22-0.53	**1.5-1.95** [0.06-.077]	170311-1	170313-1	724632-1	567324-2
20-16	0.50-1.42	**1.8-3.30** [.071-.130]	170484-1	170485-1	724787-1	—
18-14	0.86-2.18	**2.3-3.90** [.091-.153]	170312-1	170314-1	724639-1	567325-2

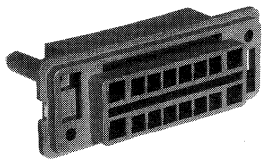
* Extraction Tool **Part No. 723986-1**

Housing

Receptacle for Wire Application



Plug for Wire Application



Note: 16 Pos. Housing Dim. (Typ.) — Receptacle, 71.2 [2.803] L x 25 [.984] W x 26.3 [1.035] H; Plug, 71.2 [2.803] L x 32.5 [1.280] W x 26.3 [1.035] H

No. of Pos.	Receptacle Floating Bushing Size	Receptacle Part Numbers	Plug Panel Mount Hole Diameter	Plug Part Numbers
8	**3.0** [.118]	172070-1	**4.3** [.169]	172063-1
	4.0 [.157]	172070-3	**5.3** [.209]	172063-3
12	**3.0** [.118]	172069-1	**4.3** [.169]	172061-1
	4.0 [.157]	172069-3	**5.3** [.209]	172061-3
16	**3.0** [.118]	172068-1	**4.3** [.169]	172059-1
	4.0 [.157]	172068-3	**5.3** [.209]	172059-3
20	**4.0** [.157]	173033-3	**5.3** [.209]	173032-3
24	**3.0** [.118]	172625-1	**4.3** [.169]	172624-1
	4.0 [.157]	172625-3	**5.3** [.209]	172624-3

SOURCE: Catalog 124962

Specifications subject to change.

1-800-522-6752
Product Information Center/ AMP FAX Service

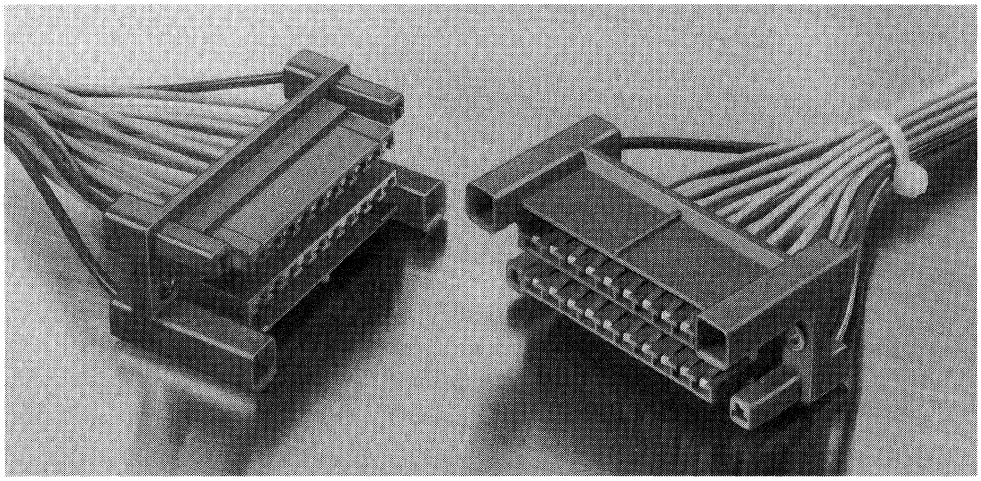
1-800-722-1111
Tooling/Technical Assistance Center

High Current Drawer Connectors

METRIC

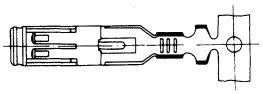
Product Facts

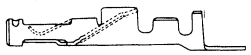
- High current circuits and signal circuits can be mixed in the same connector
- High current circuits use MIC Connector contacts located at the four corners of housing
- Signal circuits use Standard Drawer Connector contacts
- 24-position housing
- Hermaphroditic housing can be mated with top and bottom turned while maintaining polarity



MIC Contacts (Used for Power Circuits)

Receptacle Contact

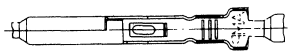




Wire Range AWG	Wire Range mm²	Insulation Diameter	Receptacle Contact Part No. Strip Form	Receptacle Contact Part No. Loose Piece	Hand Tool Part No.*
20-14	0.5-2.27	**2.2-3.4** [.087-.134]	170286-4	170289-3	755338-1 and 755339-1

*Part No. **755338-1** is used on wire for automotive application, and **Part No. 755339-1** on other types of wire.
Extraction Tool **Part No. 723735-1**

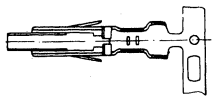
Tab Contact



Wire Range AWG	Wire Range mm²	Insulation Diameter	Tab Contact Part No. Strip Form	Tab Contact Part No. Loose Piece	Hand Tool Part No.*
20-14	0.5-2.27	**2.2-3.4** [.087-.134]	170221-4	170222-3	755338-1 and 755339-1

*Part No. **755338-1** is used on wire for automotive application, and **Part No. 755339-1** on other types of wire.
Extraction Tool **Part No. 724763-1**

Crimp, Snap-In Contact (for Signal Circuit/ Hermaphroditic)



Wire Range AWG	Wire Range mm²	Insulation Diameter	Contact Part No. Strip Form	Contact Part No. Loose Piece	Hand Tool Part No.
24-20	0.22-0.53	**1.5-1.95** [.060-.077]	170311-1	170313-1	724632-1
20-16	0.50-1.42	**1.8-3.30** [.071-.130]	170484-1	170485-1	724787-1

Extraction Tool **Part No. 723986-1**

24-Position Housing

Floating of Bushing	Housing Part No.
Up- and downward = 0.05 Circumferential = 0.14	176916-1
Up- and downward = 0.30 Circumferential = 0.80	176916-2

Upward and downward = Axial clearance
Circumferential = Floating

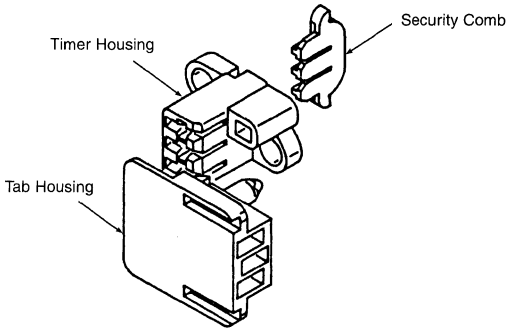
SOURCE: Catalog 124962

AMP Drawer Connectors

Special Versions

METRIC

3 Position



Tab Housing

Part No. 343402-1

Acceptable Constant Current:
10 A max. at -10°C to +80°C and 240 VAC.

Housing Material:
Glass-filled polyester, black

AMP FASTON Tabs (order separately)
Part No. 42098-1

Contact Material:
Brass

Contact Finish:
Tin-plated

Wire Size Range:
0.8-2.1 mm² [18-14 AWG]

Insulation Diameter:
3.1-4.1 [.120-.170]

Timer Housing

Part No. 343403-1

Housing Material:
Glass-filled polyester, black

Standard Timer Contact with Cantilever Spring (order separately)
Part No. 826042-3 (strip)
Part No. 827808-3 (loose piece)
Hand Tool **Part No. 825590-1**

Contact Material:
CuFe

Contact Finish:
Tin-plated

Wire Size Range:
1.0-2.5 mm² [26-22 AWG]

Insulation Diameter:
3.0-4.3 [.120-.170]

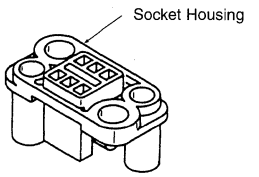
Security Comb

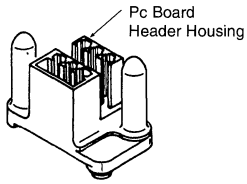
Part No. 343583-1
(for insertion in Timer Housing Part No. 343403-1)
Contact snap-in before mounting into a panel cutout

Mounting Screw M3

Part No. 343913-1
(2 pieces required for Timer Housing)

6 Position





Socket Housing

Part No. 343886-1

Acceptable Constant Current:
4 A max. at -10°C to +80°C and 50 VDC

Housing Material:
Glass-filled polyester, black

AMP-LEAF Contacts (order separately)
Part No. 583990-3 (loose piece version)
Part No. 42702-3 (reel version)

Hand Tool **Part No. 90028-0**

Contact Material:
Phosphor bronze

Contact Finish:
0.8 µm [.000030] gold over 1.2 µm [.000050] nickel

Wire Size Range:
0.14-0.36 mm² [26-22 AWG]

Insulation Diameter:
1.27-1.63 [.050-.064]

Mounting Screw

Part No. 343404-1
(2 pieces per socket housing)

Pc Board Header Housings

Part No. 343887-1
(with Board Retention)

Part No. 344974-1
(without Board Retention)

Part No. 343888-1
Partly loaded with contact **Part No. 583294-1** except for cavity no. 4

Part No. 343888-2
Fully loaded with contact **Part No. 583294-1**

AMP-LEAF Contact with solder connection
Part No. 583294-1

Contact Material:
Brass

Contact Finish:
0.8 µm [.000030] gold over 1.2 µm [.000050] nickel in contact area, remainder gold flash or tin plated over 1.2 µm [.000050] nickel

SOURCE: Catalog 124799

Specifications subject to change.

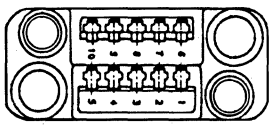
1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

METRIC

Special Versions
(Continued)

10 Position



Socket Housing
Part No. 343348-1

Acceptable Constant Current:
4 A max. at -10°C to +80°C and 24 VDC

Housing Material:
Glass-filled polyester, black, per UL 94V-0

AMP-LEAF Contact (order separately)
Part No. 343371-1

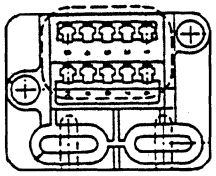
Contact Material:
Phosphor bronze

Contact Finish:
0.8 µm [.000030] gold over 1.2 µm [.000050] nickel

Wire Size Range:
0.14-0.36 mm² [26-22 AWG]

Insulation Diameter:
1.27-1.63 [.050-.064]

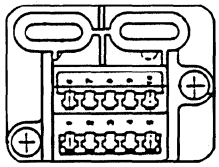
Mounting Screw
Part No. 343404-1
(2 pieces per socket housing)



Header Housing
Part No. 343347-1

Housing Material:
Glass-filled polyester, black, per UL 94V-0

AMP-LEAF Contact (order separately)
Part No. 343371-1



Pc Board Header Housing
Part No. 344978-1

Partly loaded with contact
Part No. 2-582355-0
in cavities 1, 2, 4, 5, 6, and 10

Empty Housing
Part No. 344977-1

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

Quiet Line High Performance Filter Products

Filters for Commercial Application

Selecting a Filter

1. Based on intended application, determine the highest frequency to be preserved. Higher frequencies will be filtered.

2. Consult the graphs on pages 8016 and 8017 to find a filter type which begins filtering above the highest frequency to be preserved. Select this type.

   Filter Type DA designation example:

   D = Distributed Element Filter

   A = 3000 pF Min. Capacitance

3. Consult the specifications tables to see that the type selected has adequate working voltage for the application, that the current rating is 1 to 3 times the application load and that other parameters of the filter type are suitable for the application.

SOURCE: Catalog 82061

Specifications subject to change.

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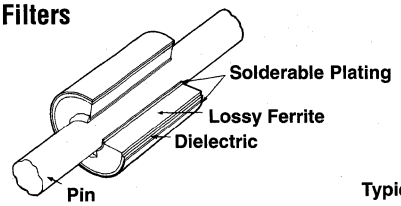
Filters for Commercial Application

(Continued)

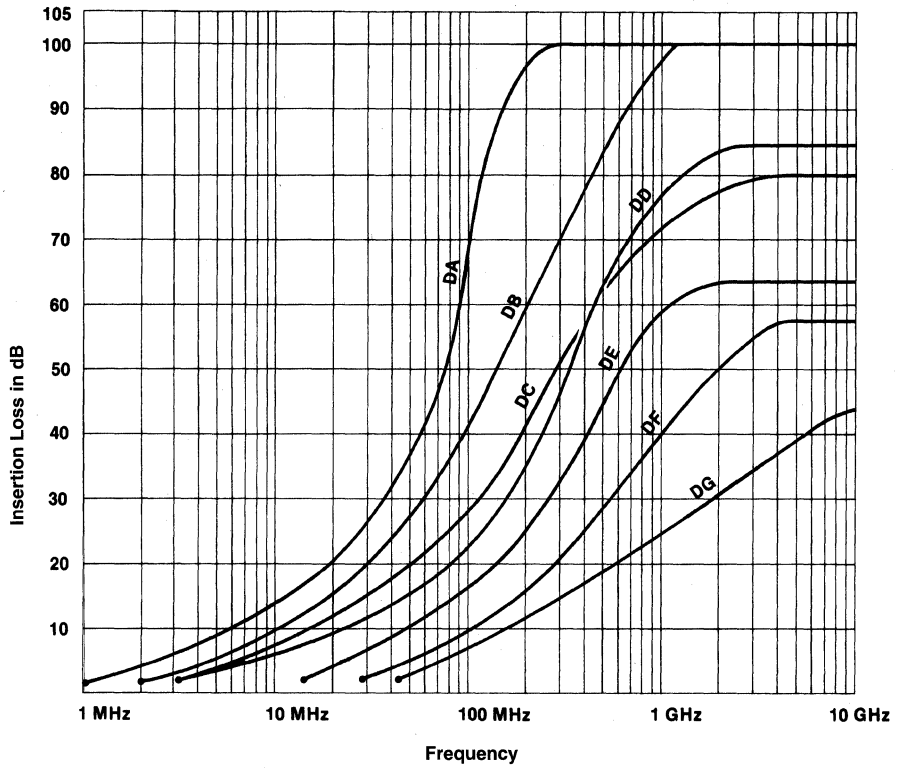
Distributed Element Filters



One-piece construction of AMP distributed element filters results in a distributed capacitance and inductance network which can be approximated by a distributed transmission line circuit. Such a circuit is a series of inductance and resistance elements with shunt elements of capacitance and conductance.

Quiet Line Filters provide an inherent insertion loss per unit length. At frequencies above about 20 MHz, the low pass filter provides 80 percent of its insertion loss from its lossy ferrite component.

Typical Insertion Loss vs. Frequency Comparison (No load @ 25°C)



Minimum No Load Insertion Loss

Filter Type	AMP Electrical Specification Number	Capacitance Range	3 dB Point	Min. No Load Insertion Loss in dB (Per MIL-STD-220 at +25°C)							
				25 MHz	50 MHz	100 MHz	300 MHz	500 MHz	1 GHz	5 GHz	10 GHz
DA	108-1116	3000 pF to 8000 pF	2 MHz	20	30	50	90	100	100	100	100
DB	108-1117	2000 pF to 5000 pF	3 MHz	15	20	30	65	80	90	90	90
DC	108-1118	1000 pF to 3000 pF	7 MHz	10	15	20	40	50	55	55	55
DD	108-1128	600 pF to 1000 pF	20 MHz	—	10	20	40	50	60	60	60
DE	108-1131	300 pF to 600 pF	30 MHz	—	8	12	25	35	45	45	45
DF	108-1124	130 pF to 400 pF	50 MHz	—	—	—	—	25	35	55	55
DG	108-1122	50 pF to 175 pF	150 MHz	—	—	—	—	—	16	35	42

SOURCE: Catalog 82061

Specifications subject to change.
1-800-522-6752
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Filters for Commercial Application

(Continued)

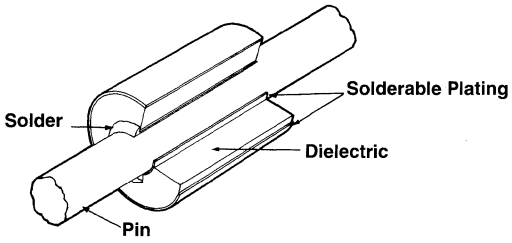
Capacitive Filters

Filtering is the simplest method of removing unwanted noise from within a circuit. And capacitive filtering provides excellent noise removal, even in the face of extreme EMI, and does so at reasonable cost.

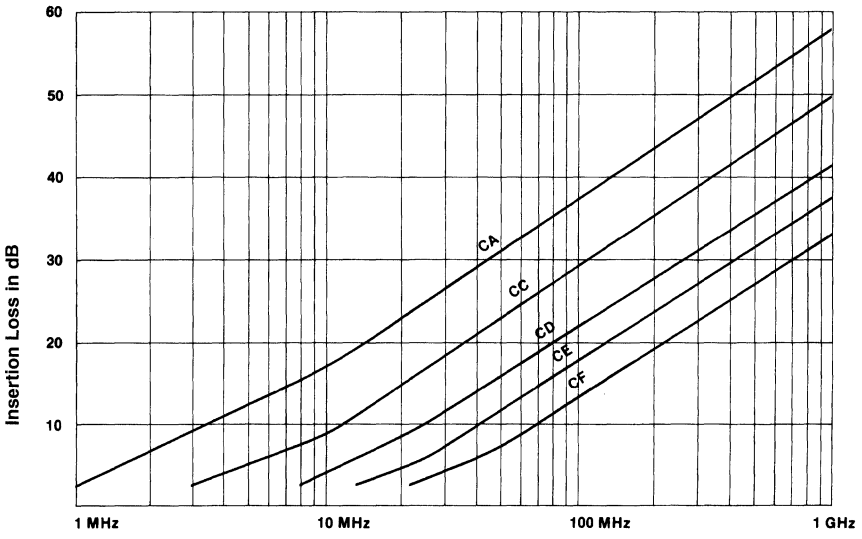
But the price extracted by capacitors is signal degradation. Systems transmitting relatively low power CMOS signals, for example, can ill afford any loss. More typical systems that transmit stronger signals and can tolerate moderate loss are well suited for capacitive filtering.

Traditionally, a filtering capacitor was used on printed circuit boards, bridging from an input or output line to ground. The proliferation of filtering capacitors in complex circuits had potential for detrimental effects, such as ground loop interference. AMP designers chose to collect the filters in a central connector where adequate grounding and control can be assured.

AMP initially developed the filtered connector concept with its premium distributed-element filter assemblies (which convert unwanted signal energy into heat) and has extended that technology to include capacitive assemblies for less demanding applications.



Calculated Insertion Loss vs. Frequency Comparison (No Load @ 25°C)



Minimum No Load Insertion Loss

Filter Type	AMP Electrical Specification Number	Capacitance Range	3 dB Point	Min. No Load Insertion Loss in dB (Per MIL-STD-220 at +25°C)					
				25 MHz	50 MHz	100 MHz	300 MHz	500 MHz	1 GHz
CA	108-1139	4000 pF to 10,000 pF	1.6 MHz	23	29	35	45	49	55
CC	108-1132	1300 pF to 2500 pF	5 MHz	—	14	25	35	40	45
CD	108-1135	600 pF to 1000 pF	10 MHz	8	13	19	25 @ 200 MHz	33	39
CE	108-1134	400 pF to 600 pF	16 MHz	5	10	16	22 @ 200 MHz	29	35
CF	108-1133	240 pF to 360 pF	27 MHz	3	6	11	17 @ 200 MHz	25	31
Feed-thru	108-1155	10 pF Max.	NA	NA	NA	NA	NA	NA	NA

SOURCE: Catalog 82061

Specifications subject to change.
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1-800-722-1111
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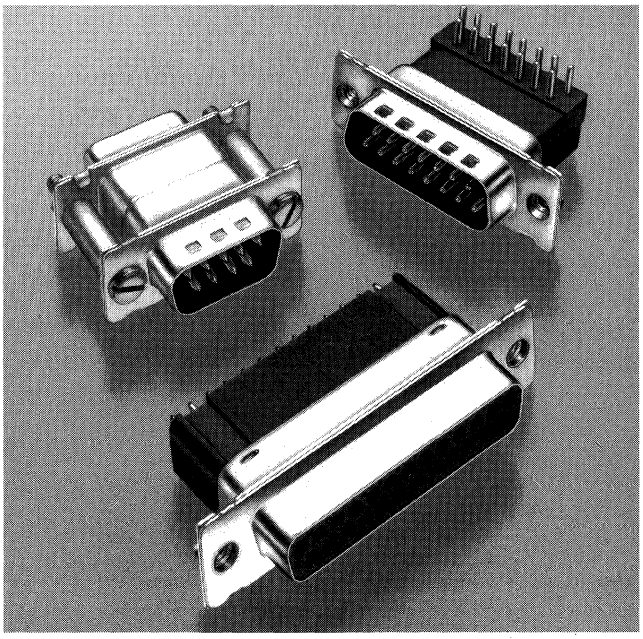
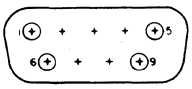
Filtered AMPLIMITE Subminiature D Connectors for Commercial Application

AMPLIMITE Subminiature D Connectors are versatile and widely used connectors. AMP has designed and built into these connectors a proven, rugged and inexpensive filter that eliminates the problem of conducted electromagnetic interference (EMI). These connectors also conform to FCC regulations which may require the use of filtering to limit EMI in computing devices.

High performance Subminiature D connectors are offered with two types of filters—distributed element and capacitive. They are provided with a variety of termination choices such as solder cup, straight post and right-angle post. Various types of accessories are available to meet the needs of many applications.

AMP also produces an extensive line of AMPLIMITE Subminiature D connectors that mate with the Quiet Line filtered connectors. These connectors are available with a choice of termination styles such as crimp snap-in contacts, posted contacts, insulation displacement contacts and contacts to terminate round conductor flat ribbon cable. For more information on these connectors request Catalog No. 82068.





Plug Insert Arrangement

9 Position Sub. D Connectors with Distributed Element Filters

Filter Type	Mounting Style	Part Numbers: Plug Assemblies with Pin Contacts — Termination Type: Right-Angle Post .040 [1.02] Dia.	Plug Assemblies with Pin Contacts — Termination Type: Straight Post .040 [1.02] Dia.	Plug Assemblies with Pin Contacts — Termination Type: Solder Cup	Receptacle Assemblies with Socket Contacts — Termination Type: Right-Angle Post .040 [1.02] Dia.	Receptacle Assemblies with Socket Contacts — Termination Type: Straight Post .040 [1.02] Dia.	Receptacle Assemblies with Socket Contacts — Termination Type: Solder Cup	Plug-Receptable Adapters
DC	**.120** [3.05] Mounting Hole	842900-1	842910-1	842920-1	842905-1	842915-1	842925-1	842930-1[1]
	4-40 Clinch Nut	842900-8	842910-8	842920-8	842905-8	842915-8	842925-8	842930-8
DB	**.120** [3.05] Mounting Hole	842900-2	842910-2	842920-2	842905-2	842915-2	842925-2	842930-2[1]
	4-40 Clinch Nut	842900-9	842910-9	842920-9	842905-9	842915-9	842925-9	842930-9
DA	**.120** [3.05] Mounting Hole	842900-3	842910-3	842920-3	842905-3	842915-3	842925-3	842930-3[1]
	4-40 Clinch Nut	1-842900-0	1-842910-0	1-842920-0	1-842905-0	1-842915-0	1-842925-0	1-842930-0
DG	**.120** [3.05] Mounting Hole	842900-4	842910-4	842920-4	842905-4	842915-4	842925-4	842930-4[1]
	4-40 Clinch Nut	1-842900-1	1-842910-1	1-842920-1	1-842905-1	1-842915-1	1-842925-1	1-842930-1
DF	**.120** [3.05] Mounting Hole	842900-5	842910-5	842920-5	842905-5	842915-5	842925-5	842930-5[1]
	4-40 Clinch Nut	1-842900-2	1-842910-2	1-842920-2	1-842905-2	1-842915-2	1-842925-2	1-842930-2
DE	**.120** [3.05] Mounting Hole	842900-6	842910-6	842920-6	842905-6	842915-6	842925-6	842930-6[1]
	4-40 Clinch Nut	1-842900-3	1-842910-3	1-842920-3	1-842905-3	1-842915-3	1-842925-3	1-842930-3
DD	**.120** [3.05] Mounting Hole	842900-7	842910-7	842920-7	842905-7	842915-7	842925-7	842930-7[1]
	4-40 Clinch Nut	1-842900-4	1-842910-4	1-842920-4	1-842905-4	1-842915-4	1-842925-4	1-842930-4

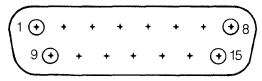
[1]This Adapter has Standard Hardware.
Note: For accessories, see page 8023.

SOURCE: Catalog 82061

Specifications subject to change.
1-800-522-6752 Product Information Center/ AMP FAX Service
1-800-722-1111 Tooling/Technical Assistance Center

15 Position Sub. D Connectors with Distributed Element Filters

Plug Insert Arrangement

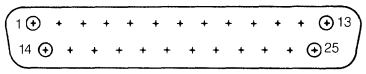


Filter Type	Mounting Style	Part Numbers: Plug Assemblies with Pin Contacts, Termination Type: Right-Angle Post .040 [1.02] Dia.	Straight Post .040 [1.02] Dia.	Solder Cup	Part Numbers: Receptacle Assemblies with Socket Contacts, Termination Type: Right-Angle Post .040 [1.02]Dia.	Straight Post .040 [1.02] Dia.	Solder Cup	Plug-Receptacle Adapters
DC	**.120** [3.05] Mounting Hole	842901-1	842911-1	842921-1	842906-1	842916-1	842926-1	842931-1[1]
	4-40 Clinch Nut	842901-8	842911-8	842921-8	842906-8	842916-8	842926-8	842931-8
DB	**.120** [3.05] Mounting Hole	842901-2	842911-2	842921-2	842906-2	842916-2	842926-2	842931-2[1]
	4-40 Clinch Nut	842901-9	842911-9	842921-9	842906-9	842916-9	842926-9	842931-9
DA	**.120** [3.05] Mounting Hole	842901-3	842911-3	842921-3	842906-3	842916-3	842926-3	842931-3[1]
	4-40 Clinch Nut	1-842901-0	1-842911-0	1-842921-0	1-842906-0	1-842916-0	1-842926-0	1-842931-0
DG	**.120** [3.05] Mounting Hole	842901-4	842911-4	842921-4	842906-4	842916-4	842926-4	842931-4[1]
	4-40 Clinch Nut	1-842901-1	1-842911-1	1-842921-1	1-842906-1	1-842916-1	1-842926-1	1-842931-1
DF	**.120** [3.05] Mounting Hole	842901-5	842911-5	842921-5	842906-5	842916-5	842926-5	842931-5[1]
	4-40 Clinch Nut	1-842901-2	1-842911-2	1-842921-2	1-842906-2	1-842916-2	1-842926-2	1-842931-2
DE	**.120** [3.05] Mounting Hole	842901-6	842911-6	842921-6	842906-6	842916-6	842926-6	842931-6[1]
	4-40 Clinch Nut	1-842901-3	1-842911-3	1-842921-3	1-842906-3	1-842916-3	1-842926-3	1-842931-3
DD	**.120** [3.05] Mounting Hole	842901-7	842911-7	842921-7	842906-7	842916-7	842926-7	842931-7[1]
	4-40 Clinch Nut	1-842901-4	1-842911-4	1-842921-4	1-842906-4	1-842916-4	1-842926-4	1-842931-4

[1]This Adapter has Standard Hardware. **Note:** For accessories, see page 8023.

25 Position Sub. D Connectors with Distributed Element Filters

Plug Insert Arrangement

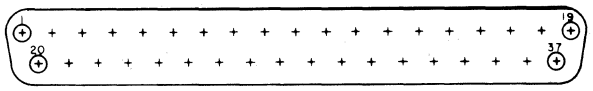


Filter Type	Mounting Style	Part Numbers: Plug Assemblies with Pin Contacts, Termination Type: Right-Angle Post .040 [1.02] Dia.	Straight Post .040 [1.02] Dia.	Solder Cup	Part Numbers: Receptacle Assemblies with Socket Contacts, Termination Type: Right-Angle Post .040 [1.02] Dia.	Straight Post .040 [1.02] Dia.	Solder Cup	Plug-Receptacle Adapters
DC	**.120** [3.05] Mounting Hole	842902-1	842912-1	842922-1	842907-1	842917-1	842927-1	842932-1[1]
	4-40 Clinch Nut	842902-8	842912-8	842922-8	842907-8	842917-8	842927-8	842932-8
DB	**.120** [3.05] Mounting Hole	842902-2	842912-2	842922-2	842907-2	842917-2	842927-2	842932-2[1]
	4-40 Clinch Nut	842902-9	842912-9	842922-9	842907-9	842917-9	842927-9	842932-9
DA	**.120** [3.05] Mounting Hole	842902-3	842912-3	842922-3	842907-3	842917-3	842927-3	842932-3[1]
	4-40 Clinch Nut	1-842902-0	1-842912-0	1-842922-0	1-842907-0	1-842917-0	1-842927-0	1-842932-0
DG	**.120** [3.05] Mounting Hole	842902-4	842912-4	842922-4	842907-4	842917-4	842927-4	842932-4[1]
	4-40 Clinch Nut	1-842902-1	1-842912-1	1-842922-1	1-842907-1	1-842917-1	1-842927-1	1-842932-1
DF	**.120** [3.05] Mounting Hole	842902-5	842912-5	842922-5	842907-5	842917-5	842927-5	842932-5[1]
	4-40 Clinch Nut	1-842902-2	1-842912-2	1-842922-2	1-842907-2	1-842917-2	1-842927-2	1-842932-2
DE	**.120** [3.05] Mounting Hole	842902-6	842912-6	842922-6	842907-6	842917-6	842927-6	842932-6[1]
	4-40 Clinch Nut	1-842902-3	1-842912-3	1-842922-3	1-842907-3	1-842917-3	1-842927-3	1-842932-3
DD	**.120** [3.05] Mounting Hole	842902-7	842912-7	842922-7	842907-7	842917-7	842927-7	842932-7[1]
	4-40 Clinch Nut	1-842902-4	1-842912-4	1-842922-4	1-842907-4	1-842917-4	1-842927-4	1-842932-4

[1]This Adapter has Standard Hardware. **Note:** For accessories, see page 8023.

SOURCE: Catalog 82061

37 Position Sub. D Connectors with Distributed Element Filters

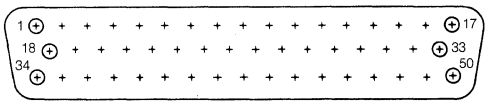


Plug Insert Arrangement

Filter Type	Mounting Style	Part Numbers: Plug Assemblies with Pin Contacts — Termination Type: Right-Angle Post .040 [1.02] Dia.	Straight Post .040 [1.02] Dia.	Solder Cup	Part Numbers: Receptacle Assemblies with Socket Contacts — Termination Type: Right-Angle Post .040 [1.02] Dia.	Straight Post .040 [1.02] Dia.	Solder Cup	Plug-Receptacle Adapters
DC	.120 [3.05] Mounting Hole	842903-1	842913-1	842923-1	842908-1	842918-1	842928-1	842933-1[1]
	4-40 Clinch Nut	842903-8	842913-8	842923-8	842908-8	842918-8	842928-8	842933-8
DB	.120 [3.05] Mounting Hole	842903-2	842913-2	842923-2	842908-2	842918-2	842928-2	842933-2[1]
	4-40 Clinch Nut	842903-9	842913-9	842923-9	842908-9	842918-9	842928-9	842933-9
DA	.120 [3.05] Mounting Hole	842903-3	842913-3	842923-3	842908-3	842918-3	842928-3	842933-3[1]
	4-40 Clinch Nut	1-842903-0	1-842913-0	1-842923-0	1-842908-0	1-842918-0	1-842928-0	1-842933-0
DG	.120 [3.05] Mounting Hole	842903-4	842913-4	842923-4	842908-4	842918-4	842928-4	842933-4[1]
	4-40 Clinch Nut	1-842903-1	1-842913-1	1-842923-1	1-842908-1	1-842918-1	1-842928-1	1-842933-1
DF	.120 [3.05] Mounting Hole	842903-5	842913-5	842923-5	842908-5	842918-5	842928-5	842933-5[1]
	4-40 Clinch Nut	1-842903-2	1-842913-2	1-842923-2	1-842908-2	1-842918-2	1-842928-2	1-842933-2
DE	.120 [3.05] Mounting Hole	842903-6	842913-6	842923-6	842908-6	842918-6	842928-6	842933-6[1]
	4-40 Clinch Nut	1-842903-3	1-842913-3	1-842923-3	1-842908-3	1-842918-3	1-842928-3	1-842933-3
DD	.120 [3.05] Mounting Hole	842903-7	842913-7	842923-7	842908-7	842918-7	842928-7	842933-7[1]
	4-40 Clinch Nut	1-842903-4	1-842913-4	1-842923-4	1-842908-4	1-842918-4	1-842928-4	1-842933-4

[1] This Adapter has Standard Hardware.
Note: For accessories, see page 8023.

50 Position Sub. D Connectors with Distributed Element Filters



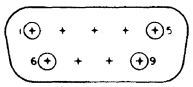
Plug Insert Arrangement

Filter Type	Mounting Style	Part Numbers: Plug Assemblies with Pin Contacts — Termination Type: Right-Angle Post .040 [1.02] Dia.	Straight Post .040 [1.02] Dia.	Solder Cup	Part Numbers: Receptacle Assemblies with Socket Contacts — Termination Type: Right-Angle Post .040 [1.02] Dia.	Straight Post .040 [1.02] Dia.	Solder Cup	Plug-Receptacle Adapters
DC	.120 [3.05] Mounting Hole	842904-1	842914-1	842924-1	842909-1	842919-1	842929-1	842934-1[1]
	4-40 Clinch Nut	842904-8	842914-8	842924-8	842909-8	842919-8	842929-8	842934-8
DB	.120 [3.05] Mounting Hole	842904-2	842914-2	842924-2	842909-2	842919-2	842929-2	842934-2[1]
	4-40 Clinch Nut	842904-9	842914-9	842924-9	842909-9	842919-9	842929-9	842934-9
DA	.120 [3.05] Mounting Hole	842904-3	842914-3	842924-3	842909-3	842919-3	842929-3	842934-3[1]
	4-40 Clinch Nut	1-842904-0	1-842914-0	1-842924-0	1-842909-0	1-842919-0	1-842929-0	1-842934-0
DG	.120 [3.05] Mounting Hole	842904-4	842914-4	842924-4	842909-4	842919-4	842929-4	842934-4[1]
	4-40 Clinch Nut	1-842904-1	1-842914-1	1-842924-1	1-842909-1	1-842919-1	1-842929-1	1-842934-1
DF	.120 [3.05] Mounting Hole	842904-5	842914-5	842924-5	842909-5	842919-5	842929-5	842934-5[1]
	4-40 Clinch Nut	1-842904-2	1-842914-2	1-842924-2	1-842909-2	1-842919-2	1-842929-2	1-842934-2
DE	.120 [3.05] Mounting Hole	842904-6	842914-6	842924-6	842909-6	842919-6	842929-6	842934-6[1]
	4-40 Clinch Nut	1-842904-3	1-842914-3	1-842924-3	1-842909-3	1-842919-3	1-842929-3	1-842934-3
DD	.120 [3.05] Mounting Hole	842904-7	842914-7	842924-7	842909-7	842919-7	842929-7	842934-7[1]
	4-40 Clinch Nut	1-842904-4	1-842914-4	1-842924-4	1-842909-4	1-842919-4	1-842929-4	1-842934-4

[1] This Adapter has Standard Hardware.
Note: For accessories, see page 8023.

9 Position Sub. D Connectors with Capacitive Filters

Plug Insert Arrangement

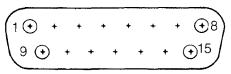


Filter Type	Mounting Style	Part Numbers: Plug Assemblies with Pin Contacts, Termination Type: Right-Angle Post .040 [1.02] Dia.	Plug Assemblies with Pin Contacts, Termination Type: Straight Post .040 [1.02] Dia.	Plug Assemblies with Pin Contacts, Termination Type: Solder Cup	Receptacle Assemblies with Socket Contacts, Termination Type: Right-Angle Post .040 [1.02] Dia.	Receptacle Assemblies with Socket Contacts, Termination Type: Straight Post .040 [1.02] Dia.	Receptacle Assemblies with Socket Contacts, Termination Type: Solder Cup	Plug-Receptacle Adapters
CA	**.122** [3.10] Dia. Mounting Hole	842946-1	842938-1	93768-1	842950-1	842942-1	93772-1	842954-1
	4-40 Clinch Nut	842946-2	842938-2	93768-6	842950-2	842942-2	93772-6	842954-2
CC	**.122** [3.10] Dia. Mounting Hole	842674-3	842666-3	93768-2	842678-3	842670-3	93772-2	842737-3
	4-40 Clinch Nut	842674-4	842666-4	93768-7	842678-4	842670-4	93772-7	842737-4
CD	**.122** [3.10] Dia. Mounting Hole	842646-3	842638-3	93768-3	842650-3	842642-3	93772-3	842697-3
	4-40 Clinch Nut	842646-4	842638-4	93768-8	842650-4	842642-4	93772-8	842697-4
CE	**.122** [3.10] Dia. Mounting Hole	842618-3	842610-3	93768-4	842622-3	842614-3	93772-4	842739-3
	4-40 Clinch Nut	842618-4	842610-4	93768-9	842622-4	842614-4	93772-9	842739-4
CF	**.122** [3.10] Dia. Mounting Hole	842590-3	842582-3	93768-5	842594-3	842586-3	93772-5	842738-3
	4-40 Clinch Nut	842590-4	842582-4	1-93768-0	842594-4	842586-4	1-93772-0	842738-4

Note: For accessories, see page 8023.

15 Position Sub. D Connectors with Capacitive Filters

Plug Insert Arrangement



Filter Type	Mounting Style	Part Numbers: Plug Assemblies with Pin Contacts, Termination Type: Right-Angle Post .040 [1.02] Dia.	Plug Assemblies with Pin Contacts, Termination Type: Straight Post .040 [1.02] Dia.	Plug Assemblies with Pin Contacts, Termination Type: Solder Cup	Receptacle Assemblies with Socket Contacts, Termination Type: Right-Angle Post .040 [1.02] Dia.	Receptacle Assemblies with Socket Contacts, Termination Type: Straight Post .040 [1.02] Dia.	Receptacle Assemblies with Socket Contacts, Termination Type: Solder Cup	Plug-Receptacle Adapters
CA	**.122** [3.10] Dia. Mounting Hole	842947-1	842939-1	93769-1	842951-1	842943-1	93773-1	842955-1
	4-40 Clinch Nut	842947-2	842939-2	93769-6	842951-2	842943-2	93773-6	842955-2
CC	**.122** [3.10] Dia. Mounting Hole	842675-3	842667-3	93769-2	842679-3	842671-3	93773-2	842740-3
	4-40 Clinch Nut	842675-4	842667-4	93769-7	842679-4	842671-4	93773-7	842740-4
CD	**.122** [3.10] Dia. Mounting Hole	842647-3	842639-3	93769-3	842651-3	842643-3	93773-3	842698-3
	4-40 Clinch Nut	842647-4	842639-4	93769-8	842651-4	842643-4	93773-8	842698-4
CE	**.122** [3.10] Dia. Mounting Hole	842619-3	842611-3	93769-4	842623-3	842615-3	93773-4	842742-3
	4-40 Clinch Nut	842619-4	842611-4	93769-9	842623-4	842615-4	93773-9	842742-4
CF	**.122** [3.10] Dia. Mounting Hole	842591-3	842583-3	93769-5	842595-3	842587-3	93773-5	842741-3
	4-40 Clinch Nut	842591-4	842583-4	1-93769-0	842595-4	842587-4	1-93773-0	842741-4

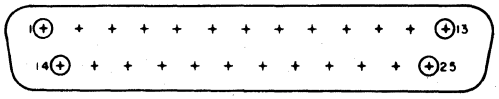
Note: For accessories, see page 8023.

SOURCE: Catalog 82061

Specifications subject to change.
1-800-522-6752 Product Information Center/ AMP FAX Service
1-800-722-1111 Tooling/Technical Assistance Center

25 Position Sub. D Connectors with Capacitive Filters

Plug Insert Arrangement

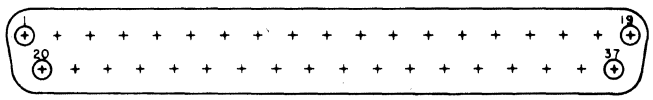


Filter Type	Mounting Style	Part Numbers: Plug Assemblies with Pin Contacts — Termination Type: Right-Angle Post .040 [1.02] Dia.	Straight Post .040 [1.02] Dia.	Solder Cup	Part Numbers: Receptacle Assemblies with Socket Contacts — Termination Type: Right-Angle Post .040 [1.02] Dia.	Straight Post .040 [1.02] Dia.	Solder Cup	Plug-Receptacle Adapters
CA	**.122** [3.10] Dia. Mounting Hole	842948-1	842940-1	93770-1	842952-1	842944-1	93774-1	842956-1
	4-40 Clinch Nut	842948-2	842940-2	93770-6	842952-2	842944-2	93774-6	842956-2
CC	**.122** [3.10] Dia. Mounting Hole	842676-3	842668-3	93770-2	842680-3	842672-3	93774-2	842743-3
	4-40 Clinch Nut	842676-4	842668-4	93770-7	842680-4	842672-4	93774-7	842743-4
CD	**.122** [3.10] Dia. Mounting Hole	842648-3	842640-3	93770-3	842652-3	842644-3	93774-3	842699-3
	4-40 Clinch Nut	842648-4	842640-4	93770-8	842652-4	842644-4	93774-8	842699-4
CE	**.122** [3.10] Dia. Mounting Hole	842620-3	842612-3	93770-4	842624-3	842616-3	93774-4	842745-3
	4-40 Clinch Nut	842620-4	842612-4	93770-9	842624-4	842616-4	93774-9	842745-4
CF	**.122** [3.10] Dia. Mounting Hole	842592-3	842584-3	93770-5	842596-3	842588-3	93774-5	842744-3
	4-40 Clinch Nut	842592-4	842584-4	1-93770-0	842596-4	842588-4	1-93774-0	842744-4

Note: For accessories, see page 8023.

37 Position Sub. D Connectors with Capacitive Filters

Plug Insert Arrangement



Filter Type	Mounting Style	Part Numbers: Plug Assemblies with Pin Contacts — Termination Type: Right-Angle Post .040 [1.02] Dia.	Straight Post .040 [1.02] Dia.	Solder Cup	Part Numbers: Receptacle Assemblies with Socket Contacts — Termination Type: Right-Angle Post .040 [1.02] Dia.	Straight Post .040 [1.02] Dia.	Solder Cup	Plug-Receptacle Adapters
CA	**.122** [3.10] Dia. Mounting Hole	842949-1	842941-1	93771-1	842953-1	842945-1	93775-1	842957-1
	4-40 Clinch Nut	842949-2	842941-2	93771-6	842953-2	842945-2	93775-6	842957-2
CC	**.122** [3.10] Dia. Mounting Hole	842677-3	842669-3	93771-2	842681-3	842673-3	93775-2	842746-3
	4-40 Clinch Nut	842677-4	842669-4	93771-7	842681-4	842673-4	93775-7	842746-4
CD	**.122** [3.10] Dia. Mounting Hole	842649-3	842641-3	93771-3	842653-3	842645-3	93775-3	842700-3
	4-40 Clinch Nut	842649-4	842641-4	93771-8	842653-4	842645-4	93775-8	842700-4
CE	**.122** [3.10] Dia. Mounting Hole	842621-3	842613-3	93771-4	842625-3	842617-3	93775-4	842748-3
	4-40 Clinch Nut	842621-4	842613-4	93771-9	842625-4	842617-4	93775-9	842748-4
CF	**.122** [3.10] Dia. Mounting Hole	842593-3	842585-3	93771-5	842597-3	842589-3	93775-5	842747-3
	4-40 Clinch Nut	842593-4	842585-4	1-93771-0	842597-4	842589-4	1-93775-0	842747-4

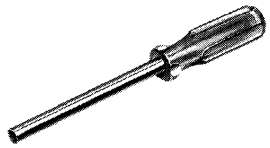
Note: For accessories, see page 8023.

SOURCE: Catalog 82061

Specifications subject to change.
1-800-522-6752 Product Information Center/ AMP FAX Service
1-800-722-1111 Tooling/Technical Assistance Center

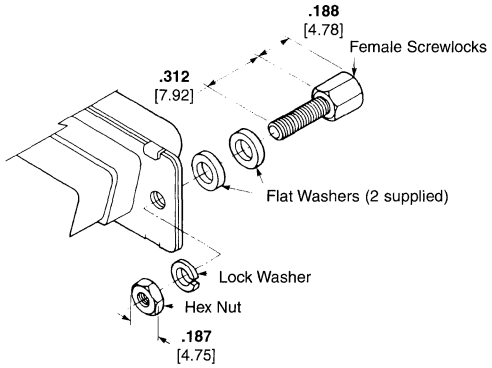
Subminiature D Connector Accessories

Female Screwlocks



Nut Driver, **Part No. 811262-1** (Used for assembling female screwlocks to connector flange)

Note: Female Screwlocks mate with Male Screw Retainers used on mating connectors. For specifications and more information refer to Catalog 82068.



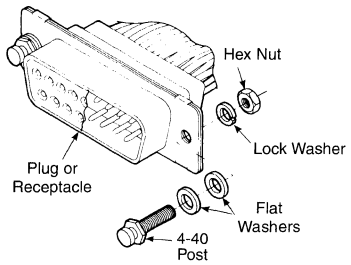
Thread Size	Finish	Kit Number Standard Female Screwlock	
		Individual	Bulk Packed[1]
4-40	Yellow Chromate	205817-1	205817-2
	Clear Chromate	205817-3	205817-4
M3 (Metric)	Yellow Chromate	207872-1	207872-2
	Clear Chromate	207872-3	207872-4

[1]Each part is individually bulk packed for multiple kit orders.

Locking Post Assembly for Filtered Half

Kit Part Numbers:
206514-1
(two assemblies per package)
206514-3 (bulk packed)*
*Each part is individually bulk packed for multiple kit orders.

Mate with—Clips below

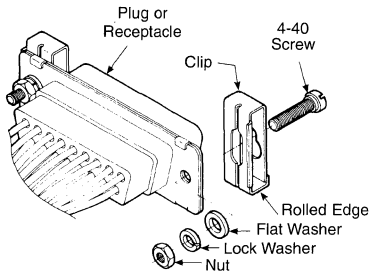


Slide Latch Clip Assembly for Unfiltered Mating Half

Kit Part Numbers:

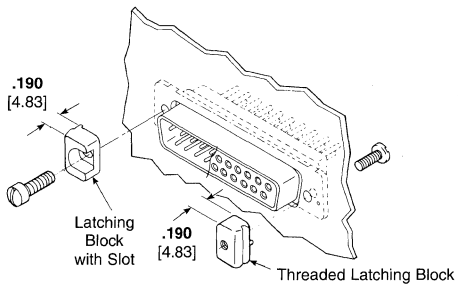
206942-1
(two assemblies per package)
206942-2 (bulk packed)*
*Each part is individually bulk packed for multiple kit orders.

Mate with—Locking Posts above



Latching Blocks

Each kit includes two blocks per package. Threaded block kits include pan head screws. Slotted blocks require customer supplied screws and nuts. All parts are packaged unassembled.



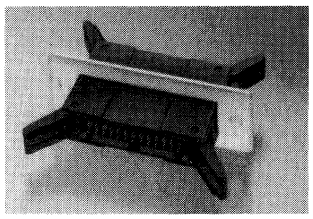
Shell Size (No. of Contact Pos.)	Threaded Latching Blocks			Slotted Latching Blocks	
	Thread Size	Individual	Bulk Packed[1]	Individual	Bulk Packed[1]
1 thru 4 (9 thru 37)	M3 (Metric)	745403-1	745403-2	745245-2	745245-3
	4-40	745403-8	745403-9		
5 (50)	M3 (Metric)	745403-5	745403-6	745245-5	745245-6
	4-40	1-745403-1	1-745403-2		

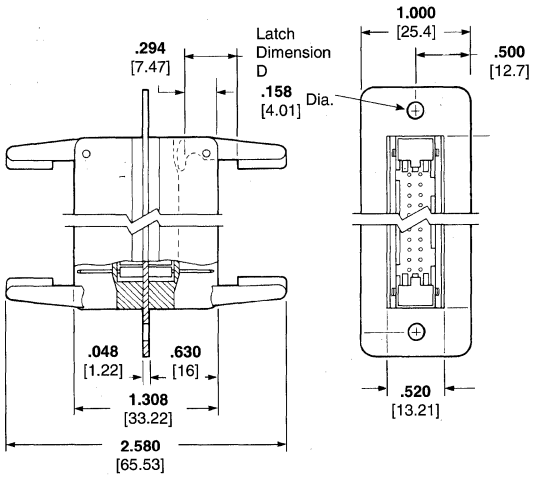
[1] Each part is individually bulk packed for multiple kit orders.

SOURCE: Catalog 82061

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

AMP-LATCH Feed-thru Pin Header Assemblies with Distributed Element Filters and Latch and Eject Levers





Product Facts

- **Polarized housing**
- **Complete pin protection**
- **All-plastic system—no shorting to latch hardware**

Mates with—Most receptacles with 2-row, .100 [2.54] centerline configuration

Filtered Pin Header Assemblies

Note: 34 Pos. Housing Dim. (Typ.)—3.200 [81.28] L x 2.580 [65.53] W x 1.000 [25.4] H

No. of Pos.	Filter Type	Part Numbers Latch Dimension D*			
		.475 [12.06]	.577 [14.66]	.615 [15.62]	.655 [16.64]
10	DC	842381-1	842381-2	842381-3	842381-4
	DB	842381-5	842381-6	842381-7	842381-8
	DA	842381-9	1-842381-0	1-842381-1	1-842381-2
	DG	1-842381-3	1-842381-4	1-842381-5	1-842381-6
	DF	1-842381-7	1-842381-8	1-842381-9	2-842381-0
	DE	2-842381-5	2-842381-6	2-842381-7	2-842381-8
	DD	2-842381-9	3-842381-0	3-842381-1	3-842381-2
26	DC	842386-1	842386-2	842386-3	842386-4
	DB	842386-5	842386-6	842386-7	842386-8
	DA	842386-9	1-842386-0	1-842386-1	1-842386-2
	DG	1-842386-3	1-842386-4	1-842386-5	1-842386-6
	DF	1-842386-7	1-842386-8	1-842386-9	2-842386-0
	DE	2-842386-5	2-842386-6	2-842386-7	2-842386-8
	DD	2-842386-9	3-842386-0	3-842386-1	3-842386-2
34	DC	842387-1	842387-2	842387-3	842387-4
	DB	842387-5	842387-6	842387-7	842387-8
	DA	842387-9	1-842387-0	1-842387-1	1-842387-2
	DG	1-842387-3	1-842387-4	1-842387-5	1-842387-6
	DF	1-842387-7	1-842387-8	1-842387-9	2-842387-0
	DE	2-842387-5	2-842387-6	2-842387-7	2-842387-8
	DD	2-842387-9	3-842387-0	3-842387-1	3-842387-2
40	DC	842388-1	842388-2	842388-3	842388-4
	DB	842388-5	842388-6	842388-7	842388-8
	DA	842388-9	1-842388-0	1-842388-1	1-842388-2
	DG	1-842388-3	1-842388-4	1-842388-5	1-842388-6
	DF	1-842388-7	1-842388-8	1-842388-9	2-842388-0
	DE	2-842388-5	2-842388-6	2-842388-7	2-842388-8
	DD	2-842388-9	3-842388-0	3-842388-1	3-842388-2
50	DC	842389-1	842389-2	842389-3	842389-4
	DB	842389-5	842389-6	842389-7	842389-8
	DA	842389-9	1-842389-0	1-842389-1	1-842389-2
	DG	1-842389-3	1-842389-4	1-842389-5	1-842389-6
	DF	1-842389-7	1-842389-8	1-842389-9	2-842389-0
	DE	2-842389-6	2-842389-7	2-842389-8	2-842389-9
	DD	3-842389-0	3-842389-1	3-842389-2	3-842389-3
60	DC	842390-1	842390-2	842390-3	842390-4
	DB	842390-5	842390-6	842390-7	842390-8
	DA	842390-9	1-842390-0	1-842390-1	1-842390-2
	DG	1-842390-3	1-842390-4	1-842390-5	1-842390-6
	DF	1-842390-7	1-842390-8	1-842390-9	2-842390-0
	DE	2-842390-5	2-842390-6	2-842390-7	2-842390-8
	DD	2-842390-9	3-842390-0	3-842390-1	3-842390-2

*.475 [12.06] and .577 [14.66] latches fit AMP receptacles without and with strain reliefs, respectively.
See Catalog 82012.
Note: Other sizes of pin headers within the 10 through 64 position can be made available. Consult AMP.

SOURCE: Catalog 82061

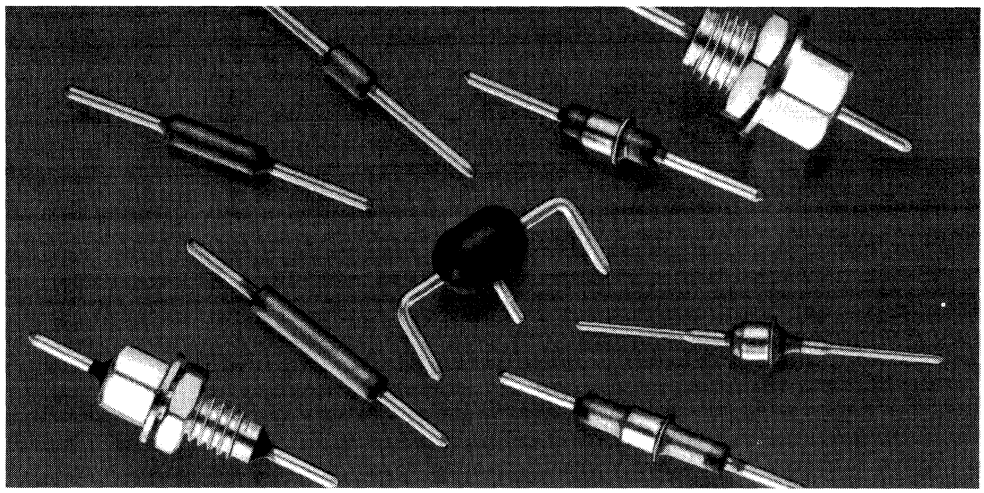
Specifications subject to change.

1-800-522-6752
Product Information Center/ AMP FAX Service

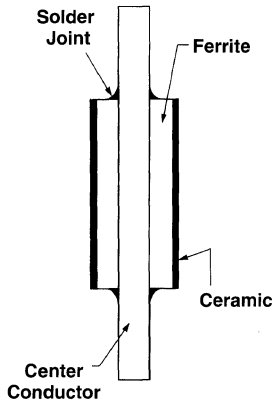
1-800-722-1111
Tooling/Technical Assistance Center

Quiet Line Standard Loose-Piece Filters

(Distributed Element Filters)



Filter Construction

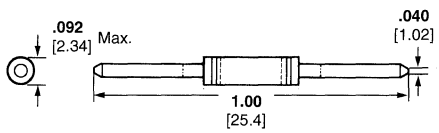


Quiet Line loose-piece filters are especially suited to the cost/performance requirements of commercial electronic equipment.

Typical applications include mobile radios, transducers, microprocessors, computer peripheral equipment and communication equipment.

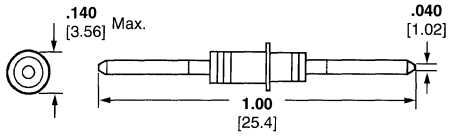
These filters employ a composite ferrite-titanate material in integrated assemblies which have no lumped elements to cause internal resonances. This design provides inherent ruggedness and reliability not found in other types of filters.

Quiet Line loose-piece filters are supplied in a variety of styles and configurations to provide mounting and termination flexibility. These distributed element filters are available in a wide range of capacitance to fill your particular filtering needs. Loose-piece filters are assembled with high temperature solder that will not reflow at temperatures below 260°C. Bolt type filters are particularly suited to physically demanding applications.



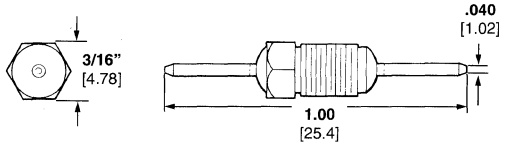
Pin-Sleeve Style

Filter Type	Part Numbers
DA	859611-1
DB	859612-1
DF	859652-1
DC	859613-1
DE	842486-1
DG	859653-1



Eyelet Style

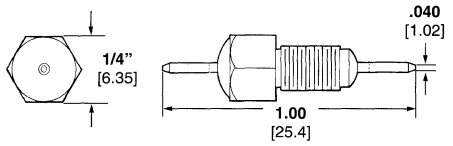
Filter Type	Part Numbers
DA	859614-1
DB	859615-1
DD	842494-1
DF	859655-1
DC	859616-1
DE	842493-1
DG	859656-1



8-32 Bolt Style

Filter Type	Part Numbers	Color Code
DA	859617-1	Black Epoxy
DB	859618-1	Black Epoxy
DF	859658-1	Black Epoxy
DC[1]	859619-1	Black Epoxy
DG[1]	859659-1	Black Epoxy

[1] Lockwasher and nut are not included.



12-32 Bolt Style

Filter Type	Part Numbers*	Color Code
DA	859646-1	Black Epoxy
DB	859645-1	Black Epoxy
DF	859681-1	Black Epoxy

*Supplied with lockwasher and nut.

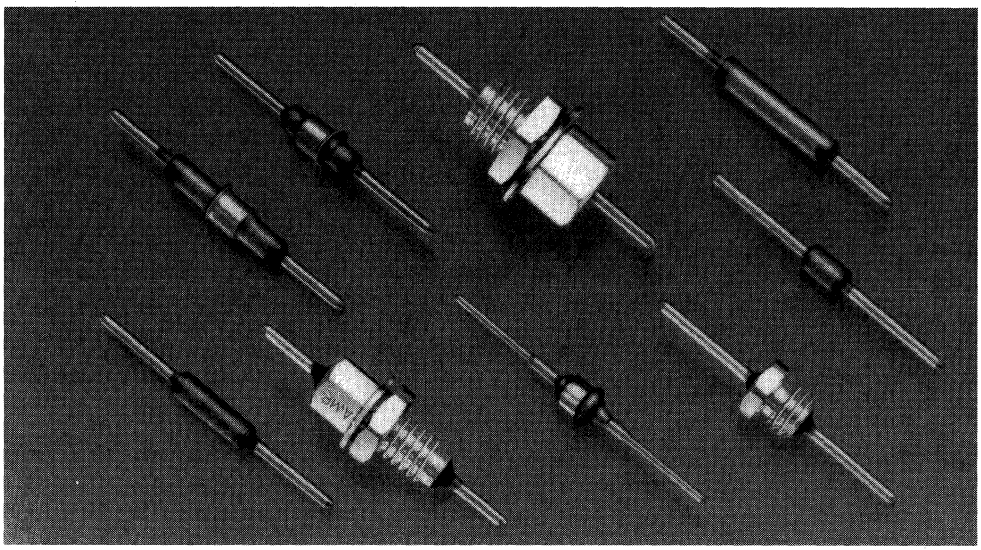
SOURCE: Catalog 82061

Specifications subject to change.
1-800-522-6752 Product Information Center/ AMP FAX Service
1-800-722-1111 Tooling/Technical Assistance Center

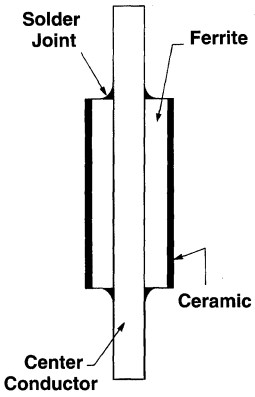
Quiet Line Premium Loose-Piece Filters

(Distributed Element Filters)

(Continued)



Filter Construction



Quiet Line Distributed Element Filters are constructed to meet the demands of military-type applications. Some common types of applications include: mobile radios, transducers, microprocessors, computer peripheral equipment and communication equipment.

All loose-piece Quiet Line filters employ a composite ferrite-titanate material in integrated assemblies which have no lumped elements to cause internal resonances. This design provides inherent ruggedness and reliability not found in other types of filters.

Quiet Line loose-piece filters are supplied in regular and low capacitance versions including a variety of styles and configurations to provide mounting and termination flexibility. Loose-piece style filters are asembled with high temperature solder that will not reflow at temperatures below 260°C. Bolt type filters are particularly suited to physically demanding applications.

Minimum No Load Insertion Loss

Filter Type	AMP Electrical Specification Number	Capacitance at 1 kHz and +25°C	3 dB Point	Min. No Load Insertion Loss in dB (Per MIL-STD-220 at +25°C)							
				25 MHz	50 MHz	100 MHz	300 MHz	500 MHz	1 GHz	5 GHz	10 GHz
DA-M	108-1119	4000 to 8000 pF	2 MHz	20	35	55	100	100	100	100	100
DB-M	108-1120	3000 to 5000 pF	3 MHz	15	25	35	70	90	100	100	100
DC-M	108-1121	1500 to 3000 pF	5 MHz	10	15	20	45	55	60	60	60
DF-M	108-1125	160 to 250 pF	50 MHz	—	—	—	—	25	35	55	55
DG-M	108-1123	80 to 125 pF	150 MHz	—	—	—	—	—	16	35	42

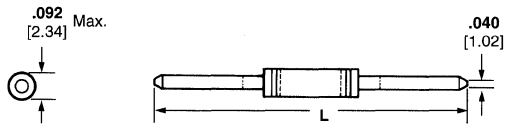
SOURCE: Catalog 82061

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

Quiet Line Premium Loose-Piece Filters

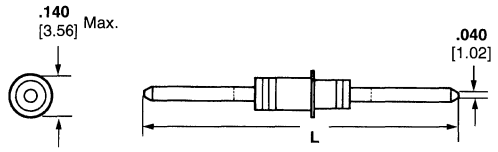
(Distributed Element Filters)

(Continued)



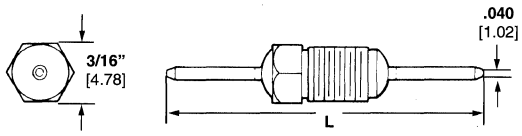
Pin-Sleeve Style

Filter Type	Dim. L	Part Numbers	Color Code
DA-M	**1.00** [25.4]	859623-1	Red Dot
DB-M	**1.00** [25.4]	859624-1	Red Dot
	.600 [15.24]	859635-1	Red Dot
DC-M	**1.00** [25.4]	859625-1	Red Dot
	.400 [10.16]	859636-1	Red Dot
DG-M	**1.00** [25.4]	859665-1	Black Dot



Eyelet Style

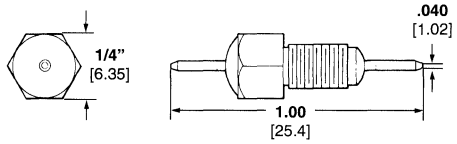
Filter Type	Dim. L	Part Numbers	Color Code
DA-M	**1.00** [25.4]	859626-1	Red Dot
DB-M	**1.00** [25.4]	859627-1	Red Dot
	.600 [15.24]	859637-1	Red Dot
DC-M	**1.00** [25.4]	859628-1	Red Dot
	.400 [10.16]	859638-1	Red Dot
DG-M	**1.00** [25.4]	859668-1	Black Dot



8-32 Bolt Style

Filter Type	Dim. L	Part Numbers	Color Code
DA-M	**1.00** [25.4]	859629-1	Black Epoxy Red Dot
DB-M	**1.00** [25.4]	859630-1	Black Epoxy Red Dot
	.600 [15.24]	859639-1	Black Epoxy Red Dot
DC-M[1]	**1.00** [25.4]	859631-1	Black Epoxy Red Dot
	.500 [12.7]	859640-1	Black Epoxy Red Dot
DF-M	**1.00** [25.4]	859670-1	Black Epoxy Red Dot
DG-M[1]	**1.00** [25.4]	859671-1	Black Epoxy Red Dot

[1] Lockwasher and nut are not included.



12-32 Bolt Style

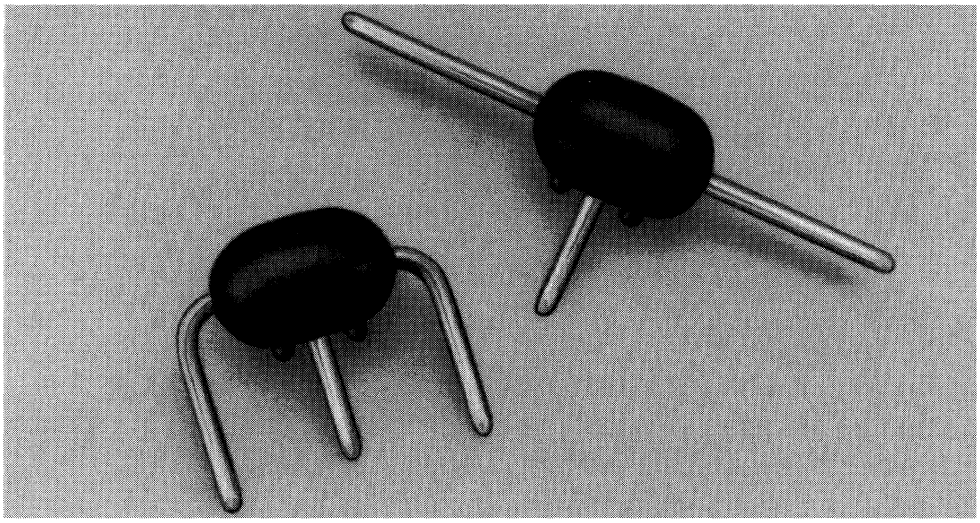
Filter Type	Part Numbers*	Color Code
DB-M	859647-1	Black Epoxy Red Dot
DF-M	859683-1	Black Epoxy Red Dot

*Supplied with lockwasher and nut.

SOURCE: Catalog 82061

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

High Frequency PCB Filters



Product Facts

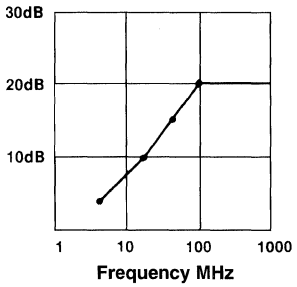
- **Provides EMI filtering to protect low power digital circuits—helps equipment meet FCC and VDE specifications**
- **Mounts directly to printed circuit board with no bracket or plate for lower applied costs can be flow soldered with other components**
- **Encapsulated for environmental protection**
- **Mounts on PCB to begin filtering at the source of the problem**
- **Built-in standoffs permit cleaning or coating under the filter**

The economical High Frequency PCB Filter offers electrical characteristics which allow many devices to meet most government and industry specifications for EMI control, while providing good electrostatic discharge protection.

A lossy ferrite filter with a center ground lead is terminated within the filter's thermoset epoxy body. AMP filters are well known for their ability to absorb unwanted signals, dispersing the energy as small amounts of heat.

The High Frequency PCB Filter offers savings three ways. First is the low cost of the filter assembly. Second is the economy of installation. Three silver plated leads are inserted into holes in a printed circuit board which has a ground path circuit, for conventional flow-soldering with other components. No special mounting plate or brackets is needed and, when the holes are placed as recommended in a .062 [1.57] thick board, no lead trimming is required. Elimination of hand soldering provides opportunities for improved quality in addition to applied-cost benefits. A third savings results from placing a filter at the source of an EMI problem, potentially eliminating the need for additional filtering at other points in the circuit.

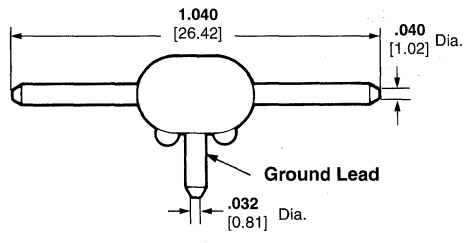
Minimum no-load insertion loss—
(per MIL-STD-220 at 25°C; PCB mounted, 50 ohm strip line)
3dB @ 8 MHz
10dB @ 25 MHz
15dB @ 50 MHz
20dB @ 100 MHz-1GHz
(See graph below)



Minimum no-load insertion loss per MIL-STD at 25°C, PCB mounted, 50 ohm strip line

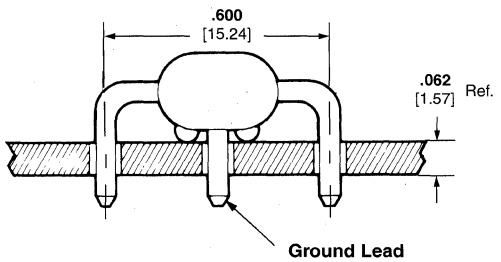
Standard Configuration

Part Number 842448-1



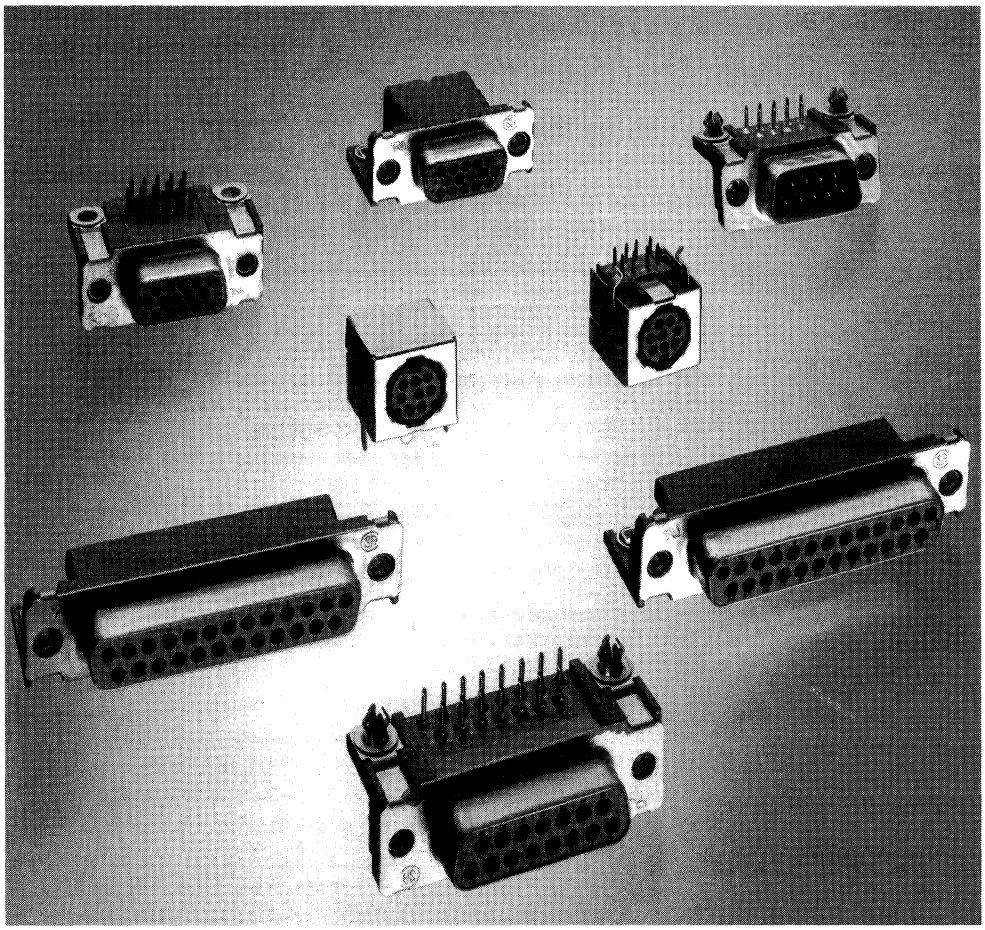
Preformed to Recommended Mounting Configuration

Part Number 842448-2



SOURCE: Catalog 82061

Quiet Line Filtered PCB Connectors

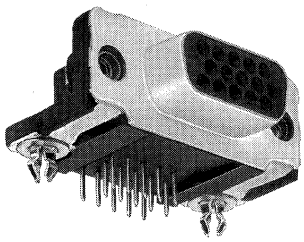


Product Facts

- Offer economic EMI/RFI protection
- Matched pcb footprints mean "Drop-in" replacement for non-filtered connectors
- Choice of ferrite only or capacitive array on ferrite
- Connectors have industry standard interface
- Connectors offer a choice of duplex gold over nickel contact plating
- AMPLIMITE connector housing made of UL 94V-0 rated high temperature thermoplastic
- Shielded miniature circular DIN receptacles made of UL 94V-0 rated, high temperature thermoplastic, compatible with IR reflow solder processes, SMT
- Recognized under the Component Program of Underwriters Laboratories Inc., File No. E28476
- Certified by Canadian Standards Association, File No. LR7189

Subminiature D HD-22 Ferrite Block Filtered Receptacles (AMPLIMITE)

Mates with—Subminiature D HD-22 Plugs



Plating Code:

A—Duplex plated select gold flash on mating end

B—Duplex plated .000030 [0.00076] min. gold on mating end

Receptacles—Ferrite Only

Shell Size	No. of Pos.	Plating Code	Part Numbers
1	15	A	869427-1
		B	869427-2

Receptacles—Ferrite Block and Capacitors

Shell Size	No. of Pos.	Plating Code	Capacitance pF	Part Numbers
1	15	A	220	869620-1
			470	869620-2
			820	869620-3
			1500	869620-4
		B	220	869620-5
			470	869620-6
			820	869620-7
			1500	869620-8

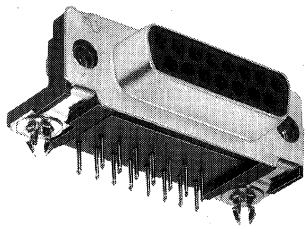
SOURCE: Catalog 82795

Specifications subject to change.

1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

Subminiature D HD-20 Connectors with Ferrite Block Filter (AMPLIMITE)



Receptacle

Plating Code:

A—Duplex plated select gold flash on mating end

B—Duplex plated .000030 [0.00076] min. gold on mating end

Mates with—Subminiature D HD-20 Connectors

Plugs—Ferrite Only

Shell Size	No. of Pos.	Plating Code	Part Numbers
1	9	A	869436-1
		B	869436-2
2	15	A	869526-1
		B	869526-2
3	25	A	869442-1
		B	869442-2

Receptacles—Ferrite Only

Shell Size	No. of Pos.	Plating Code	Part Numbers
1	9	A	869520-1
		B	869520-2
2	15	A	869521-1
		B	869521-2
3	25	A	869448-1
		B	869448-2

Plugs—Ferrite Block and Capacitors

Shell Size	No. of Pos.	Plating Code	Capacitance pF	Part Numbers
1	9	A	220	869470-1
			470	869470-2
			820	869470-3
			1500	869470-4
		B	220	869470-5
			470	869470-6
			820	869470-7
			1500	869470-8
2	15	A	220	869527-1
			470	869527-2
			820	869527-3
			1500	869527-4
		B	220	869527-5
			470	869527-6
			820	869527-7
			1500	869527-8
3	25	A	220	869476-1
			470	869476-2
			820	869476-3
			1500	869476-4
		B	220	869476-5
			470	869476-6
			820	869476-7
			1500	869476-8

Receptacles—Ferrite Block and Capacitors

Shell Size	No. of Pos.	Plating Code	Capacitance pF	Part Numbers
1	9	A	220	869522-1
			470	869522-2
			820	869522-3
			1500	869522-4
		B	220	869522-5
			470	869522-6
			820	869522-7
			1500	869522-8
2	15	A	220	869523-1
			470	869523-2
			820	869523-3
			1500	869523-4
		B	220	869523-5
			470	869523-6
			820	869523-7
			1500	869523-8
3	25	A	220	869464-1
			470	869464-2
			820	869464-3
			1500	869464-4
		B	220	869464-5
			470	869464-6
			820	869464-7
			1500	869464-8

SOURCE: Catalog 82795

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

Shielded Miniature Circular DIN Right-Angle Receptacles with Ferrite Block Filters

Note: 8 Pos. Housing Dim. (Typ.)—.551 [14.00] L x .505 [12.83] W x .512 [13.00] H

Mates with—Cable-Mount Plugs/Cable Assemblies

Receptacles—Ferrite Only

No. of Pos.	Plating Code	Part Numbers with Hold-Down	Part Numbers without Hold-Down
6	A	869508-1	869504-1
	B	869508-2	869504-2
8	A	869509-1	869505-1
	B	869509-2	869505-2

Plating Code:

A—Duplex plated select gold flash on mating end

B—Duplex plated .000030 [0.00076] min. gold on mating end

Receptacles—Ferrite Block and Capacitors

No. of Pos.	Plating Code	Capacitance pF	Part Numbers with Hold-Down	Part Numbers without Hold-Down
6	B	280	869567-5	869566-5
		480	869567-6	869566-6
		850	869567-7	869566-7
		950 Min.	869567-8	869566-8
8	B	280	869569-5	869568-5
		480	869569-6	869568-6
		850	869569-7	869568-7
		950 Min.	869569-8	869568-8

Subminiature D Ferrite Block Filtered Connectors (AMPLIMITE)

Cross-Reference Unfiltered to Filtered

Unfiltered Part No.	Filtered Part No.
747840-3	869436-1
	869470-1
	869470-2
	869470-3
	869470-4
747840-4	869436-2
	869470-5
	869470-6
	869470-7
	869470-8
747841-3	869526-1
	869527-1
	869527-2
	869527-3
	869527-4
747841-4	869526-2
	869527-5
	869527-6
	869527-7
	869527-8
747842-3	869442-1
	869476-1
	869476-2
	869476-3
	869476-4
747842-4	869442-2
	869476-5
	869476-6
	869476-7
	869476-8
747844-3	869520-1
	869522-1
	869522-2
	869522-3
	869522-4
747844-4	869520-2
	869522-5
	869522-6
	869522-7
	869522-8
747845-3	869521-1
	869523-1
	869523-2
	869523-3
	869523-4
747845-4	869521-2
	869523-5
	869523-6
	869523-7
	869523-8
747846-3	869448-1
	869464-1
	869464-2
	869464-3
	869464-4
747846-4	869448-2
	869464-5
	869464-6
	869464-7
	869464-8
748390-5	869427-2
	869620-5
	869620-6
	869620-7
	869620-8
1-748390-1	869427-1
	869620-1
	869620-2
	869620-3
	869620-4

Shielded Miniature Circular DIN Connectors with Ferrite Block Filters

Cross-Reference Unfiltered to Filtered

Unfiltered Part No.	Filtered Part No.
749179-1	869509-2
	869569-5
	869569-6
	869569-7
	869569-8
749180-1	869508-2
	869567-5
	869567-6
	869567-7
	869567-8
749231-1	869508-1
749232-1	869509-1
749265-1	869504-1
749266-1	869504-2
	869566-5
	869566-6
	869566-7
	869566-8
749267-1	869505-2
	869568-5
	869568-6
	869568-7
	869568-8
749268-1	869505-1

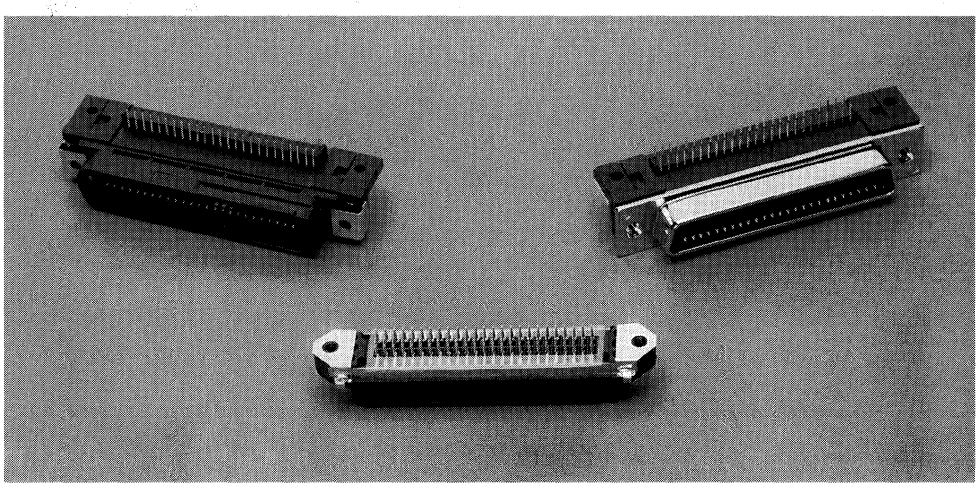
SOURCE: Catalog 82795

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

Quiet Line Filtered CHAMP Connectors

Product Facts

- Lower installed cost
- Helps in meeting FCC Part 15; available for Part 68 requirements
- Applicable for VDE specifications 0871, 0875-0878, Vfg Federal Regulations and VCCI noise requirements
- Drop-in replacement, matched footprint
- All circuit lines protected
- Dielectric Withstanding Voltage up to 1000 VAC
- Insulation resistance 10 Gohm @ 100 VDC
- Capacitive values up to 1000pF typically, greater capacitance values available
- Wide wire range
- Available as fully-shielded or unshielded
- Available with a choice of mounting methods—screw lock, bail lock or locking latch type
- Recognized under the Component Program of Underwriters Laboratories Inc., File No. E28476
- Certified by Canadian Standards Association, File No. LR7189



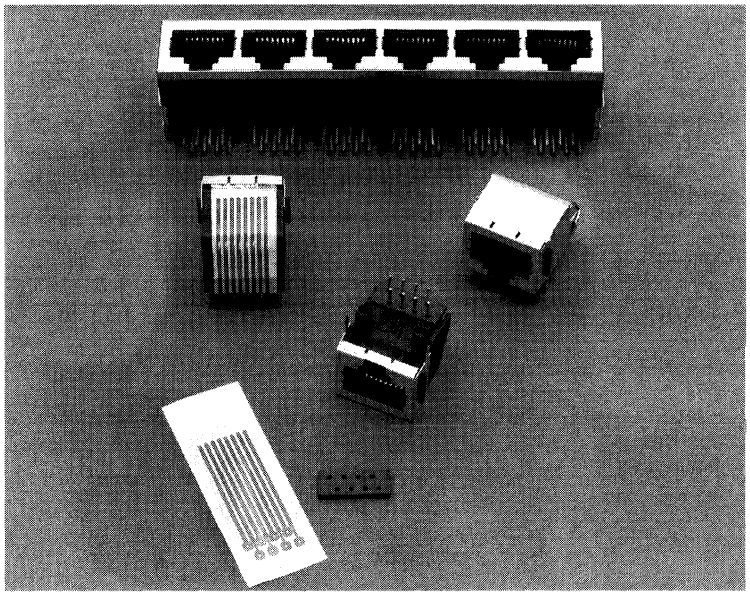
Filtered CHAMP Connector Assembly Part Number Cross Reference

Description	Part Numbers	
	Unfiltered*	Filtered
Right Angle Receptacle, Shielded, 50 Pos., 100 pF	553813-3	93533-1
Right Angle Receptacle, Shielded, 1000 pF	553813-3	93533-2
Right Angle Receptacle, Shielded, 220 pF	553813-3	93533-3
Right Angle Plug, Unshielded, 50 Pos., 1000 pF	552726-1	93532-1
ACTION PIN Plug, 50 Pos., 100 pF	554758-1	93510-1
ACTION PIN Plug, 470 pF	554758-1	93510-2
ACTION PIN Plug, 1000 pF	554758-1	93510-3
ACTION PIN Plug, 470 pF	554758-1	93510-4
ACTION PIN Plug, mixed pF	554758-1	93510-5
Adapter, 50 Pos., 820 pF, 600 VAC, w/bail locks	N/A	93552-1
Adapter, 50 Pos., 470 pF	N/A	93552-2
Adapter, 50 Pos., 100 pF	N/A	93552-3
Adapter, 50 Pos., 820 pF, 50 micro Au	N/A	93552-4
Adapter, 50 Pos., 470 pF	N/A	93552-5
Adapter, 50 Pos., 470 pF	N/A	93552-6
Adapter, 50 Pos., 1200 pF	N/A	93552-7
Adapter, 50 Pos., 820 pF	N/A	93552-8
Adapter, 50 Pos., 100 pF	N/A	93552-9
Adapter, 50 Pos., 470 pF, 50 micro Au	N/A	1-93552-0
Adapter, 50 Pos., 100 pF, 50 micro Au	N/A	1-93552-1

*For standard unfiltered version consult Catalog 82008.

SOURCE: Catalog 65696

Quiet Line Filtered Modular Jack Connectors



Product Facts

- Lower installed cost
- Assists with FCC Part 15 A and B compliance
- Drop-in replacement, matched footprint
- All circuit lines protected
- Inductor (L), and Capacitor (C), versions
- Capacitive versions feature:
  - Dielectric withstanding voltage 500 VAC maximum
  - Insulation resistance—10 Gohm @ 100 VDC
  - Capacitive value 110 pF
- Offers minimum 20dB shielding effectiveness from 30 MHz–400 MHz
- Available with two grounding options—PCB or panel
- Recognized under the Component Program of Underwriters Laboratories Inc., File Nos. E28476 and E81956
- Certified by Canadian Standards Association, File No. LR7189

Part Number Cross Reference

Unfiltered	Filtered	Description
*555162-1	93570-1	Low profile, 8 pos., ferrite, no shield
*555162-1	93653-1	Low profile, 8 pos., ferrite, no shield
*555153-1	93534-1	Low profile, 8 pos., ferrite, front shield
*556926-1	93782-1	Low profile, 8 pos., ferrite, extended front shield
*555153-1	93538-1	Low profile, 8 pos., cap. film, front shield
*555153-1	93546-1	Low profile, 8 pos., ferrite, full shield
*557785-1	93801-1	Multigang, 1 port, ferrite, no shield
*557786-1	93754-1	Multigang, 1 port, ferrite, pcb ground
*557786-1	93655-1	Multigang, 1 port, cap. film, pcb ground
*557560-1	93802-1	Multigang, 2 port, ferrite, no shield
*557570-1	93795-1	Multigang, 2 port, ferrite, pcb ground
*557562-1	93578-1	Multigang, 4 port, ferrite, no shield
*557571-1	93579-1	Multigang, 4 port, ferrite, pcb ground, one tab
*557571-2	93579-2	Multigang, 4 port, ferrite, panel ground, three tabs
*557571-3	93579-3	Multigang, 4 port, ferrite, pcb ground, three tabs
*557571-4	93579-4	Multigang, 4 port, ferrite, pcb ground, no tabs
*557571-1	93580-1	Multigang, 4 port, cap. film, pcb ground, one tab
*557571-2	93580-2	Multigang, 4 port, cap. film, panel ground, three tabs
*557571-3	93580-3	Multigang, 4 port, cap. film, pcb ground, three tabs
*557571-4	93580-4	Multigang, 4 port, cap. film, pcb ground, no tabs
*557564-1	93582-1	Multigang, 6 port, ferrite, no shield
*557572-1	93583-1	Multigang, 6 port, ferrite, pcb ground, one tab
*557572-2	93583-2	Multigang, 6 port, ferrite, pcb ground, no tabs
*557572-3	93583-3	Multigang, 6 port, ferrite, panel ground, one tab
*557572-1	93584-1	Multigang, 6 port, cap. film, pcb ground, one tab
*557572-2	93584-2	Multigang, 6 port, cap. film, pcb ground, no tabs
*557572-3	93584-3	Multigang, 6 port, cap. film, panel ground, one tab
*557566-1	93586-1	Multigang, 8 port, ferrite, no shield
*557573-1	93587-1	Multigang, 8 port, ferrite, pcb ground, one tab
*557573-2	93587-2	Multigang, 8 port, ferrite, panel ground, one tab
*557573-1	93588-1	Multigang, 8 port, cap. film, pcb ground, one tab
*557573-2	93588-2	Multigang, 8 port, cap. film, panel ground, one tab

*For Standard Unfiltered Versions Consult Catalog 82066.

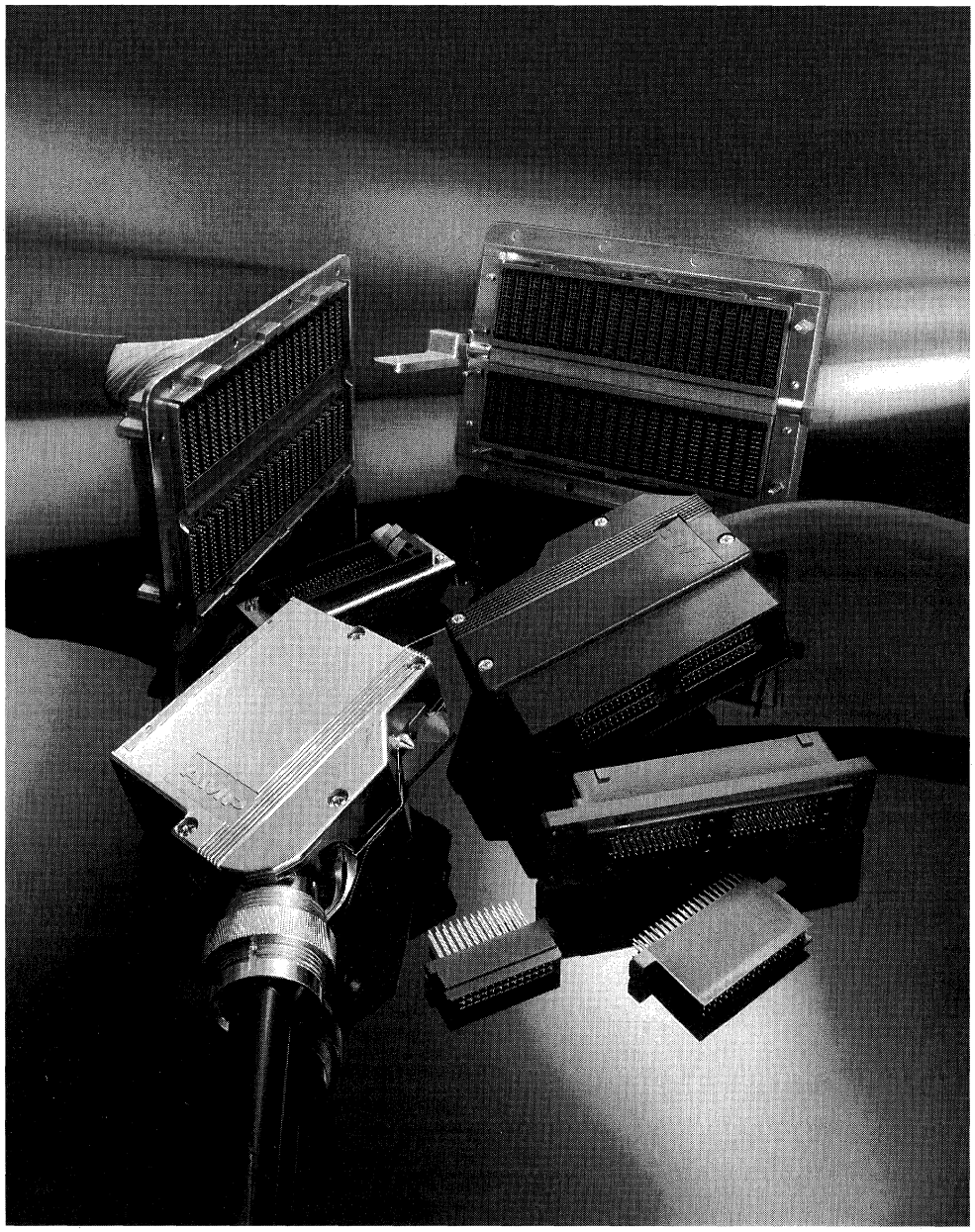
SOURCE: Catalog 65697

Specifications subject to change.

1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

CR ZIF (Cammed Rectangular, Zero Insertion Force) Connector System



Product Facts

- Modular construction for reliabilty and economy
- Variety of contacts are available for broad range of mating capabilities
- Plug contacts
  - Crimp, snap-in
  - Insulation displacement
  - .026 [0.66] formed posts
  - Power Type 1 Size 12, and Miniature COAXICON pins and sockets (40 positions)
  - Ribbon cable
- Receptacle contacts
  - Choice of .025 [0.64] square post lengths for wire wrap, flow solder, or connectorizing
  - Insulation displacement
  - Power Type 1 Size 12, and Miniature COAXICON pins and sockets (40 positions)
  - Ribbon cable
- Plug and receptacle module concept for diversity and replaceability
- Individual modules stand alone and are not disturbed by replacing adjacent modules
- Available in rugged metal shells for EMI/RFI shielding in 120-position size
- Zero insertion force for blind mating and low contact wear
- Wipe-backwipe action of cam for cleaning contact surfaces and providing excellent electrical continuity
- Available in a wide range of positions (40 to 1040) to meet I/O requirements, the 520 and 1040 allow selective module loading
- Long life—tested up to 5,000 cycles minimum
- Keying options for individual modules
- Various strain reliefs for flat or round cable exits
- Positive lock housing (40, 120 and 156 positions) and frames (520 and 1040 positions) to provide full mating of connector halves
- Application tooling ranges from fully automatic to hand tools to meet various levels of production requirements

The Modular Approach

Modularity means flexibility. CR ZIF connectors are constructed in a manner reflected by the adjacent chart.

Type of CR ZIF Connector (total position number)	Number of Contact Positions per Module	Number of Modules (Max.) per Connector	See Page No.
40	40	1	8035
120	40	3*	8036 and 8037
156	26	6	8038
520	26	20	8039
1040	26	40	8039

***Note:** 7-Pos. RF/Power Contact Modules can replace one or two of these Modules.

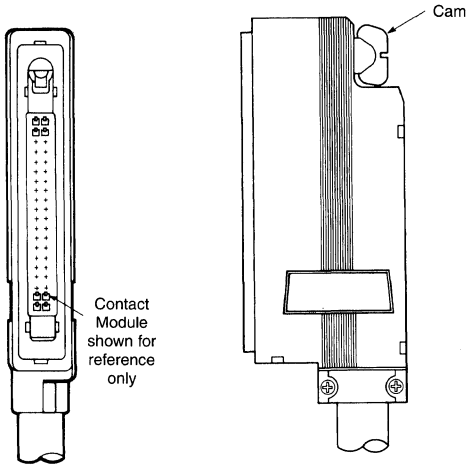
SOURCE: Catalog 82157

Specifications subject to change.

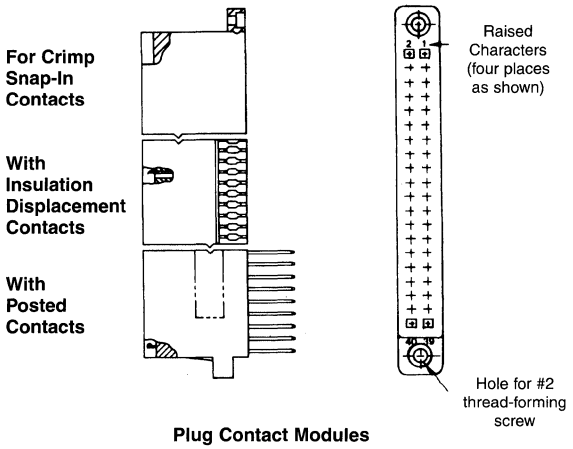
1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

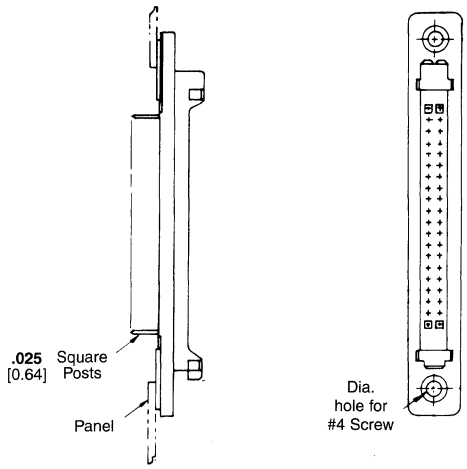
40-Position Connector Assemblies



Plug Housing Kit



Plug Contact Modules



Standard Receptacles

40-Position Plug and Receptacle Assemblies

Plug Housing Kit

Kit Part No. 207691-1
Includes plug housing with strain relief, cable clamp, cam and four #2 thread-forming screws. Order Contact Modules separately.

Plug Contact Modules

■ **For Crimp, Snap-In Contacts**

Module Part No. 206541-1
Order contacts separately. (See Page 8040.)

■ **With Insulation Displacement Contacts (for discrete wire)**

Module Part No. 206573-1
Order Cover, **Part No. 206574-1**, separately. (Two covers per module required.)

■ **With 0.26 [0.66] Formed Posted Contacts**

Post Length	Module Part No.
.270 6.86	206735-2
.340 8.66	206735-3

Note: 40-Pos. Housing Dim. (Typ.)—2.570 [65.28] L x .297 [7.54] W x 1.025 [26.04] H

Standard Receptacle

Contact Modules
.025 [0.64] Square Posts

Post Length	Module Part No.
.240 6.10	206952-1
.693 17.6	206952-2

Note: 40-Pos. Housing Dim. (Typ.)—3.626 [92.1] L x .460 [11.68] W x .410 [10.41] H

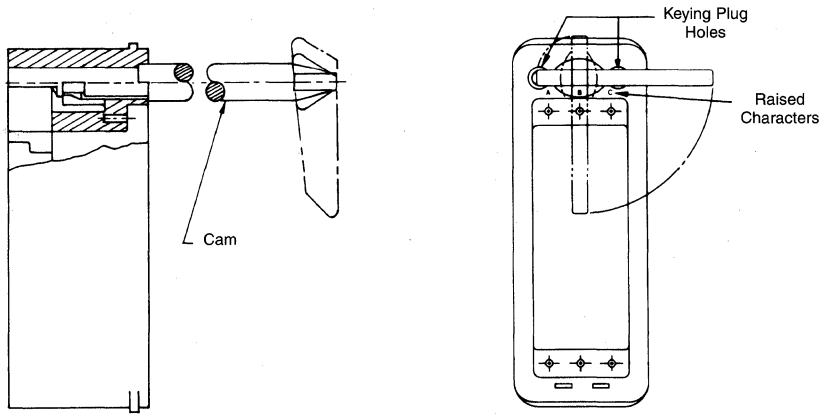
SOURCE: Catalog 82157

Specifications subject to change.

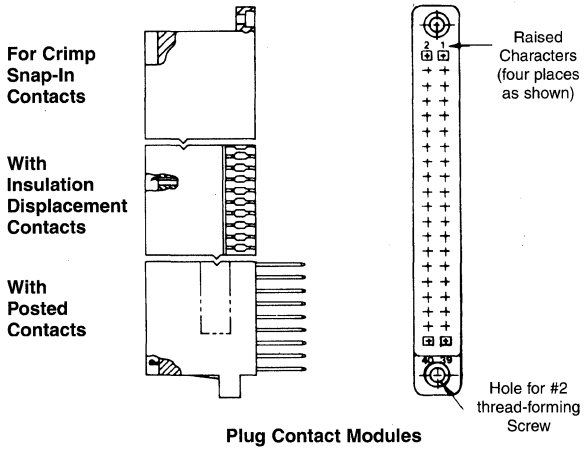
1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

120-Position Connector Assemblies



Plug Housing Kit



Plug Contact Modules

120-Position Plug Assemblies

Plug Kits

Kit Part No. 207226-1 (Crimp, snap-in)
Includes housing, strain relief **(Part No. 206540-1)**, cam, two keying plugs, **Part Number 206545-1**, cable clamps, all screws required, and three modules for crimp, snap-in contacts. Order contacts separately, on page 8040.

Kit Part No. 207226-2 (IDC)
Includes housing, strain relief **(Part No. 206540-1)**, cam, two keying plugs, **Part Number 206545-1,** cable clamps, all screws required, and three insulation displacement contact modules with covers.

Kit Part No. 207205-2 (flat cable)
Includes housing, strain relief **(Part No. 207080-1)**, cam, two keying plugs, **Part Number 206545-1,** cable clamps, and all screws required. Order posted contact modules* separately (listed below).

*To be used with AMP-LATCH Ribbon Cable Connector.

Plug Contact Modules

Each 120-Position connector requires three 40-position contact modules.

■ For Crimp, Snap-In Contacts

Module Part No. 206541-1
Order contacts separately. (See page 8040.)

■ With Insulation Displacement Contacts

Module Part No. 206573-1
Order cover, **Part No. 206574-1**, (for IDC modules only) separately. Two covers per module required.

■ With .026 [0.66] Formed Posted Contacts

Post Length	Module Part No.
.270 6.86	206735-2
.340 8.64	206735-3

Plug Housings only

Part No. 206527-1
(with standard camshaft)
Part No. 207921-1
(with short cam handle)

SOURCE: Catalog 82157

Specifications subject to change.
1-800-522-6752 Product Information Center/ AMP FAX Service
1-800-722-1111 Tooling/Technical Assistance Center

120-Position Connector Assemblies
(Continued)

120-Position Plug Assemblies
(Continued)

Strain Relief Kits

Round Cable Strain Relief Kits

Kits include strain relief, cable clamps, and all screws required.

Kit Part No. 206540-1
For .750-1.000 [19.05-25.40] cable dia.

Kit Part No. 206540-2
For .400-.600 [10.16-15.24] cable dia.

Flat Cable Strain Relief Kit

Kit Part No. 207080-1
Includes cam, strain relief, cable clamps, and all screws required.

EMI/RFI Shielded Strain Relief Kits

Kits include left and right shield halves, threaded yoke, ring and four screws.

Kit Part No. 211679-2
1-3/8 [34.92] dia. cable outlet

An additional cable clamp "Iris" assembly, **Part Number 211845-2**, is available for use with above kit only.

Kit Part No. 211975-1
1-5/16 [33.32] dia. cable outlet

120-Position Receptacle Assemblies

Receptacle Kits

Standard Kit Part No. 207227-1

Includes housing **(Part No. 206539-2)**, three modules (Module **Part No. 206542-1**), two keying plugs, and all screws required.

Wrap-Type Terminations
Kit Part No. 207356-2
Includes housing **(Part No. 207357-1)** and all screws required. Order .025 [0.64] square posted contact modules separately (see table below).

No. of Pos.	Post Length	Module Part No.
40	.250 6.35	206542-1
	.550 13.97	207173-1
	.770 19.56	206396-1

Shielded Kit
Part No. 211686-2

Includes housing, screws, and keying plug. Order contact modules separately.

Receptacle Contact Modules

■ **With .025 [0.64] Square Posts**

No. of Pos.	Post Length	Module Part No.
40	.250 6.35	206542-1
	.550 13.97	207173-1
	.770 19.56	206396-1

■ **For Mass Termination of .050 [1.27] Centerline Ribbon Cable**

Module Part No. 208498-1

7-Position Modules for RF/Power Contacts

Plug Module

Module Part No. 211978-2

These modules can replace any of the 40-position modules used in the 120-Position Plug Assemblies. However, please note that this module cannot be used in the middle module position of the housing.

Order Miniature COAXICON Contacts or Power Type 1 Size 12 Pin Contacts separately.

Receptacle Module

Module Part No. 211979-2

These modules can replace any of the 40-position modules used in the 120-Position Receptacle Assemblies. However, please note that this module cannot be used in the middle module position of the housing.

Order Miniature COAXICON Contacts or Power Type 1 Size 12 Pin Contacts separately. (See pages 8040-8042).

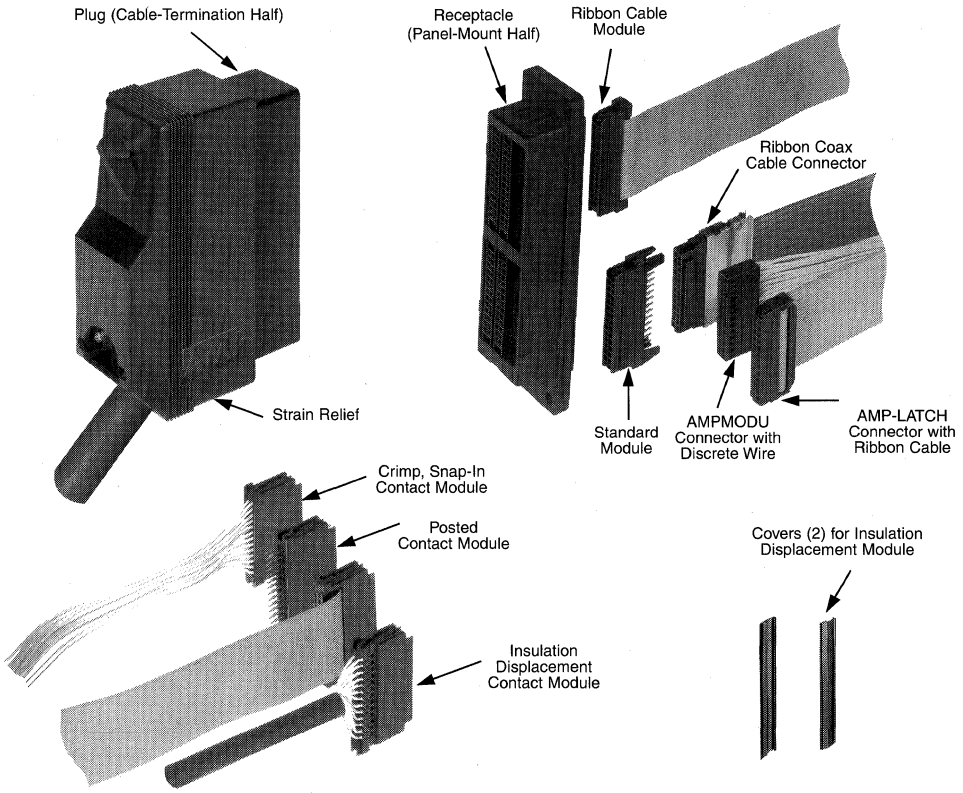
SOURCE: Catalog 82157

Specifications subject to change.

1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

156-Position Connector Assemblies



156-Position Plug Assemblies

Plug Kits

Kit Part No. 207228-1 (Crimp, snap-in)
Order contacts separately. (See page 8040)

Kit Part No. 207228-2 (IDC)
With insulation displacement contact modules and covers.

Above kits include plug housing, cam, strain relief, six modules, two keying plugs **(Part No. 206545-1)**, cable clamps, and all screws required.

Plug Housing Only (includes cam)

Part No. 206740-1

Plug Contact Modules

Each 156-position plug requires six, 26-position contact modules.

- **For Crimp, Snap-In Contacts**
  Module Part No. 206743-1
  Order contacts separately. (See page 8040)
- **With Insulation Displacement Contacts (for discrete wire)**
  Module Part No. 206745-1
  Order cover, **Part No. 206574-3**, separately. Two covers per module required.

156-Position Plug Assemblies (Continued)

- **With 0.26 [0.66] Formed Posted Contacts**

No. of Pos.	Post Length	Module Part No.
26	.270 6.86	207385-1
	.340 8.64	211812-1

Module Extraction Tool Part No. 91173-1

Strain Relief Kit

Kit Part No. 206737-1
For .750-1.000 [19.05-25.4] cable dia.

Includes strain relief, cable clamps, and all screws required.

156-Position Receptacle Assemblies

Receptacle Kit

Kit Part No. 207229-1
Includes housing **(Part No. 206742-1)**, six contact modules with guides (Module **Part No. 206746-1)**, and two keying plugs.

156-Position Receptacle Assemblies (Continued)

Receptacle Modules

With .025 [0.64] Square Posts

No. of Pos.	Post Length	Module
26	.230 5.84	206746-2
	.550 13.97	207256-1
	.230 5.84	206746-1*

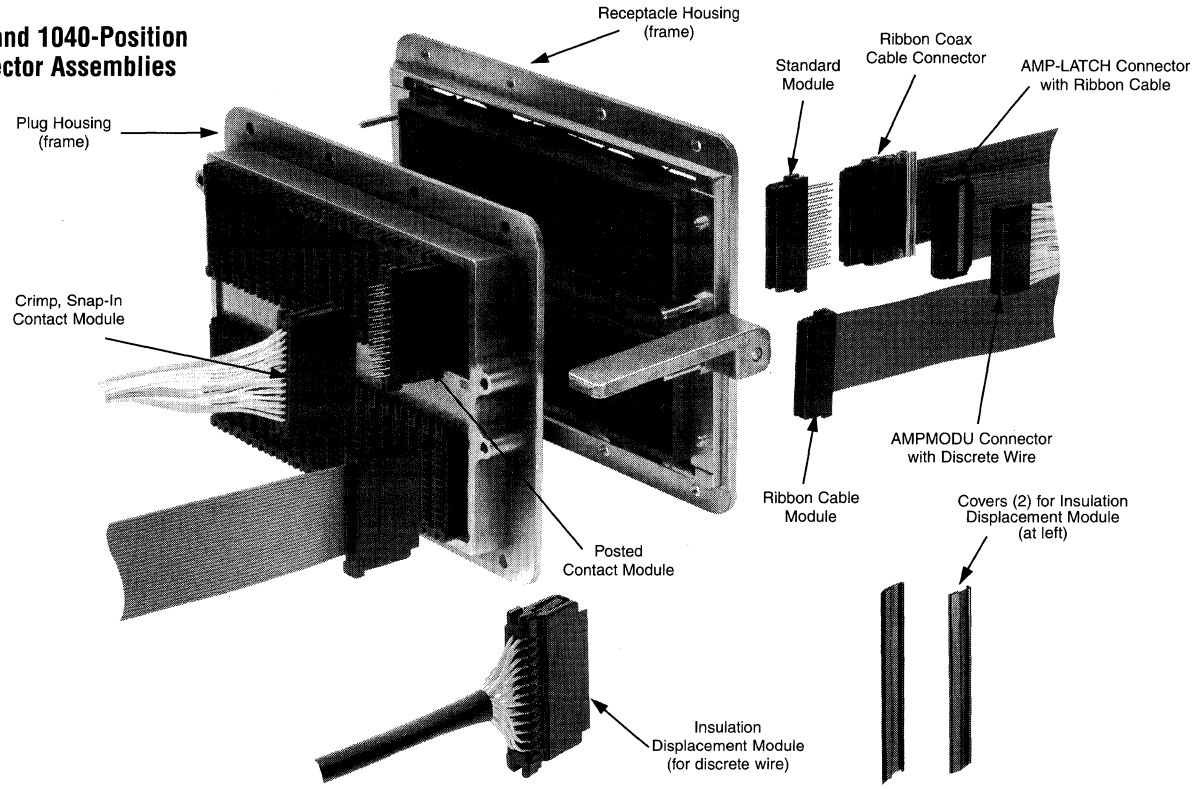
*With Guides

For Mass Termination of .050 [1.27] Centerline Ribbon Cable

Module Part No. 443044-1

SOURCE: Catalog 82157

520- and 1040-Position Connector Assemblies



520-Position Plug and Receptacle Assemblies

Plug Housing (frame)

Part No. 211889-3

Note: Dim. (Typ.)—4.350 [110.49] L x 5.310 [134.87] W x 1.115 [28.32] H

Plug Contact Modules

For Crimp, Snap-In Contacts

Module Part No. 206743-1
Order contacts separately. (See page 8040)

With Insulation Displacement Contacts (for discrete wire)

Module Part No. 206745-1

Order Cover **Part No. 206574-3** separately. Two covers per module required.

With 0.25 [0.64] Square or 0.26 [0.66] Formed Posted Contacts

No. of Pos.	Post Length	Module Part No.
26	.270 6.36	207385-1
	.340 8.64	211812-1

Module Extraction Tool

Part No. 91173-1

520-Position Plug and Receptacle Assemblies (Continued)

Receptacle Housing Assembly

Part No. 211890-1

Includes two retainer brackets, two module housings, four screws, cam, four polarizing posts, frame, two springs and handle.

Contact modules must be ordered separately (see chart below).

Receptacle Contact Modules

With .025 [0.64] Square Posts

No. of Pos.	Post Length	Module Part No.
26	.230 5.48	206746-2
	.550 13.97	207256-1
	.230 5.84	206746-1*

*With Guides

For Mass Termination of .050 [1.27] Centerline Ribbon Cable

Module Part No. 443044-1

Module Extraction Tool

Part No. 91173-1

1040-Position Plug and Receptacle Assemblies

Plug Housing (frame)

Part No. 208788-3

Note: Dim. (Typ.)—7.380 [187.45] L x 5.310 [134.87] W x 1.115 [28.32] H

Plug Contact Modules

For Crimp, Snap-In Contact Module Part No. 206743-1

Order contacts separately. (See page 8040)

With Insulation Displacement Contacts (for discrete wire)

Module Part No. 206745-1

Order Cover **Part No. 206574-3** separately. Two covers per module required.

With .025 [0.64] Square Posts

No. of Pos.	Post Length	Module Part No.
26	.270 6.85	207385-1
	.340 8.64	211812-1

Module Extraction Tool

Part No. 91173-1

1040-Position Plug and Receptacle Assemblies (Continued)

Receptacle Housing Assembly

Part No. 208789-1

Includes two retainer brackets, two module housings, four screws, camshaft, four polarizing posts, frame, two springs and handle.

Contact modules must be ordered separately (see chart below).

Receptacle Contact Modules

With .025 [0.64] Square Posts

No. of Pos.	Post Length	Module Part No.
26	.230 5.48	206746-2
	.550 13.97	207256-1
	.230 5.84	206746-1*

*With Guides

For Mass Termination of .050 [1.27] Centerline Ribbon Cable

Module Part No. 443044-1

Module Extraction Tool

Part No. 91173-1

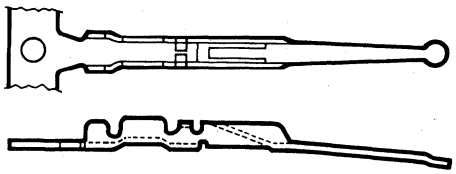
SOURCE: Catalog 82157

Specifications subject to change.

1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

Crimp, Snap-In Contacts and Tooling



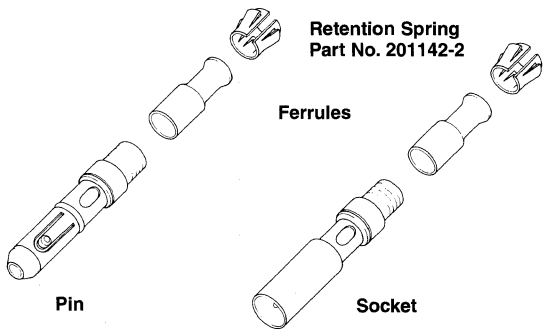
Wire Size	Insul. Dia. (Max.)	Contact Finish	Contact Part Numbers		Tooling Part Numbers		
			Strip	Loose Piece	Hand Tool	Quick-Change Applicator	Applicator for AMP-O-MATIC Stripper-Crimper
28-24 AWG 0.00-0.2 mm²	.049 1.25	Gold/Nickel	66555-2	66555-3	90309-1	466047*	466961-1
24-20 AWG 0.2-0.5 mm²			66750-2	66750-3	90416-1	567163*	466971-1

*Base number can have one of two dash numbers:
-1 refers to applicator for AMPOMATOR Machine;
-2 refers to applicator for AMP-O-LECTRIC Machine **Part No. 565435-5.**
For use with AMP-O-LECTRIC Model K Machines. Call the Tooling/Technical Assistance Center for the part number of Applicators for use with other bench machines and fully-automatic AMPOMATOR Lead Making Machines.
Contact Extraction Tool **Part No. 91111-1.**

RF Contacts for 7-Position Modules

Note: Modules for use in 120-Position Connector Assemblies.

Selection Charts for Miniature COAXICON Contacts, Crimp



RF Contacts for Coaxial Cable

Cable Size* (RG/U)	Contact Finish	Loose Piece Contact Part No.		Ferrule Part No.	Tooling Part No.	
		Pin	Socket		Die Inserts for Hand Tool Part No. 69710-1 or Pneumatic Tool Part Nos. 69365-2 & 69365-3**	Hand Tool
55, 55A, 55B, 141, 142, 223	Gold/Nickel	201145-4	201146-4	330478	69315-4	69248-4
	Gold/Copper	201145-9	201146-9			
58, 58A, 58B, 58C	Gold/Nickel	201145-4	204146-4	328663	69220-2	45740-2
	Gold/Copper	201145-9	201146-9			
174, 197A, 187, 21-598	Gold/Nickel	201143-1	201144-1	328666	69227-2	45638-2
	Gold/Copper	201143-6	201144-6			
180, 180A, 195, 21-597	Gold/Nickel	201145-2	201146-2	328664	69222-2	45639-2
	Gold/Copper	1-201145-0	1-201146-0			
178, 178A, 196	Gold/Nickel	201511-1	201512-1	328667	69373	69186-2
	Gold/Copper	201511-3	—			
188	Gold/Nickel	201143-5	201144-5	328666	69227-2	45638-2
	Gold/Copper	201143-7	201144-7			
122	Gold/Nickel	201145-1	201146-1	328664	69222-2	45639-2
	Gold/Copper	—	1-201146-5			

* Cable or wire other than that listed above may be used. Send sample of cable or wire to AMP for engineering recommendation.
** Requires Manual Take-Up Attachment **Part No. 69689**
Extraction Tool **Part No. 305183-8**

SOURCE: Catalog 82157

Specifications subject to change.

1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

Selection Charts for Miniature COAXICON Contacts, Crimp
(Continued)

RF Contacts for Twisted Pairs

Wire Size AWG	Wire Size mm²	Max. Ins. Dia. (Two Wires Combined)	Contact Finish	Loose Piece Contact Part No. Pin	Loose Piece Contact Part No. Socket	Ferrule Part No.	Tooling Part No. Dies Inserts for Hand Tool Part No. 69710-1 or Pneumatic Tool Part Nos. 69365-2 & 69365-3**	Tooling Part No. Hand Tool
28-26 (Solid)	0.08-0.15	.080 2.03	Gold/Nickel	201511-1	201512-1	328667	69373	69186-2
			Gold/Copper	201511-3	201512-3			
24-22 (Stranded)	0.2-0.4	.115 2.92	Gold/Nickel	201143-5	201144-5	328666	69672	45638-3
			Gold/Copper	201143-7	201144-7			
24-22 (Solid or Stranded)	0.2-0.4	.160 4.06	Gold/Nickel	201145-2	201146-2	—	69222-2	45639-2

RF Contacts for Shielded Cable

Shielded Wire No.	Contact Finish	Loose Piece Contact Part No. Pin	Loose Piece Contact Part No. Socket	Ferrule Part No.	Tooling Part No. Die Inserts for Hand Tool Part No. 69710-1 or Pneumatic Tool Part Nos. 69365-2 & 69365-3**	Tooling Part No. Hand Tool
26, NAS-702, Class A & C 26, MIL-W-16878, Types E & EE 24, NAS-702, Class A & C 24, MIL-W-16878, Types E & EE 22, NAS-702, Class C 22, MIL-W-16878, Type E 22, MIL-C-7078A, Type I; No. 1 Dielectric, .068 [1.73] O.D.	Gold/Nickel	201143-2	201144-2	328666	69230-1	69147-2
22, NAS-702, Class A	Gold/Nickel	201143-3	201144-3	328666	69227-2	45638-2
22, MIL-C-7078A, Type II	Gold/Copper	201143-9	—			
22, MIL-C-7078A, Types I & II; No. 2 Dielectric, .075 [1.9] O.D.; No. 3 Dielectric, .085 [2.16] O.D.	Gold/Copper*	201145-1	201146-4	—	69222-2	45639-2
22, NAS-702, Class B	Gold/Nickel	201145-4	201146-4	328663	69220-2	45740-2
	Gold/Copper	201145-9	201146-2			

RF Contacts for Various Manufacturer's Cables

Cable Size* AWG/Type	Cable Size* mm²	Dielectric O.D. (Max.)	Cable O.D. Range	Braid	Contact Finish	Loose Piece Contact Part No. Pin	Loose Piece Contact Part No. Socket	Ferrule Part No.	Tooling Part No. Die Inserts for Hand Tool Part No. 69710-1 or Pneumatic Tool Part Nos. 69365-2 & 69365-3**	Tooling Part No. Hand Tool
Brand Rex T209A	—	.076 1.93	.112-.122 2.84-3.10	Single	Gold/Nickel	201145-6	201146-2	330587	—	69360-2
29 AWG	0.08									
32-26 AWG	0.03-0.15	.129 3.28	.122-.137 3.10-3.48	Single	Gold/Nickel	201145-6	201146-2	330587	—	69360-2
Raychem 0030D1314	—									

* Cable or wire other than that listed above may be used. Send sample of cable or wire to AMP for engineering recommendation.
** Requires Manual Take-Up Attachment **Part No. 69689**

SOURCE: Catalog 82157

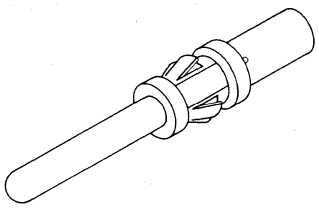
Specifications subject to change.
1-800-522-6752 Product Information Center/ AMP FAX Service
1-800-722-1111 Tooling/Technical Assistance Center

Power Contacts for 7-Position Modules

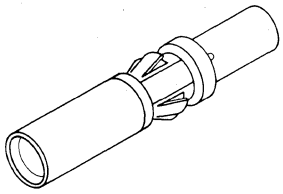
Note: Modules for use in 120-Position Connector Assemblies

Type 1, Size 12 Crimp Contacts

Pin Dia.—.094 [2.39]
Test Current—23 A



Pin



Socket

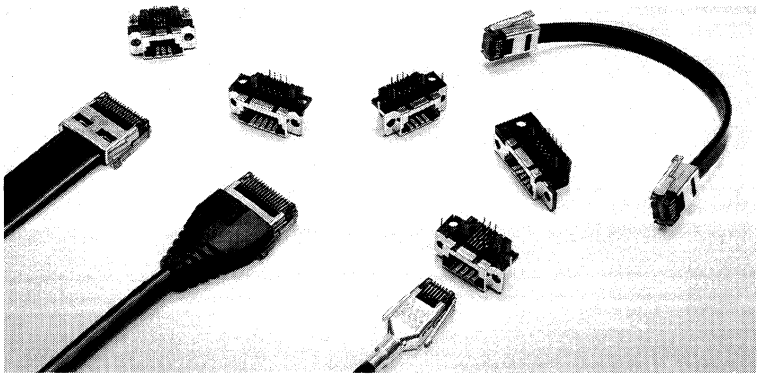
Wire Size Range[1]		Loose Piece Contact Part No.		Tooling Part No.	
AWG	[mm²]	Pin	Socket	Die Inserts for Pneumatic Tool Part No. 69365	Hand Tool
18-16	0.8-0.4	202421-1	202418-1	90122	90121
14-12	2-3	202422-1	202417-1		

[1]Wire strip length—.234 [5.94] (all wire sizes).
Extraction Tool **Part No. 305183-8**

SDL (Shielded Data Link) Connectors

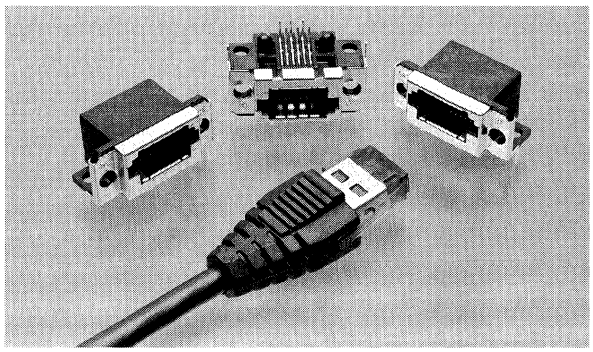
Product Facts

- Cost-effective shielded connector for data, communication and medical system interconnections
- Miniature size minimizes pc board real estate
- Plug has insulation displacement contacts for mass termination of cable for 28 to 24 AWG [0.08 to 0.2 mm²] 7-strand wire
- New integral wire guidance system provides effortless conductor indexing and seating prior to mass termination of the plug (round cable only)
- Durability, tested up to 3000 cycles
- Available in 4, 6, 8 and 16 position plug and receptacle styles; 6 position "D" Keyed M.I.B. version
- Compatible with shielded flat, round and coiled cables
- Plug supplied with preloaded contacts on .050 [1.27] centerlines
- Variety of keying options available for each size
- Dual strain reliefs—one for conductors and one for the cable jacket
- Low insertion force receptacle design for easy, quick connect/disconnect
- M.I.B. version designed to meet IEEE Standard P1073.4 for Medical Device communications
- Recognized under the Component Program of Underwriters Laboratories Inc., File No. E28476
- Certified by the Canadian Standards Association, File No. LR7189



SDL Connectors (standard)

The SDL (Shielded Data Link) standard connector meets industry's demand for a cost effective shielded connector. This connector provides EMI/RFI protection for a wide range of applications from critical medical systems to point-of-sale equipment, including computers, computer peripherals, video games and process control equipment. This connector is also compatible with flat, round and coil cables that use 28 to 24 AWG [0.08 to 0.2 mm²] 7-strand wire.



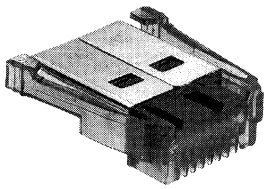
SDL Connectors (for M.I.B.)

The AMP SDL connector for M.I.B. (Medical Information Bus) is a 6-position, miniature, "D" keyed connector designed specifically for use in the medical communication's environment as specified in IEEE Standard P1073.4. The SDL connector provides a simple and inexpensive interconnection system that operates with the certainty required for patient bedside communications.

For optimum use within this medical environment, the SDL connector for M.I.B. incorporates such quality features as: housings made of high-impact polycarbonate, UL 94V-2 rated, durable gold plating on the mating end over nickel plating on the entire copper contacts, ESD shielding, and an optional, slide-on, thermo-plastic rubber boot for the cable assembly as added ESD protection.

50 Series Plug Assemblies for Flat Cable

(24 AWG or 26 AWG [0.2 mm² or 0.12–0.15 mm²])



Note: 8 Conductor Housing Dim. (Typ.)—.890 [22.61] L x .864 [21.95] W x .333 [8.46] H

No. of Conductors	Key[1]	Part Numbers[2]	
		Plug Assembly	Die Sets for Connectors
4	D	4-520423-1	58261-1
	E	5-520423-1	
	F	6-520423-1	
6	A	1-520423-2	58261-2
	C	3-520423-2	
	E	5-520423-2	
8	A	1-520423-3	58261-3
	C	3-520423-3	
	E	5-520423-3	
16	A	1-520423-6	58261-6
	C	3-520423-6	
	E	5-520423-6	

[1]Other keying options are available; contact AMP for information.
[2]Prefix number of plug assemblies designates key configuration. Suffix number of plug assemblies is a code for the number of conductors. Prefix and suffix numbers of plug assemblies must match prefix and suffix numbers of the intended mating receptacles. Keys are molded in as an integral part of the plug and receptacle.

Note: 1. One plug assembly required for each flat cable termination.
2. These parts are for termination of flat cable with individual conductor insulation diameter of .045/.050 [1.14/1.27] (50 Series). For individual cable specifications, see page 8047.

Application Tooling

Die sets for Plug Assemblies listed in the table above fit into the following:

Hand Tool Frame Part No. 58194-1
Pneumatic Machine Part No. 312522-1
(Requires Die Holder **Part No. 58201-1**)

SOURCE: Catalog 82101

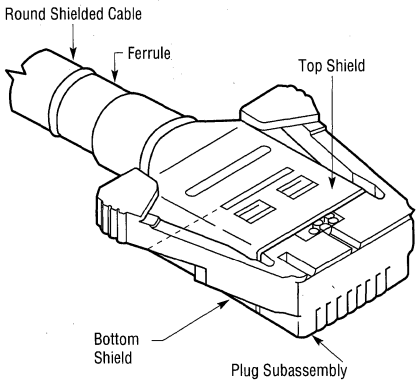
Specifications subject to change.

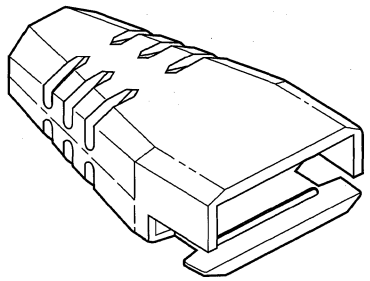
1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

Plug Assemblies for Round Cable

50 Series (24 AWG or 26 AWG [0.2 mm² or 0.12–0.15 mm²]) and 36 Series (26 AWG or 28 AWG [0.12–0.15 mm² or 0.08–0.09 mm²])



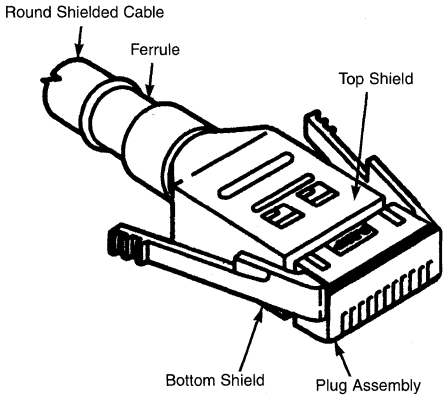


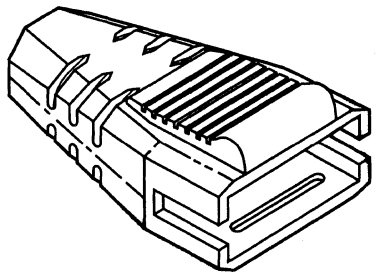
Boot (for round cable only)

File No. E28476

File No. LR7189

M.I.B. 50 Series





Application Tooling

Die sets for connectors listed in the table below fit into the following:

Hand Tool Frame
Part No. 58194-1
Pneumatic Machine
Part No. 312522-1
(Requires Die Holder **Part No. 58201-1**)

Die sets for ferrules listed in the table below fit into the following:

Hand Tool Frame
Part No. 69710-1
Pneumatic Tool
Part No. 69365-2,
Part No. 69365-3 with Foot Pedal

Note: 8 Conductor Housing Dim. (Typ.)—.855 [21.72] L x .894 [21.95] W x .333 [8.46] H

No. of Conductors	Key[1]	Part Numbers[2]								
		Plug Subassemblies		Die Sets for Connectors	Top Shield	Bottom Shield	Ferrule	Die Sets for Ferrules	Boot	Cable O.D.
		50 Series	36 Series							
4	D	4-520424-1	4-520532-1	58195-1	520460-1	520461-1	520432-1	58166-1	520851-1	**.147–.174** 3.73–4.42
	E	5-520424-1	5-520532-1							
	F	6-520424-1	6-520532-1				520433-1	58166-2		**.186–.200** 4.72–5.08
6	A	1-520424-2	1-520532-2	58195-2	520462-1	520463-1	520434-1	58166-3	520852-1	**.168–.200** 4.27–5.08
	C	3-520424-2	3-520532-2							
	D[5]	943010-2[3]	—				520435-1	1-58166-1	943014-2[4]	**.211–.225** 5.36–5.72
	E	5-520424-2	5-520532-2							
8	A	1-520424-3	1-520532-3	58195-3	520464-1	520465-1	520436-1	58166-5	520853-1	**.179–.212** 4.55–5.38
	C	3-520424-3	3-520532-3							
	E	5-520424-3	5-520532-3				520437-1	1-58166-2		**.224–.244** 5.69–6.20
16	A	1-520424-6	1-520532-6	58195-6	520466-1	520467-1	520440-1	58166-7	520854-1	**.229–.272** 5.82–6.91
	C	3-520424-6	3-520532-6							
	E	5-520424-6	5-520532-6				520441-1	1-58166-3		**.288–.308** 7.32–7.83

[1]Other keying options are available; contact AMP for information.
[2]Prefix number designates key configuration. Suffix number is a code for the number of conductors. Prefix and suffix numbers of plug assemblies must match prefix and suffix numbers of the intended mating receptacles. Keys are molded in as an integral part of the plug and receptacle.
[3]Special polarization for M.I.B. Mates with **Part No. 943013-2** only.
[4]For M.I.B. 50 Series Plug only.
[5]M.I.B. 50 Series Plug.

Note: 1. Plug Subassembly—top shield, bottom shield, ferrule, and boot are required for each round cable termination.
2. These parts are for termination of round cable with individual conductor insulation diameters of .045/.050 [1.14/1.27] (50 Series) or .035/.038 [0.89/0.97] (36 Series). For individual cable specifications see page 8048.

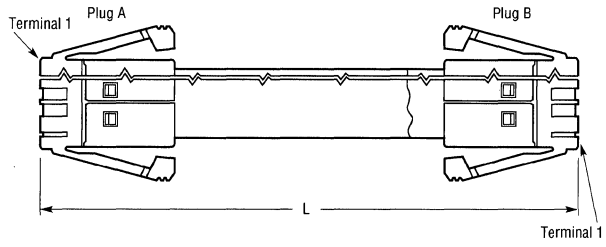
SOURCE: Catalog 82101

Specifications subject to change.
1-800-522-6752 Product Information Center/ AMP FAX Service
1-800-722-1111 Tooling/Technical Assistance Center

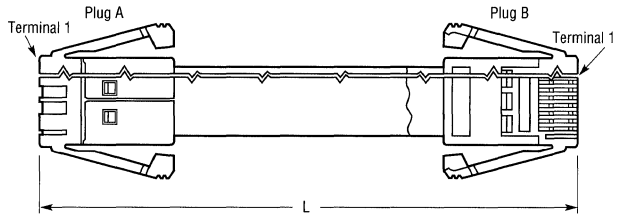
Flat Cable Assemblies

24 AWG [0.2 mm²]
50 Series Conductors

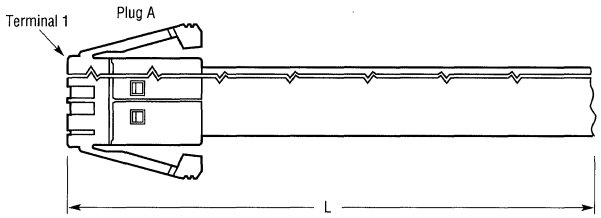
26 AWG [0.12–0.15 mm²]
50 Series Conductors



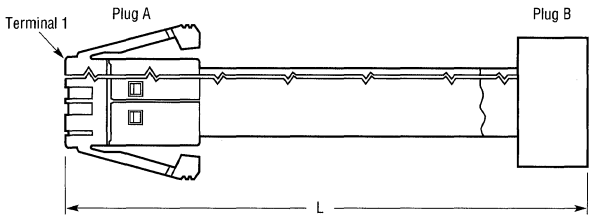
Style A—Dual Ended



Style B—Dual Ended, Straight-Through



Style C—Single Ended



Style D[2] —Dual Ended, Other AMP Connector

Recognized under the Component Program of Underwriters Laboratories Inc., File No. E53799

Certified by the Canadian Standards Association, File No. LR7189

Note: UL Recognition and CSA Certification apply only when connectors are terminated to cable.

Specification Form

Name_____

Company_____

Street_____

City_____ State_____ Zip_____

Phone (_____)_____

AMP Sales Engineer_____

☐ Quote ☐ Sample[1]

1. Style: ☐ A ☐ B ☐ C ☐ D[2]

2. No. of Cable Conductors: ☐ 4 ☐ 6 ☐ 8 ☐ 16

3. Cable Color: ☐ Black ☐ Gray

4. Length "L"_____
(Indicate preferred tolerance)

5. Plug A

No. of Positions:	☐ 4	☐ 6	☐ 8	☐ 16
Key Selection:	☐ D	☐ A	☐ A	☐ A
	☐ E	☐ C	☐ C	☐ C
	☐ F	☐ E	☐ E	☐ E

6. Plug B

No. of Positions:	☐ 4	☐ 6	☐ 8	☐ 16
Key Selection:	☐ D	☐ A	☐ A	☐ A
	☐ E	☐ C	☐ C	☐ C
	☐ F	☐ E	☐ E	☐ E

7. Ink Stamped: ☐ Yes ☐ No

If **yes,** each character .118 (w) x .09 (h) [3 x 2.29]

No. of Characters_____

8. Other AMP Connector, Plug B_____

Remarks

_____

_____

_____

_____

[1]Sample quantity limited to two.
[2]Need schematic or wiring diagram.

SOURCE: Catalog 82101

Specifications subject to change.

1-800-522-6752
Product Information Center/ AMP FAX Service

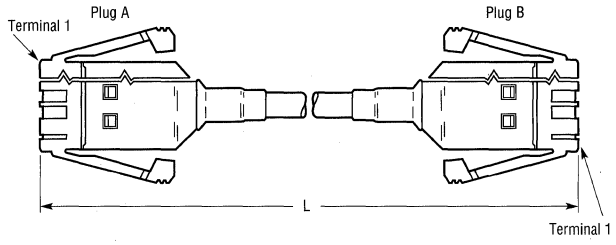
1-800-722-1111
Tooling/Technical Assistance Center

Round Cable Assemblies

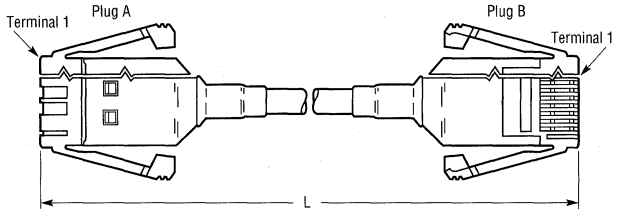
24 AWG [0.2 mm²]
50 Series Conductors

26 AWG [0.12–0.15 mm²]
36 Series or 50 Series Conductors

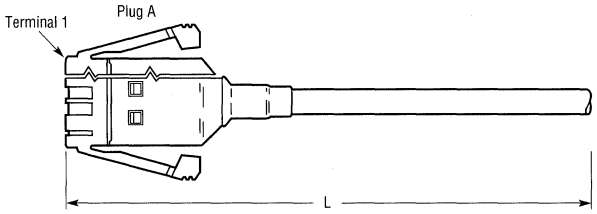
28 AWG [0.08–0.09 mm²]
36 Series Conductors



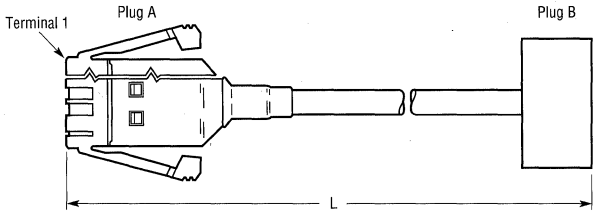
Style A—Dual Ended



Style B—Dual Ended, Straight-Through



Style C—Single Ended



Style D²—Dual Ended, Other AMP Connector

Recognized under the Component Program of Underwriters Laboratories Inc., File No. E53799

Certified by the Canadian Standards Association, File No. LR7189

Note: UL Recognition and CSA Certification apply only when connectors are terminated to cable.

Specification Form

Name_____

Company_____

Street_____

City_____ State_____ Zip_____

Phone (_____)_____

AMP Sales Engineer_____

☐ Quote ☐ Sample[1]

1. Style: ☐ A ☐ B ☐ C ☐ D[2]
2. Conductor Size: ☐ 24 AWG ☐ 26 AWG ☐ 28 AWG
3. No. of Cable Conductors: ☐ 4 ☐ 6 ☐ 8 ☐ 16
4. Length "L"_____
(Indicate preferred tolerance)
5. Plug A

Boot	☐ Y	☐ N		
No. of Positions:	☐ 4	☐ 6	☐ 8	☐ 16
Key Selection:	☐ D	☐ A	☐ A	☐ A
	☐ E	☐ C	☐ C	☐ C
	☐ F	☐ E	☐ E	☐ E

6. Plug B

Boot	☐ Y	☐ N		
No. of Positions:	☐ 4	☐ 6	☐ 8	☐ 16
Key Selection:	☐ D	☐ A	☐ A	☐ A
	☐ E	☐ C	☐ C	☐ C
	☐ F	☐ E	☐ E	☐ E

7. Other AMP Connector, Plug B_____

Remarks

_____

_____

_____

_____

[1]Sample quantity limited to two.
[2]Need schematic or wiring diagram.

SOURCE: Catalog 82101

Flat Cable

Specifications

Physical Specifications

UL Style: 2576 (16-position) and 2655 (4-, 6-, 8-position).

UL Flammability: Passes VW-1 Vertical Flame Test.

Jacket Material*: PVC.

Cable Shield: Aluminum/Polyester/Aluminum foil .0018 [0.046] thick, 100% coverage with longitudinal wrap.

Temperature Rating: –20°C to +80°C.

Conductor AWG [mm²]: 24 [0.2] (7/32) stranded tinned copper, lay length .333 [8.46].

Conductor Insulation Material*: PVC—.045/.050 [1.14/1.27] conductor insulation diameter.

Drain Wires: Two 28 AWG [0.08–0.09 mm²] (7/36).

*See Cable Specification Drawings listed to the right for restrictions on cable jacket and conductor insulation materials.

Electrical Specifications

Voltage: 90 volts RMS.

Insulation Resistance: 1000 Mohms per 10 ft. [3048] sample.

Dielectric Withstanding Voltage: 1500 volts RMS.

Characteristic Impedance: 39 ohms nominal, unbalanced, signal-to-ground.

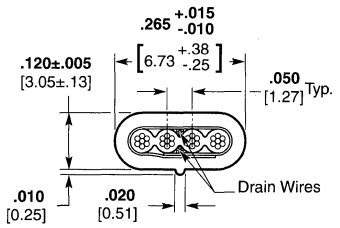
Capacitance at 1 MHz: Max. 60 pF per ft. [304.8].

Propagation Delay: Max. 2.0 nanoseconds per ft. [304.8].

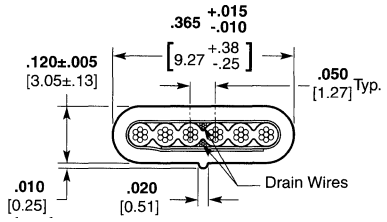
Crosstalk: At 2 nanoseconds rise time 10–90% per 10 ft. [3048] sample.

Matched Termination: Forward 4% peak, max., backward 1% avg. max.

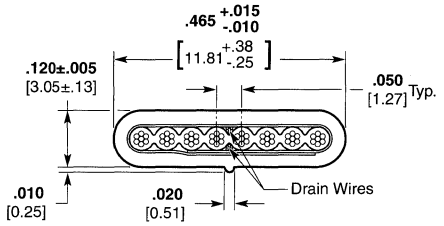
Shielding Effectiveness: 30 dB minimum over 30 MHz to 1000 MHz (standard configuration for evaluation—GSGSG—conductor pattern, shield and drain wires grounded).



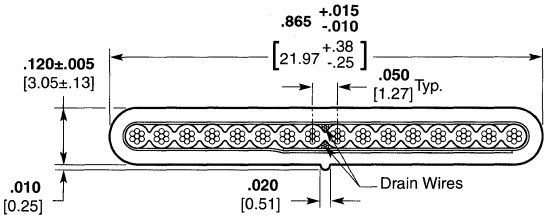
4 Conductor Cable
(Cable Specification Drawing No. 520471)



6 Conductor Cable
(Cable Specification Drawing No. 520473)



8 Conductor Cable
(Cable Specification Drawing No. 520475)



16 Conductor Cable
(Cable Specification Drawing No. 520477)

SOURCE: Catalog 82101

Specifications subject to change.

1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

Round Cable

24 AWG [0.2 mm²] (50 Series)

Specifications

Physical Specifications

UL Style: 2464.

UL Flammability: Passes VW-1 Vertical Flame Test.

Jacket Material*: PVC.

Cable Shield: Aluminum/Polyester/Aluminum foil .0018 [0.046] thick, 100% coverage with longitudinal wrap and .100 [2.54] minimum overlap.

Temperature Rating: –20°C to +80°C.

Conductor AWG [mm²]: 24 [0.2] (7/32) stranded tinned copper, lay length .333 [8.46].

Conductor Insulation Material*: PVC—.045/.050 [1.14/1.27] conductor insulation diameter.

Drain Wire: One 28 AWG [0.08-0.09 mm²] (7/36).

*See Cable Specification Drawings listed in table to the right for restrictions on cable jacket and conductor insulation materials.

Electrical Specifications

Voltage: 100 volts RMS.

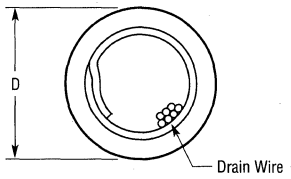
Insulation Resistance: 1000 Mohms per 10 ft. [3048] sample.

Dielectric Withstanding Voltage: 1000 volts RMS.

Characteristic Impedance: 60 ohms nominal, unbalanced, signal-to-ground.

Capacitance at 1 MHz: Max. 32 pF per ft. [304.8].

Shielding Effectiveness: 30 dB minimum over 30 MHz to 1000 MHz (standard configuration for evaluation—GSGSG—conductor pattern, shield and drain wires grounded).



50 Series

No. of Conductors	Dimension D	Cable Specification Drawing Number
4	**.193 ± .007** 4.90 ± 0.18	520704-1
6	**.218 ± .007** 5.54 ± 0.18	520705-1
8	**.234 ± .010** 5.94 ± 0.25	520706-1
16	**.298 ± .010** 7.57 ± 0.25	520707-1

28 AWG [0.08–0.09 mm²] (36 Series)

Physical Specifications

UL Style: 2464.

UL Flammability: Passes VW-1 Vertical Flame Test.

Jacket Material*: PVC.

Cable Shield: Aluminum/Polyester/Aluminum foil .0018 [0.046] thick, 100% coverage with longitudinal wrap and .100 [2.54] minimum overlap.

Temperature Rating: –20°C to +80°C.

Conductor AWG [mm²]: 28 [0.08–0.09] (7/36) stranded tinned copper, lay length .333 [8.46].

Conductor Insulation Material*: PVC—.035/.038 [0.89/0.96] conductor insulation diameter.

Drain Wire: One 28 AWG [0.08–0.09 mm²] (7/36).

*See Cable Specification Drawings listed in table to the right for restrictions on cable jacket and conductor insulation materials.

Electrical Specifications

Voltage: 100 volts RMS.

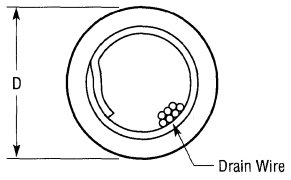
Insulation Resistance: 1000 Mohms per 10 ft. [3048] sample.

Dielectric Withstanding Voltage: 1000 volts RMS.

Characteristic Impedance: 50 ohms nominal, unbalanced, signal-to-ground.

Capacitance at 1 MHz: Max. 37 pF per ft. [304.8].

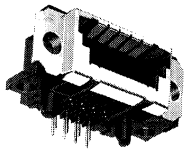
Shielding Effectiveness: 30 dB minimum over 30 MHz to 1000 MHz (standard configuration for evaluation—GSGSG—conductor pattern, shield and drain wires grounded).



36 Series

No. of Conductors	Dimension D	Cable Specification Drawing Number
4	**.193 ± .007** 4.90 ± 0.18	520730-1
6	**.218 ± .007** 5.54 ± 0.18	520731-1
8	**.234 ± .010** 5.94 ± 0.25	520732-1
16	**.298 ± .010** 7.57 ±0.25	520733-1

Side Entry Receptacles, Panel Ground and PCB Ground



Standard

File No. E28476

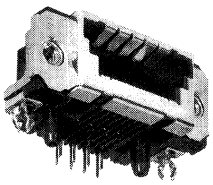
File No. LR7189

Note: 8 Pos. Housing Dim. (Typ.)—1.250 [31.75] L x .650 [16.51] W x .535 [13.59] H

No. of Conductors	Key[1]	Part Numbers[2]		
		Panel Ground	PCB Ground	Panel Ground and PCB Ground
4	D	4-520421-1	4-520459-1	—
	E	5-520421-1	5-520459-1	—
	F	6-520421-1	6-520459-1	—
6	A	1-520421-2	1-520459-2	—
	C	3-520421-2	3-520459-2	—
	D (For M.I.B.)	—	—	943013-2[3]
	E	5-520421-2	5-520459-2	—
8	A	1-520421-3	1-520459-3	—
	C	3-520421-3	3-520459-3	—
	E	5-520421-3	5-520459-3	—
16	A	1-520421-6	1-520459-6	—
	C	3-520421-6	3-520459-6	—
	E	5-520421-6	5-520459-6	—

[1]Other keying options are available; contact AMP for information.
[2]Prefix number designates key configuration. Suffix number is a code for the number of conductors. Prefix and suffix numbers of plug assemblies must match prefix and suffix numbers of the intended mating receptacles. Keys are molded in as an integral part of the plug and receptacle.
[3]Special polarization for M.I.B. Mates with **Part No. 943010-2** only.

Side Entry Boardlock Receptacles, Panel Ground and PCB Ground



File No. E28476

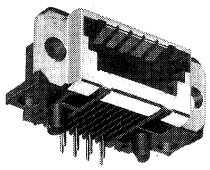
File No. LR7189

Note: 8 Pos. Housing Dim. (Typ.)—1.250 [31.75] L x .650 [16.51] W x .535 [13.59] H

No. of Conductors	Key[1]	Part Numbers[2]
4	D	4-943036-1
	E	5-943036-1
	F	6-943036-1
6	A	1-943036-2
	C	3-943036-2
	E	5-943036-2
8	A	1-943036-3
	C	3-943036-3
	E	5-943036-3
16	A	1-943036-6
	C	3-943036-6
	E	5-943036-6

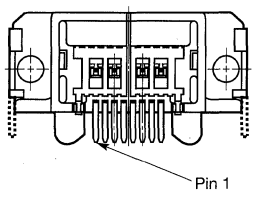
[1]Other keying options are available; contact AMP for information.
[2]Prefix number designates key configuration. Suffix number is a code for the number of conductors. Prefix and suffix numbers of plug assemblies must match prefix and suffix numbers of the intended mating receptacles. Keys are molded in as an integral part of the plug and receptacle.

Side Entry Receptacles, 8-Position Shunted

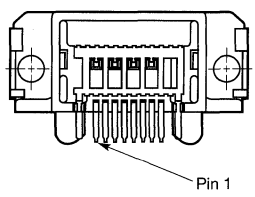


File No. E28476

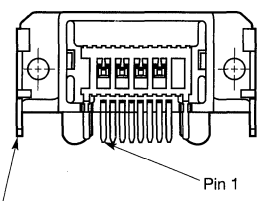
File No. LR7189



Style X
Split Shunt
Isolated



Style Y
Common Shunt



Style Z
PCB Grounding Posts
Common Shunt *

Note: 8 Pos. Housing Dim. (Typ.)—1.250 [31.75] L x .650 [16.51] W x .535 [13.59] H

Style	Commoned Circuits	Key	Part Number	Ground*
X	1–3[1], 6–8	E	5-520801-3	Panel Only
			5-943202-3	PCB & Panel
Y	1, 3, 5, 7	E	5-520428-3	Panel Only
Z	1, 3, 5, 7	E	5-520802-3	PCB & Panel

[1]Commoned circuits 1–3 are electrically isolated from commoned circuits 6–8.

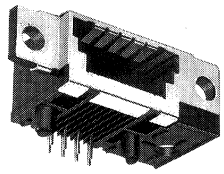
SOURCE: Catalog 82101

Specifications subject to change.

1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

Side Entry Receptacles, Offset Flange



File No. E28476

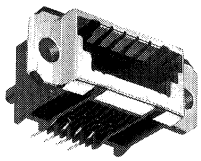
File No. LR7189

Note: 8 pos. Housing Dim. (Typ.)—1.500 [38.10] L x .650 [16.51] W x .535 [13.59] H

No. of Conductors	Key[1]	Part Numbers[2]
4	D	4-520501-1
	E	5-520501-1
	F	6-520501-1
6	A	1-520501-2
	C	3-520501-2
	E	5-520501-2
8	A	1-520501-3
	C	3-520501-3
	E	5-520501-3
16	A	1-520501-6
	C	3-520501-6
	E	5-520501-6

[1]Other keying options are available; contact AMP for information.
[2]Prefix number designates key configuration. Suffix number is a code for the number of conductors. Prefix and suffix numbers of plug assemblies must match prefix and suffix numbers of the intended mating receptacles. Keys are molded in as an integral part of the plug and receptacle.

Top Entry Receptacles, Panel Ground



File No. E28476

File No. LR7189

Note: 8 pos. Housing Dim. (Typ.)—1.300 [33.02] L x .556 [14.12] W x .665 [16.89] H

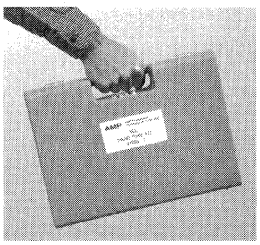
No. of Conductors	Key[1]	Part Numbers[2]
4	D	4-520422-1
	E	5-520422-1
	F	6-520422-1
6	A	1-520422-2
	C	3-520422-2
	E	5-520422-2
8	A	1-520422-3
	C	3-520422-3
	E	5-520422-3
16	A	1-520422-6
	C	3-520422-6
	E	5-520422-6

[1]Other keying options are available; contact AMP for information.
[2]Prefix number designates key configuration. Suffix number is a code for the number of conductors. Prefix and suffix numbers of plug assemblies must match prefix and suffix numbers of the intended mating receptacles. Keys are molded in as an integral part of the plug and receptacle.

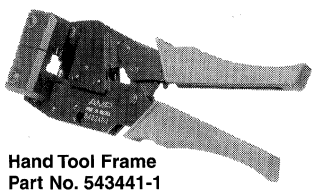
SDL (Shielded Data Link) Connector Hand Tool Kit

Product Facts

- Complete tool set, terminates 4, 6, 8, and 16 position plug connectors to round* or flat, shielded cable, 28-24 AWG [0.08–0.2 mm²], with 7-strand conductors
- Portable, custom designed carrying case
- Bench-mount capability
- Precision tooled die sets, coupled with preset shut height for positive termination
- Helps to prevent rejects, minimizes waste
- Increases production and provides overall cost savings



Carrying Case

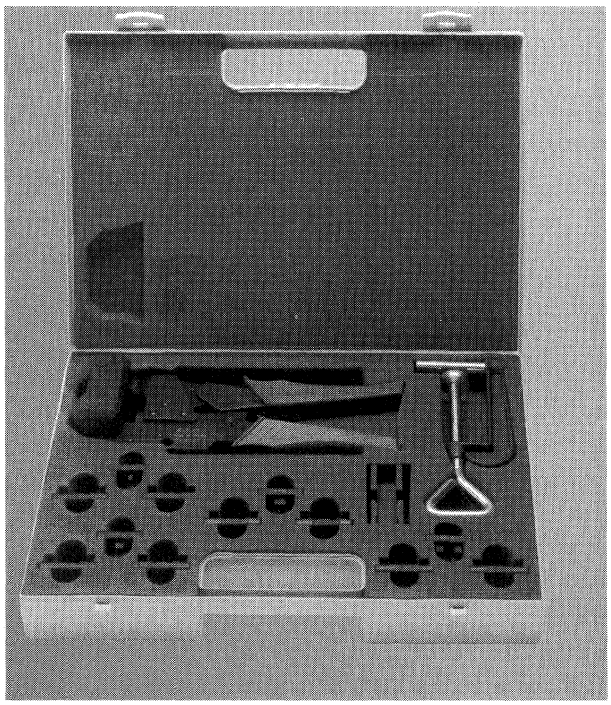


Hand Tool Frame
Part No. 543441-1

Die sets for Round/Flat Cable

No. of Pos.	Part No.
4	543448-1
6	543448-2
8	543448-3
16	543448-6

*For round cable applications Hand Crimping Tool **Part No. 69710-1** is required to terminate ferrules.



Part No. 91290-1

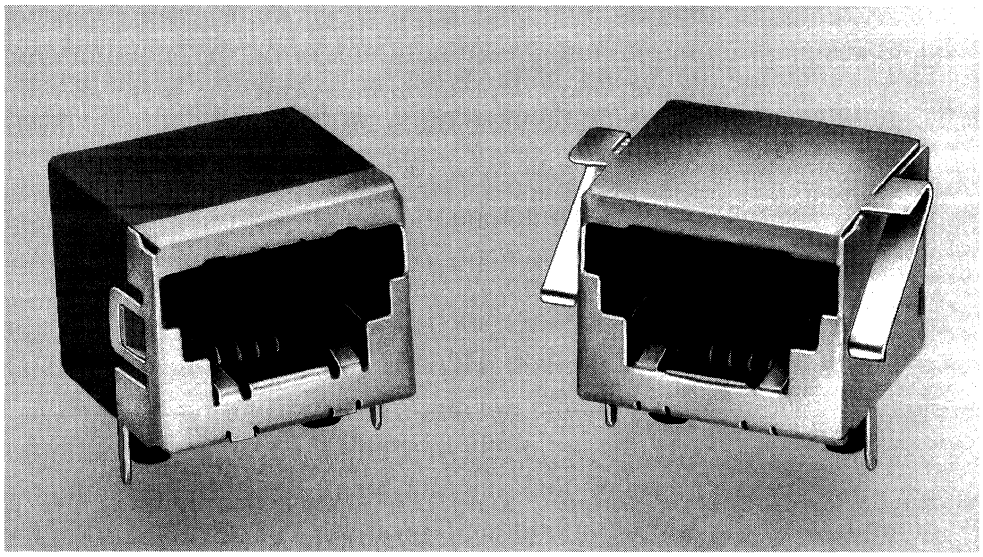
SOURCE: Catalog 82101

Specifications subject to change.

1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

SDL (Shielded Data Link) Connectors for ACCESS.bus† Applications



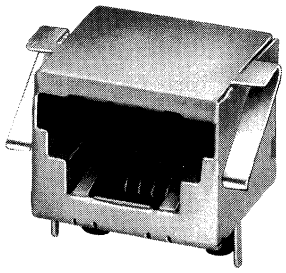
Product Facts

- VESA Monitor Committee—proposed Display Data Channel (DDC) Input/Output Connector
- Cost effective
- Streamlined design minimizes required pcb space
- Housings made of high-temperature materials—SMT compatible
- Choice of configurations:
  - Fully shielded with panel ground
  - Partial shield without panel ground
- Industry accepted 4-position "D" keyed configuration
- Contacts on .050 [1.27] centerlines
- Other 4-position "D" keyed configurations available, see pages 8043, 8044, 8049 and 8050
- Mating "D" keyed cable connector compatible with flat, round and coiled cables
- Dual strain reliefs—one for conductors and one for the cable jacket
- Low insertion force
- Recognized under the Component Program of Underwriters Laboratories Inc., File No. E28476
- Certified by the Canadian Standards Association, File No. LR 35510

ACCESS.bus is an open industry standard that provides a simple and inexpensive way to connect multiple I/O devices to a single computer port. Whether you add one or as many as 125 peripheral devices, one port can handle it with ACCESS.bus.

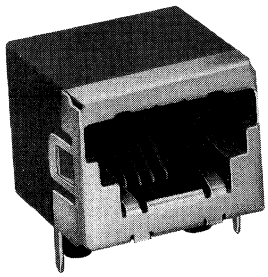
The connector of choice for ACCESS.bus applications is the AMP SDL connector. The VESA Monitor Committee has proposed the AMP SDL connector to be the standard I/O connector for the Display Data Channel (DDC).

Side-Entry Receptacle, with Panel Ground Part No. 4-943196-1



Note: 4 Pos. Housing Dim. (Typ.)—.853 [21.67] L x .674 [17.12] W x .535 [13.59] H

Side-Entry Receptacle, without Panel Ground Part No. 4-943197-1



Note: 4 Pos. Housing Dim. (Typ.)—.663 [16.84] L x .674 [17.12] W x .535 [13.59] H

†ACCESS.bus is a trademark of the ACCESS.bus Industry Group

SOURCE: Catalog 65974

Specifications subject to change.

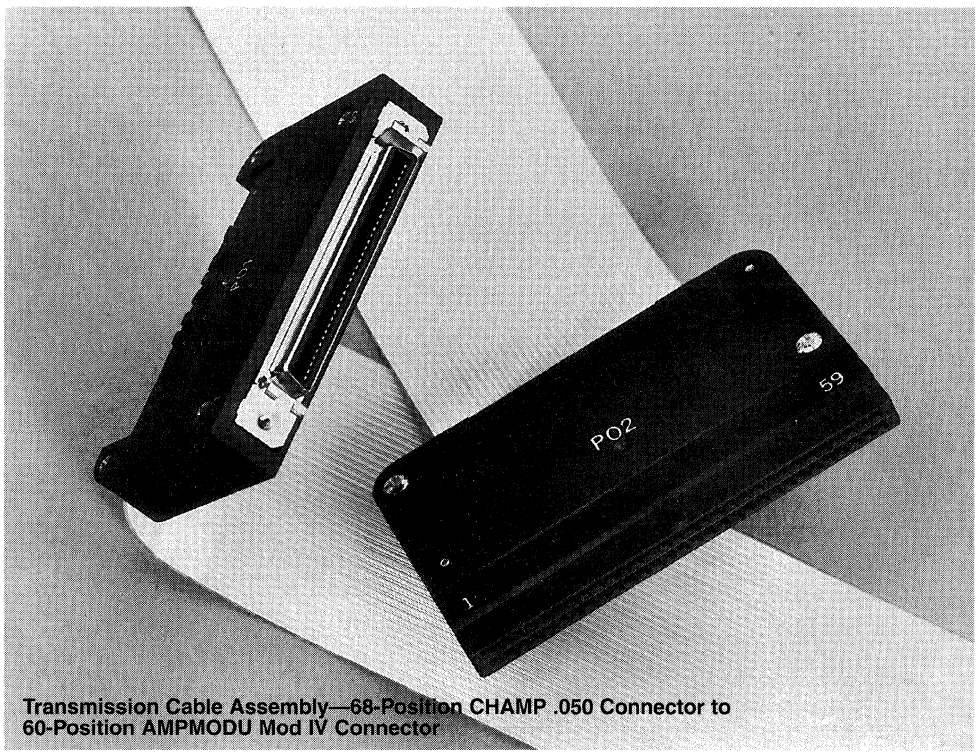
1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

Paddlecard Cable Assemblies

Product Facts

- Custom planar transmission cable terminations to a wide variety of AMP connectors
- Reflow soldered terminations
- Choice of signal/ground patterns and ratios
- Custom designed thermoplastic strain relief covers
- Hot melt potting for environmental protection
- Shielded and unshielded designs
- Common mode and differential cable
- Daisy chaining capability
- CFC-free cleaning process
- ISO 9001 certified supplier



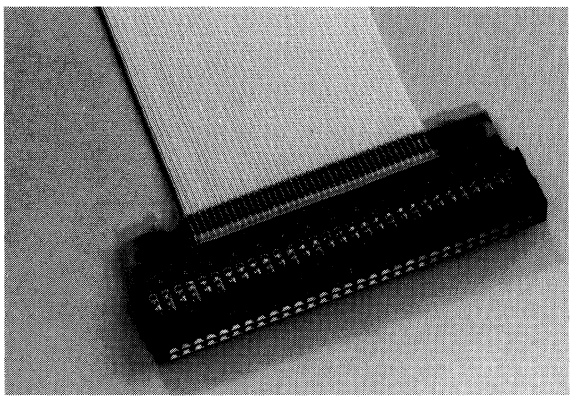
Transmission Cable Assembly—68-Position CHAMP .050 Connector to 60-Position AMPMODU Mod IV Connector

AMP Paddlecard Cable Assemblies are most often used when the conductor spacing or pitch of the planar transmission cable is not compatible with the termination centerline spacing of the desired connector interface. Planar transmission cable must often be designed to have conductors on nonstandard centerlines in order to achieve the desired impedance and other electrical performance characteristics.

Printed circuit boards, or paddlecards, are designed to provide a transition between the cable and connector centerlines. Both straddle-mount, right-angle and vertical mount connector headers can be considered. The connectors are reflow soldered to one side of the pc board. The cable is stripped then mass soldered to the opposite side of the board. Strain relief covers are applied and a hot melt material is injected to seal the termination area. Cable shields and connector shields can be included in the design to address radio frequency interference (RFI), electromagnetic interference (EMI), and electrostatic discharge (ESD) concerns.

Complete vertical integration is key with AMP manufactured planar transmission cable, connectors, pc board design and manufacturing, and mass soldering processes. Our Advanced Cable Systems Division has the tools to work with you from concept through production, to develop engineered solutions for your custom application needs. Advanced Cable Systems Division is an ISO 9001 certified facility and does not use ozone depleting chemicals in our manufacturing processes.

Typical Paddlecard Termination (Connector without cover)



SOURCE: Catalog 65705

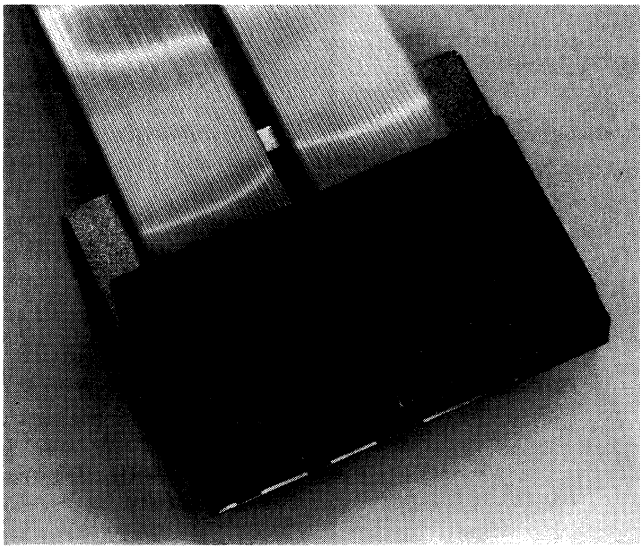
Specifications subject to change.

1-800-522-6752
Product Information Center/ AMP FAX Service

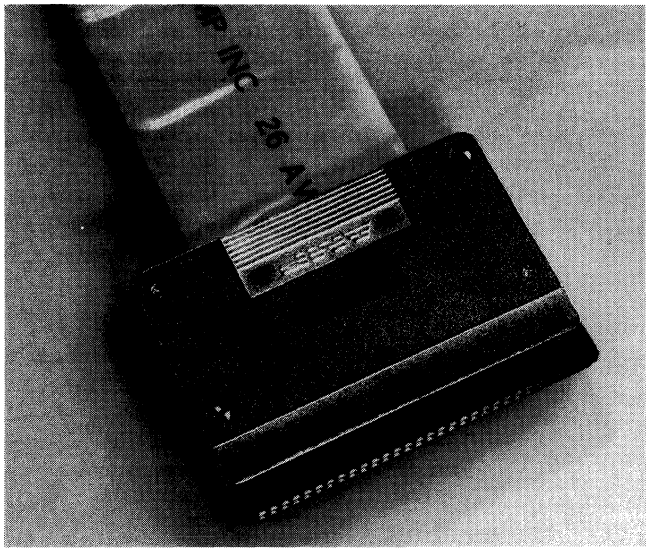
1-800-722-1111
Tooling/Technical Assistance Center

Paddlecard Cable Assemblies
(Continued)

Eurocard Transmission Cable Assembly (96-Position)



Shielded Differential Transmission Cable Assembly (60-Position AMPMODU Mod IV Connector)



Note: Contact AMP for engineered solutions to your custom application needs.

SOURCE: Catalog 65705

Specifications subject to change.

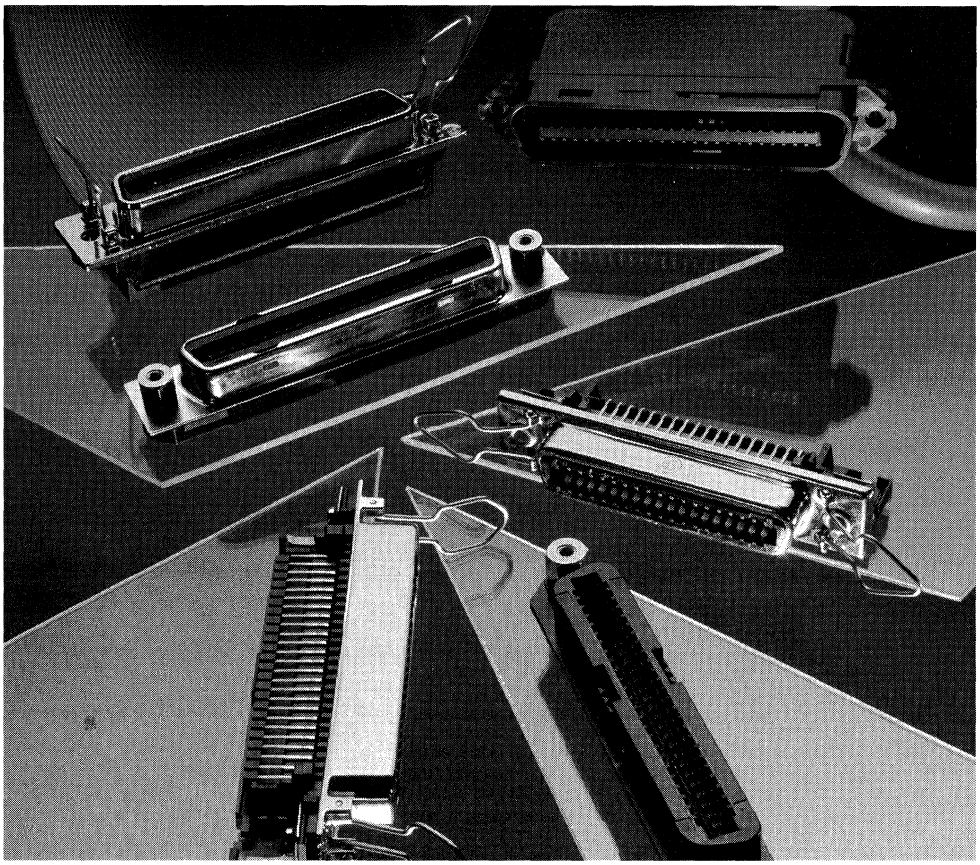
1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

Miniature Ribbon Connector System (CHAMP)

Approvals

- **CHAMP Cable Connectors have been classified by Underwriters Laboratories for use in "Environmental Air Spaces" as described in Articles 300-22C and 800-3D of the National Electrical Code**
- **CHAMP Cable Connectors have been Listed by Underwriters Laboratories for use as Communication Circuit Accessories, File No. E81956**
- **Recognized under the Component Recognition Program of Underwriters Laboratories Inc., File No. E28476**
- **Certified by Canadian Standards Association, File No. LR 7189**



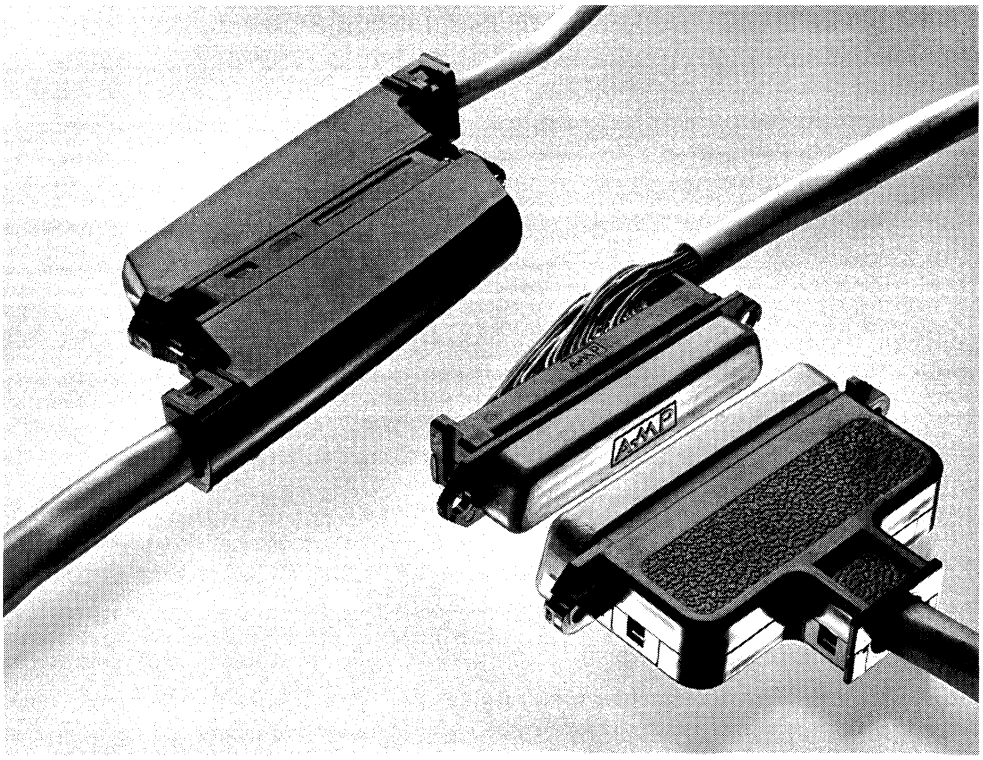
The CHAMP Connector is fully intermateable and interchangeable with existing connectors of a similar design. Applications for this type of connector are widely diversified and include all phases of the Telecommunications industry, including original telephone manufacturing, Operating Telephone Companies, Cable Reclamation, Cable Manufacturing and Bay Connectorization. In addition, the CHAMP Connector product line is ideally suited for use in computer terminals, test equipment, business and copying machines, telemetering and various equipment used in the security industry. The CHAMP Connector product line includes not only the network of Standard CHAMP Connectors, but also a growing network of Shielded CHAMP Connectors and other capabilities to meet various Federal Communications Commission (FCC) requirements for the control of electromagnetic interference (EMI).

SOURCE: Catalog 82008

CHAMP IDC Connectors

Product Facts

- **Wide wire range**
- **Connectors available in 14, 24, 36, 50 and 64 positions with a choice of mounting methods: screw lock type, bail lock type and locking latch type**
- **Self-extinguishing thermoplastic housings and accessories**
- **Contacts on .085 [2.16] centers in dual position arrangements**
- **Optional dust covers and snap-on strain relief covers**



CHAMP Insulation Displacement Contact (IDC) Connectors provide a low cost method of terminating unstripped solid or stranded copper wires and cables to connectors. Application for the CHAMP IDC Connectors are widely diversified and are designed for specific field and industrial applications.

Connectors and Housings

Plug and receptacle connectors are furnished preloaded with contacts on .085 [2.16] centers. Connectors are available in 14, 24, 36, 50 and 64 positions, in standard black housings and molded from self-extinguishing plastic material for high impact and dielectric strength. Housing material is rated at an Oxygen Index Rating of 28% minimum.

Terminals

The terminal is precision formed of high conductivity, high strength copper alloy with 30 microinch gold minimum over 50 microinch nickel plating in contact area. The wire terminating area (rear of terminal) is stamped like a slotted reversed "U" and each leg contains a wire slot and strain relief slot with precisely controlled dimensions.

Wire Range and Types

The terminal is designed to accept 26-22 AWG [0.4-0.64 mm] solid wire and 28-22 AWG [0.08-0.4 mm^2] stranded wire (7 strands). The terminal is designed to accommodate most types of insulation—PVC, polyethylene, irradiated polyethylene and polypropylene.

SOURCE: Catalog 82008

Specifications subject to change.

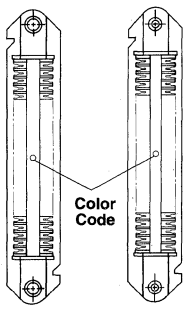
1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

CHAMP IDC Connectors
(Continued)

CHAMP Connector and Terminal Identification

Slotted terminals in CHAMP connector systems will accept solid or stranded (7 strands, maximum) copper conductors within 22 to 28 AWG range. Note that contact slots are designed with carefully-calibrated dimensions and accept a specific wire range and insulation diameter. The adjacent chart shows how color-coded housings (center dot on wire side) and letter-coded terminals (stamped on outside slot) work in tandem for proper wire selection and terminations:

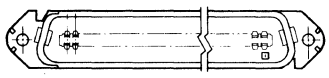


Color Code (Housing)	Letter Code (Contact)	Wire Range (AWG)	Ins. Dia.* (Max.)
Blue	B	One 24-26 Solid or 24 Stranded	**.045** [1.14]
Green	C	One 22 Solid or Stranded	**.045** [1.14]
Yellow	E	One 26, 27, or 28 Stranded	**.045** [1.14]
Orange	H	Two 26 Solid Each Wire	**.034** [0.86]
Pink	J	Two 24 Solid Each Wire	**.034** [0.86]
Brown	F	One 22 Solid or Stranded	**.056** [1.42]

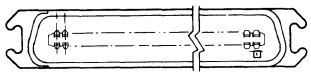
*Depends upon type of insulation and applicator tool.

Plug and Receptacle Connectors

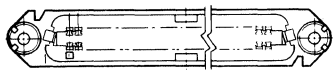
Style PS—Plug, Screw Lock (Thick Flange)[1]



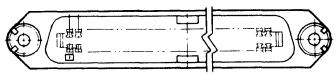
Style PB—Plug, Bail Lock



Style RS—Receptacle, Screw or Bail Lock (Thick Flange)[1]



Style RP—Receptacle, Panel Mount, Screw or Bail Lock (Thin Flange)[2]



[1] Thick flange connectors are typically for cable-to-cable screw lock applications.
[2] Thin flange connectors are typically for panel mount applications.

Note: 36 Pos. Housing Dim. (Typ.)—2.685 [68.20] L x .690 [17.53] W x .605 [15.37] H

No. of Positions	Wire Size				Housing Color Dot Des.	Contact Letter Code	Part Numbers			
	Solid		7 Strand				Plug		Receptacle	
	AWG	mm	AWG	mm²			Style PS	Style PB	Stype RS	Style RP
14	22	0.65	22	0.40	Green	C	552300-1	—	—	—
24							552301-1	552317-1	552305-1	2-552322-1
36							552302-1	552318-1	552306-1	—
50							552173-1	552319-1	552064-1	2-552324-1
64							552303-1	—	552307-1	—
14	24-26	0.51-0.40	24	0.20	Blue	B	552282-1	552270-1	552312-1	2-552271-1
24							552283-1	552272-1	552313-1	2-552273-1
36							552284-1	552274-1	552314-1	2-552275-1
50							229974-1	552032-1	229975-1	2-552001-1
64							552285-1	552276-1	552315-1	2-552277-1
14	—	—	26-27-28	0.14, 0.10, 0.09	Yellow	E	552442-1	—	—	2-552473-1
24							552443-1	552469-1	552464-1	2-552474-1
36							552444-1	552470-1	—	2-552475-1
50							552390-1	552471-1	552391-1	2-552476-1
64							552488-1	—	—	—

Notes: 1. A panel mount 50 position plug connector is available in thin flange with .187 [4.75] diameter mounting hole, **Part Number 552686-1**, which has B slot contacts.
2. For thin flange panel mount plug connectors all standard mounting hardware may be utilized with the exception of bail lock mounting hardware.
3. Acceptable conductor insulations are polyvinyl chloride (PVC), polyethylene, irradiated polyethylene, polypropylene and TEFLON. Maximum insulation diameter .045 [1.14] for tools that mass terminate conductors on one side at a time. For tools that insert one conductor per side at a time, .043 [1.09] insulation diameter is the maximum. As a rule, harder insulations require smaller conductor insulation diameters.

SOURCE: Catalog 82008

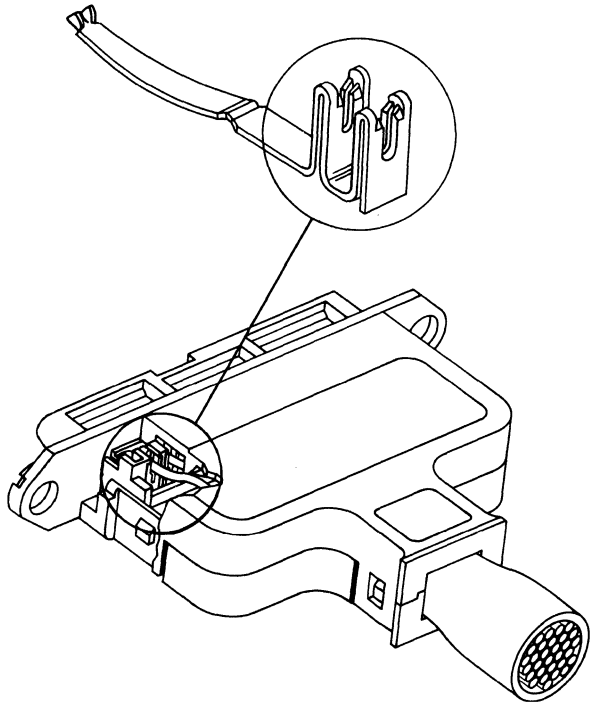
Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

CHAMP IDC Connectors
(Continued)

Large Insulation Wire Connectors

Miniature Ribbon IDC Connectors that can accommodate 22 AWG wire with insulation diameters up to .056 [1.42]. The F-slot contacts handle large insulation diameter conductors using a folded beam contact design.

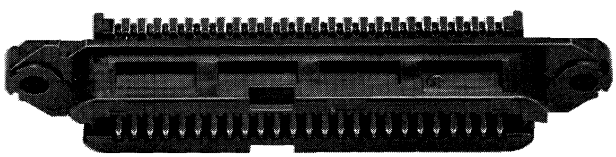
Only connector supplied. 180° Cover and Cable shown for reference



No. of Positions	Wire Size				Housing Color Dot Description	Part Numbers			
	Solid		7 Strand			Plug		Receptacle	
	AWG	mm	AWG	mm²		Style PS	Style PB	Style RS	Style RP
24	22	0.64	22	0.40	Brown	—	—	555229-1	—
36						—	558506-1	5-555037-1	5-555066-1
50						556039-1	—	555227-1	—
64						556409-1	555753-1	—	555151-1

These special CHAMP connectors are designed with an integral latching system that eliminates the need for additional locking hardware. Receptacle assemblies are preassembled with two plated steel spring latches (one at each end) that latch into cutout slots in mating plug connectors. To release a mated pair, simply depress latches into recessed areas and disengage. Note, however, that integral latches are not repairable nor replaceable. Integral-latch connectors are presently available in 50 and 64 position sizes.

Integral Locking Latch Receptacle



No. of Positions	Housing Color Dot Des.	Contact Letter Code	Part Numbers
50	Blue	B	553921-1
64	Blue	B	554381-2

SOURCE: Catalog 82008

Specifications subject to change.

1-800-522-6752
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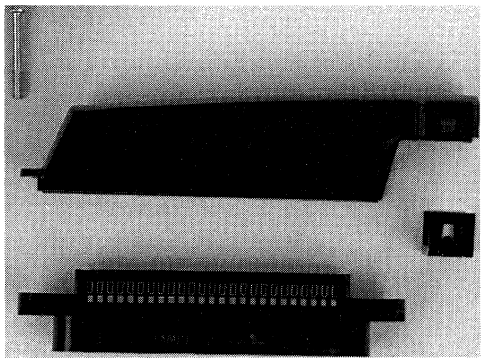
CHAMP IDC Connectors
(Continued)

Cable-to-Cable Applications for 50 Position Connector Kits

Cable-to-Cable Plug and Receptacle with Tapered Cover and Screw



Wire Size				Housing Color Dot Des.	Contact Letter Code	Cable Diameter Range	Dust Cover	Kit Part Numbers			
Solid		7 Strand						Plug		Receptacle	
AWG	mm	AWG	mm²					Black	Gray	Black	Gray
22	0.64	22	0.4	Green	C	Up to **.550** 13.97	No	552382-1	—	552383-1	—
24-26	0.51-0.40	24	0.20	Blue	B	**.350-.425** 8.89-10.80	No	229912-1	229912-4	229913-1	229913-4
							No	*6-229912-1	*6-229912-2	*6-229913-1	*6-229913-2
							Yes	1-229912-1	1-229912-4	1-229913-1	1-229913-4
							Yes	*6-229912-3	*6-229912-4	*6-229913-3	*6-229913-3
						.425-.500 10.80-12.70	No	2-229912-1	—	2-229913-1	—
							Yes	3-229912-1	—	3-229913-1	—
—	—	26, 27, 28	0.14-0.10, 0.09	Yellow	E	**.350-.425** 8.26-10.80	No	552402-1	552402-4	552403-1	—

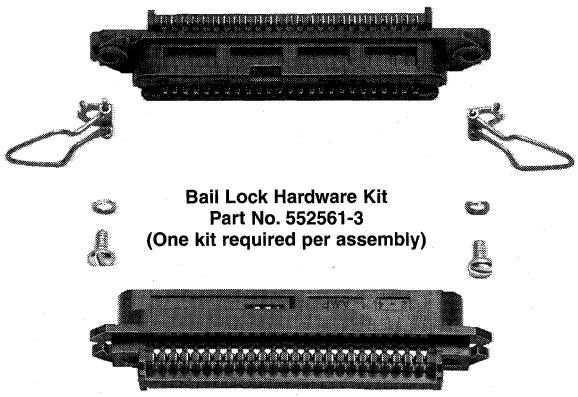
***Note:** Part Numbers with prefix of "6" are bulk packed in quantities of 500.

Cable-to-Cable Hardware Kits

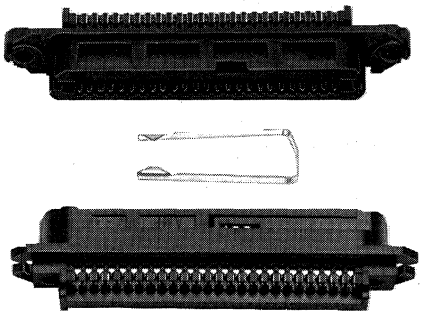
Only fastening hardware supplied, other items shown for reference purposes.

Screw Lock Hardware Kit
Part No. 229911-1
(Two required per assembly)

Bent Bail Lock Hardware Kit
Part No. 552561-4
(For use with 90° Strain Relief Cover— One kit required per assembly)



Bail Lock Hardware Kit
Part No. 552561-3
(One kit required per assembly)



CHAMP-LOK Hardware Kit
(One locking latch required per assembly)
Part No. 552723-1 (36 or 50 Pos. Locking Latch)
Part No. 552723-2 (14 or 24 Pos. Locking Latch)
Part No. 552723-3 (64 Pos. Locking Latch)

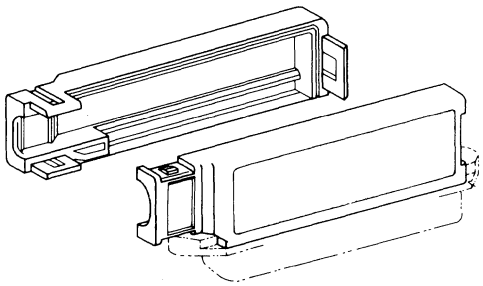
SOURCE: Catalog 82008

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

CHAMP IDC Connectors
(Continued)

Cable-to-Cable Accessories

90° Snap-On Strain Relief Cover

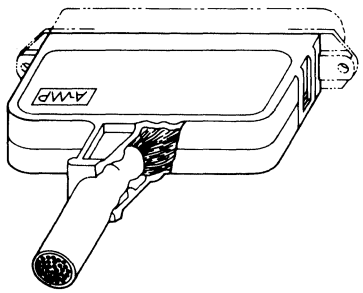


Note: 36 Pos. Housing Dim. (Typ.)—2.798 [71.07] L x .684 [17.37] H

No. of Pos.	Cable Range Diameter*	Part Numbers
14	**.185-.230** 4.70-5.84	552412-1
	.250-.300 6.35-7.62	1-552412-1
24	**.250-.300** 6.35-7.62	552413-1
	.305-.360 7.75-9.14	1-552413-1
36	**.305-.360** 7.75-9.14	552414-1
	.330-.380 8.38-9.65	3-552414-1
50	**.340-.400** 8.64-10.16	552014-1
	.315-.415 8.00-10.54	1-552011-1
	.415-.465 10.54-11.81	552011-1
	.475-.540 12.07-13.72	552731-1
64	**.410-.475** 10.41-12.07	552496-1
	.475-.540 12.07-13.72	1-552496-1
	.540-.605 13.72-15.37	2-552496-1

*Strain relief cover cable diameter range is a guideline. The appropriate strain relief cover depends on cable stiffness, cable packing and fillers.

180° Snap-On Strain Relief Cover

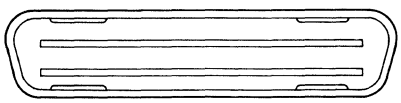


Note: 36 Pos. Housing Dim. (Typ.)—1.824 [46.33] L x 1.934 [49.12] W x .605 [15.37] H

No. of Pos.	Cable Range Diameter*	Part Numbers
14	**.175-.220** 4.45-5.59	552079-1
	.220-.265 5.59-6.73	1-552079-1
	.265-.310 6.73-7.87	2-552079-1
24	**.230-.280** 5.84-7.11	552076-1
	.280-.320 7.11-8.13	1-552076-1
	.320-.380 8.13-9.65	2-552076-1
36	**.290-.360** 7.37-9.14	552073-1
	.360-.430 9.14-10.92	552073-5
	.430-.500 10.92-12.70	552073-6
50	**.330-.380** 8.38-9.65	3-552008-1
	.380-.430 9.65-10.92	2-552008-1
	.430-.490 10.92-12.45	552008-1
	.480-.550 12.19-13.97	4-552008-1
	.430-.500 10.92-12.70	552003-1[1]
64	**.480-.540** 12.19-13.72	552082-1

[1]With probe holes.

Dust Cover



Note: 36 Pos. Plug Cover Dim. (Typ.)—
2.085 [52.96] L x .320 [8.13] W x .610 [15.49] H;
36 Pos. Receptacle Cover Dim. (Typ.)—
1.931 [49.05] L x .320 [8.13] W x .478 [12.14] H

No. of Pos.	Plug Cover (Blue) Part No.	Receptacle Cover (Red) Part No.
14	229968-5	229969-5
24	229968-4	229969-4
36	229968-3	229969-3
50	229968-1	229969-1
64	229968-2	229969-2

SOURCE: Catalog 82008

Specifications subject to change.

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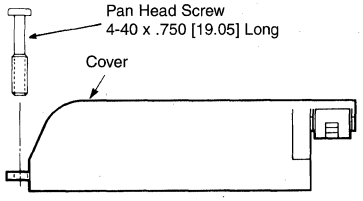
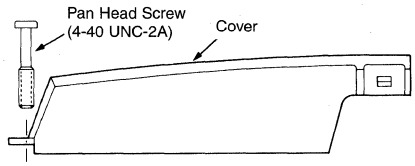
CHAMP IDC Connectors
(Continued)

Cable-to-Cable Accessories
(Continued)

90° Standard Slide-On Strain Relief Cover Kit (for 50 Position Only)



90° Tapered Slide-On Strain Relief Cover Kit (for 50 Position Only)



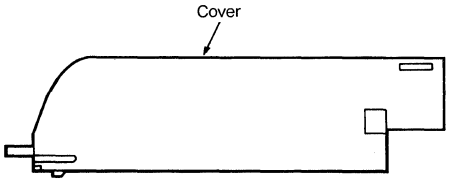
Cable Range Diameter	Kit Part Numbers		Component Part Numbers			
	Standard Cover	Tapered Cover	Cable Clamp	Screw	90° Tapered Cover	90° Slide-On Cover
.425-.500 10.80-12.70	552960-1	552560-5	1-229910-1	229911-1	229909-1	552617-1
.350-.425 8.89-10.80	552960-2	552560-1	229910-1	229911-1	229909-1	552617-1
.325-.370 8.26-9.40	—	—	2-229910-1	229911-1	229909-1	552617-1
.300-.325 7.62-8.26	—	—	3-229910-1	229911-1	229909-1	552617-1
.500-.550 12.70-13.97	552960-5	—	4-229910-1	229911-1	229909-1	552617-1

90° Standard Slide-On Strain Relief Cover and Adjustable Cable Clamp (for 50 Position Only) (recommended for use with CHAMP-LOK or Screw Lock hardware)

Cable Dia.: .425 [10.80] Max.

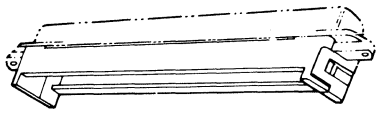
Cover: Black—**Part No. 552760-1**,
Gray—**Part No. 552760-2**

Cable Clamp: Black—**Part No. 552763-1**,
Gray—**Part No. 552763-2**



Cable-to-Panel Accessories

Snap-On Strain Relief

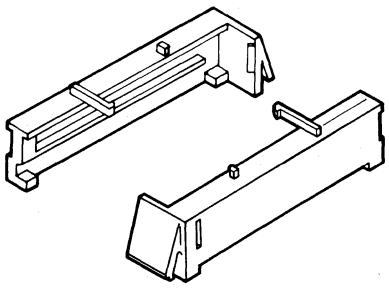


No. of Positions	Low Profile Part Numbers
14	1-552299-1
24	1-552298-1
36	1-552297-1
50	1-552027-1
64	1-552296-1

Note: Two required per connector assembly.

Snap-In Panel Mount Strain Relief

No additional panel mounting hardware required.



Note: Two required per assembly.

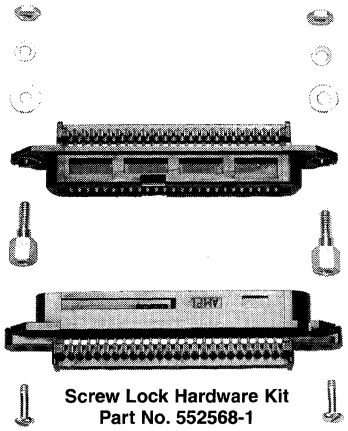
No. of Pos.	Panel Thickness	Color	Part Number
50	**.090** 2.29	Black	552962-3

Notes: 1. Recommended for use with CHAMP-LOK Assembly Hardware. No panel mounting hardware necessary when utilized.
2. Strain Relief recommended for installation of Panel Mount Connectors to prevent inadvertent contact or conductor damage.

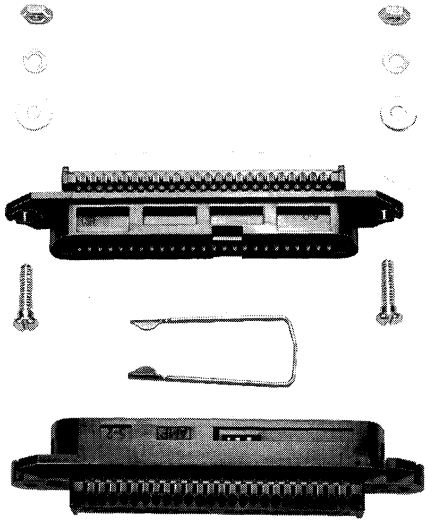
CHAMP IDC Connectors
(Continued)

Cable-to-Panel Hardware Kits

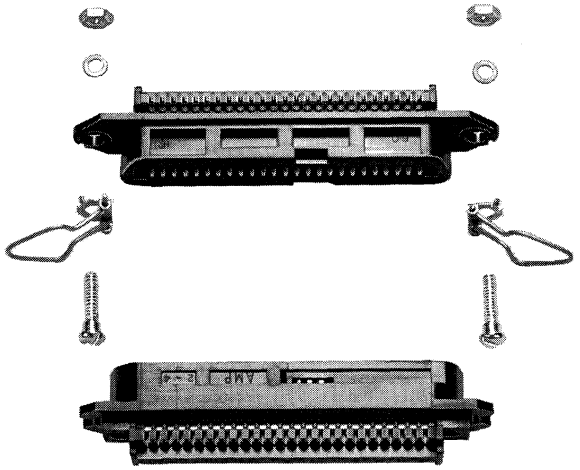
Only fastening hardware supplied, other items shown for reference purposes.



Screw Lock Hardware Kit
Part No. 552568-1
(For rear panel mount applications, max. panel thickness shall be .062 [1.57].)
(One kit required per assembly)

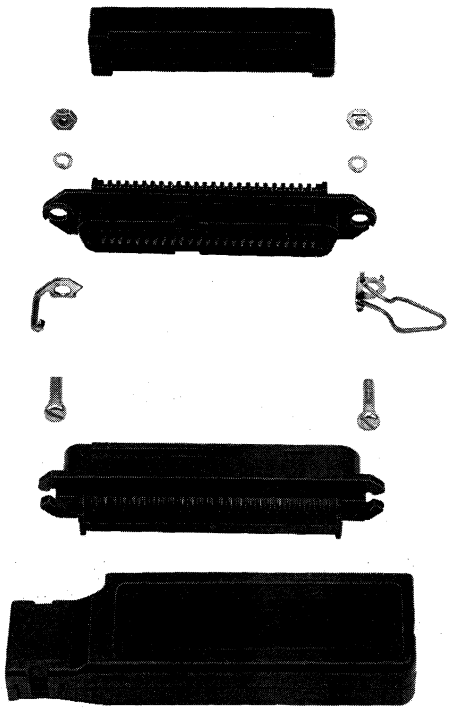


CHAMP-LOK Hardware Kit for Thin Flange Panel Mount Connector
Part No. 553359-1 (36 and 50 Pos.)
Part No. 553359-2 (14 and 24 Pos.)
(For rear panel mount applications, holes in the panel shall be .149 [3.78].)
Recommended panel thickness for rear panel mounting applications to be .062 [1.57] max.



Bail Lock Hardware Kit
Part No. 552567-1
(One kit required per assembly)

Bent Bail Lock Hardware Kit
Part No. 552567-2
(For use with 90° strain relief cover—One kit required per assembly)



Bail Lock Hardware Kit Part No. 552698-2
(Bail lock cable connector mated with thin flange panel connector)

Note: J-Hook Latch **Part No. 552655-1** may be purchased separately.

SOURCE: Catalog 82008

Specifications subject to change.
1-800-522-6752
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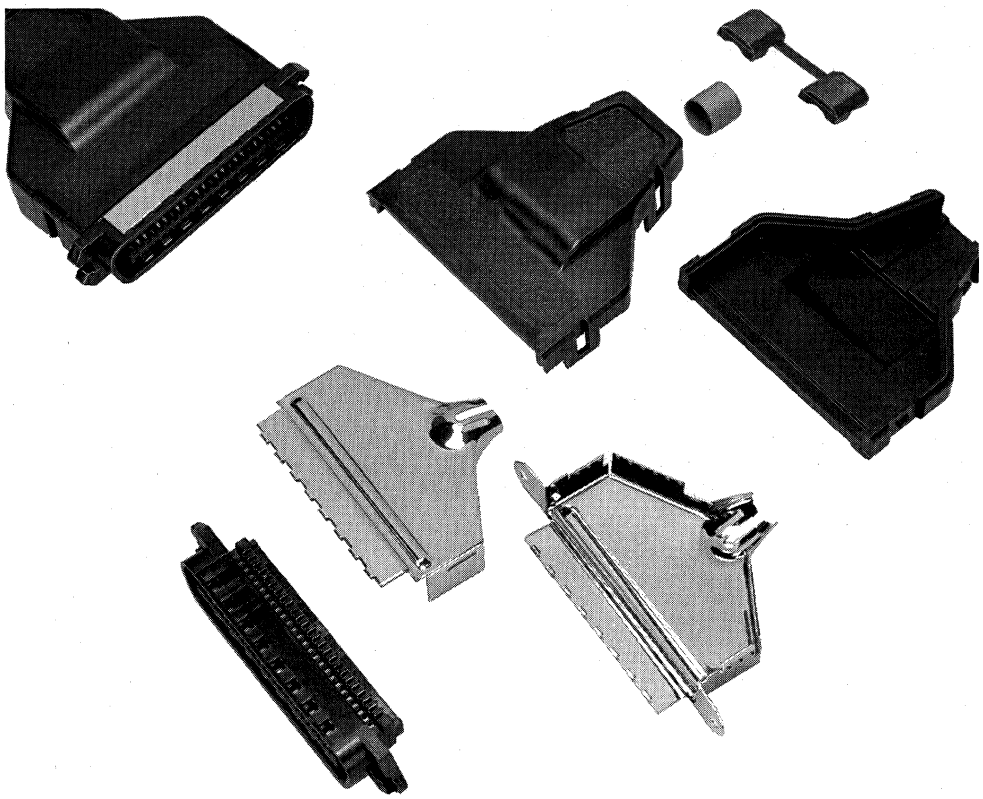
CHAMP IDC Connectors
(Continued)

Shielded Cable Connectors



Product Facts

- **Designed for shielding, NOT just as metal shell connector**
- **Available in 24-, 36- and 50-position plugs and receptacles**
- **Available in bail and screw lock plug and thru-hole receptacle styles with pre-loaded insulation displacement contacts in a choice of two wire slot sizes**
- **Capable of using any standard CHAMP Connector applicator tooling**
- **Unique, high tensile strain relief with adjustable ratchet**
- **Conducive to post molding simply by deleting 180° cover kit**
- **No outer crimp ferrule required**
- **Fully compatible with all die cast, metal shell panel mount CHAMP connectors in a variety of termination styles, and intermateable with all those of a similar design**

The CHAMP Connector product line continues to expand, fulfilling the needs of the various industries. The Shielded CHAMP Cable Connectors have been specifically designed to produce the optimum in shielding effectiveness while still offering low initial cost and ease of assembly with the applied-cost savings of a proven insulation displacement system.

Shielded CHAMP Cable Connectors are available in 24, 36 and 50 position plugs and receptacles with either bail lock or screw lock plug and thru-hole receptacle styles. Connectors are shipped with contacts preloaded and are ready for termination in all standard CHAMP Connector applicator tooling. Two different contact sizes are available—B-slot, 24 AWG [0.51 mm] and 26 AWG [0.04 mm] (solid) or 24 AWG [0.20 mm^2] (7-strand); and E-slot, 26-27-28 AWG [0.14-0.10-0.09 mm^2] (7-strand) wire.

Superior shielding performance is achieved due to minimal leakage from a specially designed two-piece, precision formed shield. Positive contact with the panel mounted connector is obtained by the interface of metal "spring fingers" which protrude through small openings around the perimeter of the plug and contact plate on receptacle.

Highly effective braid termination is achieved with an outstanding stored energy design incorporated into the two-piece shield.

In addition to the superior shielding effectiveness, another important feature of the connector is the design of the outer plastic strain relief cover, which uses a ratcheting wedge that provides greater strain relief as more tension is applied to the cable. Should post molding be desired, the 180° cover kit may be deleted.

SOURCE: Catalog 82008

CHAMP IDC Connectors
(Continued)

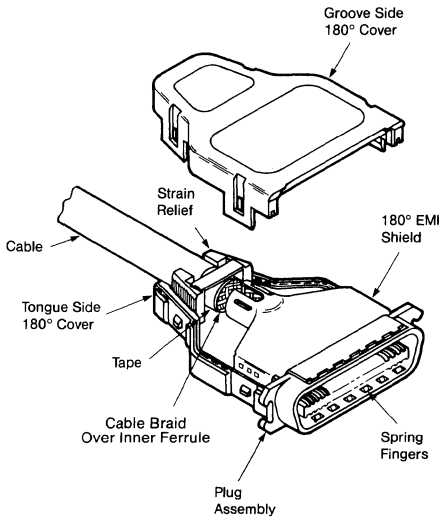
Shielded Cable Connector Kits

Slot Designation stamped on contacts which are preloaded in housing.

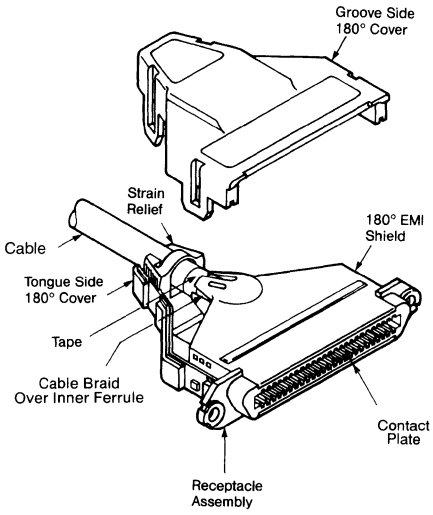
B-Slot—24 AWG [0.51 mm] and 26 AWG [0.40 mm] (solid) or 24 AWG [0.20 mm²] (7-strand)

E-Slot—26-27-28 AWG [0.12-0.10-0.09 mm²] (7-strand) wire

Note: Connector kits shipped unassembled.



Plug Connectors and Kits



Receptacle Connectors and Kits

No. of Positions	Cable Range Dia.	Part Numbers: Shielded Plug Kit, Screw Lock, B-Slot	Shielded Plug Kit, Screw Lock, E-Slot	Shielded Plug Kit, Bail Lock, B-Slot	Shielded Plug Kit, Bail Lock, E-Slot	Shielded Receptacle Kit, Screw or Bail Lock, B-Slot	Shielded Receptacle Kit, Screw or Bail Lock, E-Slot	Cover Kits
24	**.250-.500** 6.35-12.70	554948-4[7] 554948-2[6]	554948-3[4]	554947-2	554947-1	—	—	554944-1
36	**.250-.500** 6.35-12.70	554951-2	554951-1	554950-2	554950-1	—	5-554952-1[5]	554945-1
50	**.350-.625** 8.89-15.88	554954-2	554954-1	554953-2[1]	554953-1[1]	554955-2[2]	554955-1[2]	554946-1[3] 554946-2

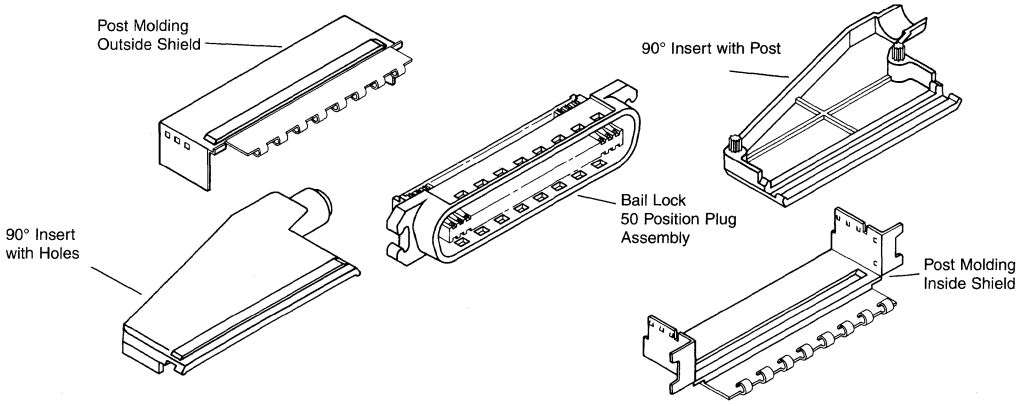
[1]SCSI applicable.
[2]SCSI applicable with Hardware Kit **Part Number 552561-6**.
[3]For cable diameter of .500 [12.70] or less use -1 kit. For cable diameter greater than .500 [12.70] use -2 kit.
[4]Connector with M3.5 threads kits includes M3.5 x 2.00 [50.80] standoff stud.
[5]This kit available in bulk only.
[6]4-40 UNC-2B hole size.
[7]M3.5 x 0.6-6G, shoulder stud screws (2) supplied.

Ferrule Part Numbers[1] Inside Diameter	Part Numbers
.250 6.35	554725-1
.300 7.62	554725-2
.350 8.89	554725-3

Ferrule Part Numbers[1] Inside Diameter	Part Numbers
.400 10.16	554725-4
.450 11.43	554725-5
.500 12.7	554725-6

[1]Bulk packed in quantities of 100 per bag.

50 Position Plug Kit
90° Cable Exit for Post Molding Operation
(Available in 50 position only)



Wire Size: Solid, AWG	Wire Size: Solid, mm	Wire Size: 7 Strand, AWG	Wire Size: 7 Strand, mm²	Housing Color Dot Description	Connector Color	Kit Part Number
24-26	0.51-0.40	24	0.20	Blue	Gray	5-555012-1
—	—	26-27-28	0.14, 0.10, 0.09	Yellow	Gray	5-555012-2

Notes: Kit components only supplied (500 pcs. bulk packaged). Copper foil wrap. Solder operation and post molding is completed by customer. For post mold application contact AMP.

SOURCE: Catalog 82008

Specifications subject to change.

1-800-522-6752
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1-800-722-1111
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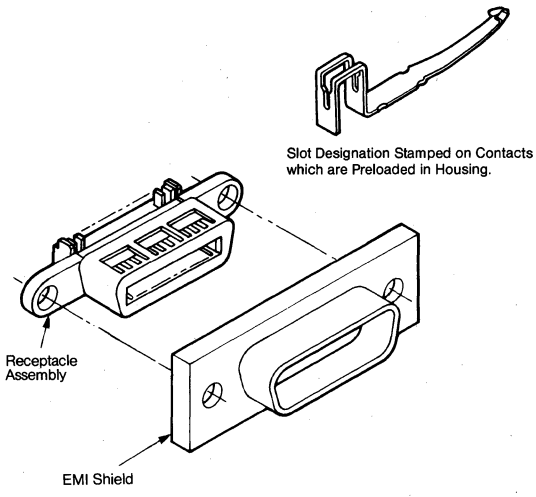
CHAMP IDC Connectors
(Continued)

Shielded Panel Mount

Standard CHAMP Panel Mount Connectors for Jacketed Cable or Discrete Wire



Note: 24 Pos. Housing Dim. (Typ.)—2.380 [60.45] L x .810 [20.57] H

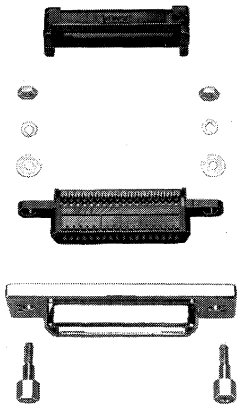
No. of Positions	Part Numbers	
	B-Slot	E-Slot
24	—	553034-1[1]
36	553643-1	—

[1]Can be used with Interface Bus Applications per IEEE-488.

Slot Designation: B—24 AWG [0.51 mm] and 26 AWG [0.40 mm] (solid) or 24 AWG [0.20 mm²] (7-strand) wire.
E—26-27-28 AWG [0.14-0.09 mm²] (7-strand) wire.

Screwlock Hardware Components (Order separately)

Only fastening hardware supplied, other items shown for reference purposes.



Screw Lock Hardware

Snap-on Strain Relief
Part No. 1-552297-1
(2 required)

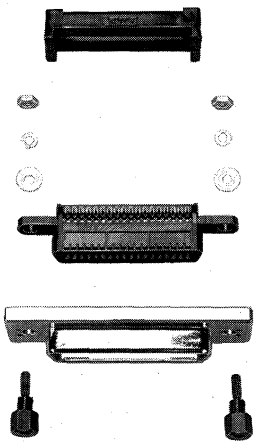
Nut Part No. 21068-4*
(2 required)

Washer Part No. 21074-2*
(2 required)

Flat Washer Part No. 21108-4
(2 required)
Connector and Shield not included

Standoff Mounting Stud
Part No. 229995-1
(2 required)

***Commercial item**



Metric Screw Lock Hardware

Snap-on Strain Relief
Part No. 1-552298-1
(2 required)

Connector and Shield not included

For Front Panel Mount Metric Screw Lock Hardware Kit Part No. 553636-2

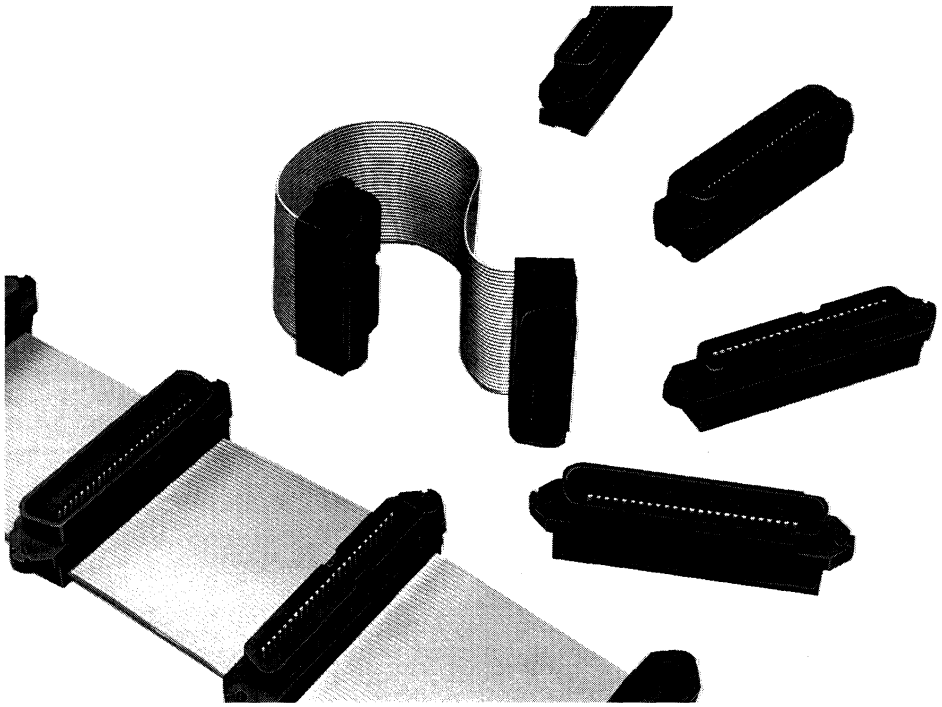
For Rear Panel Mount Metric Screw Lock Hardware Kit Part No. 553636-3

CHAMP IDC Connectors
(Continued)

CHAMP Latch Low-Profile Connectors

Product Facts

- **Ready to use connectors—strain relief covers preassembled to connector bodies**
- **Overall assembled dimension of .820 [20.83]**
- **Simple one-step termination operation**
- **May be used in "dead-end" or "daisy-chain" applications**
- **Hardware kits available for Cable-to-Cable or Cable-to-Panel applications**
- **Available in 24, 36 and 50 positions**
- **Capable of mass termination without time-consuming soldering and prestripping of wire**
- **Terminates .050 [1.27] centerline 26 AWG [0.40 mm] (solid); 28 AWG [0.08-0.09 mm²] (stranded); 28 AWG [0.32 mm] (solid) or 30 AWG [0.25 mm] (solid) copper ribbon cable, including certain twisted pair types from .032-.045 [0.81-1.14] thick**
- **Available in standard connectors, preassembled and loose-piece shielded**



The CHAMP Latch Low-Profile Connector comes ready to use—just slide the cable in and squeeze. The underside of the strain relief cover is fluted to assist in proper cable orientation. Plastic "barbs" sticking up from the connector body act as guides for proper cable alignment during insertion. When terminated, these "barbs" pierce the cable insulation between the conductors and lock on to the strain relief cover.

Another advantage to this connector is its overall assembled dimension (.820 [20.83]), which takes up less space inside or outside of the equipment.

Standard connectors are available in 14, 24, 36 and 50 position plugs or receptacles. Shielded CHAMP Latch Connector version receptacles are available loose piece and preassembled in 24, 36, and 50 positions. A 64 position plug or receptacle can be supplied with an assembled height of 1.130 [28.70]. For 64 position plug and receptacle part numbers and specifications, contact AMP. CHAMP Latch Connectors provide a fast, reliable means of mass terminating .050 [1.27] centerline ribbon cable without time-consuming soldering and prestripping of wire. They are capable of terminating 26 AWG [0.40 mm] (solid); 28 AWG [0.08-0.09 mm²] (stranded) 28 AWG [0.32 mm] (solid) or 30 AWG [0.25 mm] (solid) copper ribbon cable.

Termination of CHAMP Latch Low Profile Connectors is accomplished in a simple one-step operation using the appropriate CHAMP Latch tooling. The ability to make "daisy chain" terminations requires nothing more than depressing the stop bar on the hand tool or repositioning the stop bar provided on the base plate for the manual applicator.

The housings and covers are constructed of black thermoplastic. The terminals are gold over nickel plated high strength copper alloy on the mating face and gold flash over nickel plate on the terminating side. The mating face consists of 2 rows of terminals on .085 [2.16] centers. Terminating side consists of terminals on .100 [2.54] centers for an effective .050 [1.27] staggered termination. EMI Shield, for Shielded Connectors, are die cast zinc with nickel plating.

Connector hardware kits are available for Cable-to-Cable (Screw Lock, Bail Lock and CHAMP-LOK connectors) applications, and Cable-to-Panel (Screw Lock, Bail Lock, Metric Screw Lock for IEEE-488 Applications and CHAMP-LOK connector) applications.

Note: CHAMP Latch connectors have been tested on a wide variety of .050 [1.27] centerline cables conforming to AMP customer drawings 746395, 746396 and 86901. If cables other than those specified are used, forward sample of cable for approval to AMP Engineering, Harrisburg, PA 17105.

SOURCE: Catalog 82008

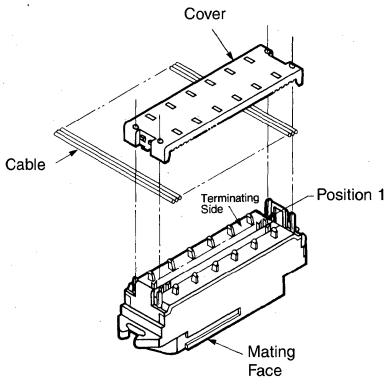
Specifications subject to change.

1-800-522-6752
Product Information Center/ AMP FAX Service

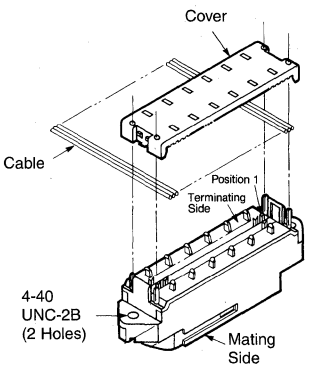
1-800-722-1111
Tooling/Technical Assistance Center

CHAMP IDC Connectors
(Continued)

CHAMP Latch Low-Profile Connectors—Standard

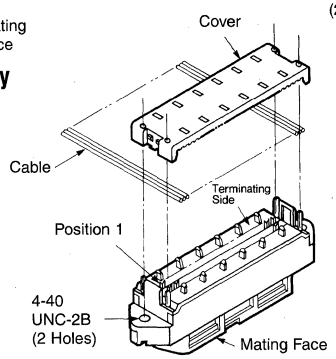


Bail Lock Assembly

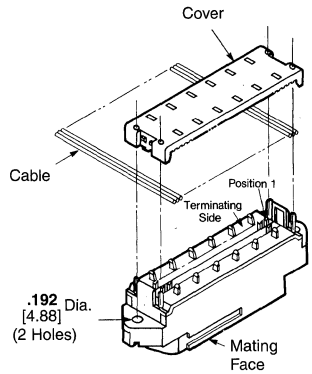


Screw Lock Plug Assembly

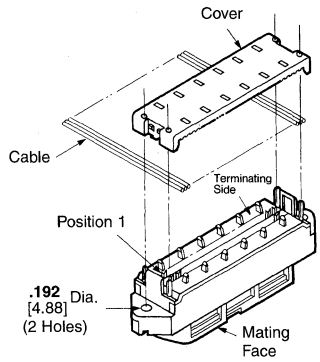
Notes:
1. Cover shown loose but shipped ready to terminate.
2. Cable conforming to AMP specifications to be furnished by customer.
3. Mating face consists of 2 rows of terminals on .085 [2.16] centers. Terminating side consists of terminals on .100 [2.54] centers for an effective .050 [1.27] termination.



Screw Lock Receptacle Assembly



Panel Mount Plug Assembly



Panel Mount Receptacle Assembly

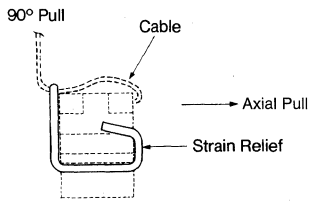
Note: 36 Pos. Housing Dim. (Typ.)—2.685 [68.20] L x .620 [15.75] W x .820 [20.83] (Assembled) H

No. of Positions	Part Numbers				
	Bail Lock Plug Assembly	Screw Lock Plug Assembly	Screw Lock Receptacle Assembly	Panel Mount Plug Assembly	Panel Mount Receptacle Assembly
14	—	553596-1	553597-1	—	—
24	—	553598-1	553599-1	554103-1	554088-1
36	554084-1	553600-1	553601-1	554104-1	554089-1
50	554085-1	553602-1	553603-1	554105-1[1]	554090-1

[1]For filtered connector, order **Part No. 93540-1**. Refer to Catalog 65696 for more information.

CHAMP Latch Cable 50-Position Strain Relief Clip

Part Number 554099-1



End View

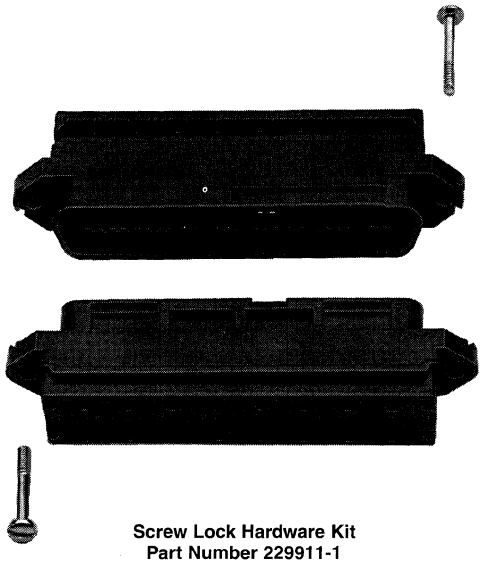
SOURCE: Catalog 82008

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

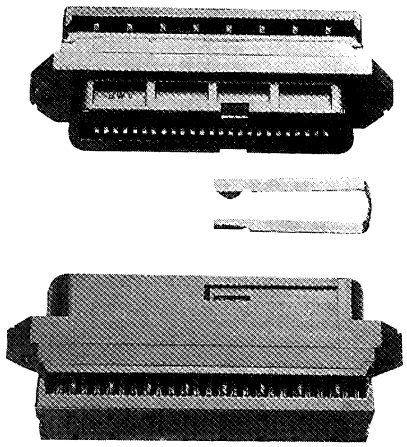
CHAMP IDC Connectors
(Continued)

CHAMP Latch Low-Profile Connectors Cable-to-Cable Hardware Kits

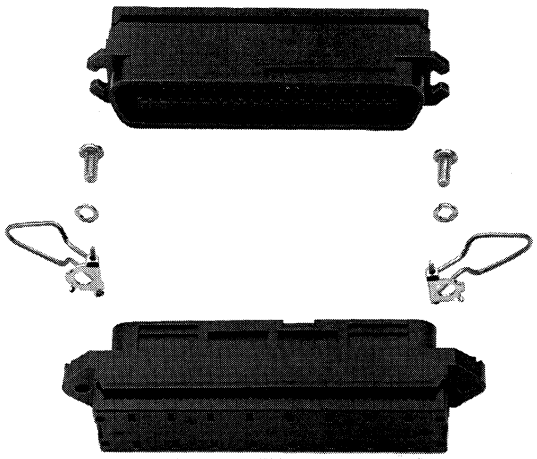
Only fastening hardware supplied, other items shown for reference purposes.



Screw Lock Hardware Kit
Part Number 229911-1
(two required per assembly)



CHAMP-LOK Hardware Kit
Part Number 552723-1 (36 and 50 Pos.)
Part Number 552723-2 (14 and 24 Pos.)
(one locking latch required per assembly)



Bail Lock Hardware Kit
Part Number 552561-3
(one kit required per assembly)

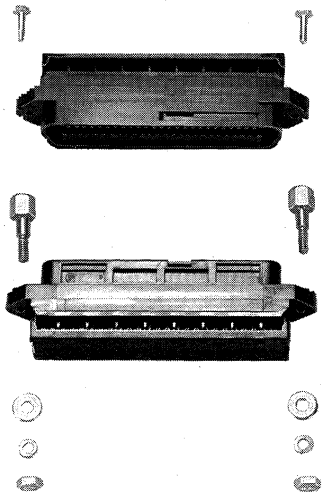
SOURCE: Catalog 82008

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

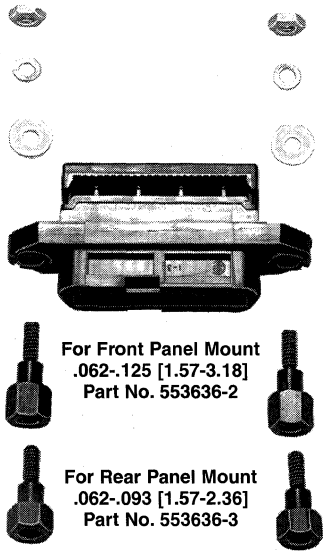
CHAMP IDC Connectors
(Continued)

CHAMP Latch Low-Profile Connectors Cable-to-Panel Hardware Kits
(Continued)

Only fastening hardware supplied, other items shown for reference purposes.



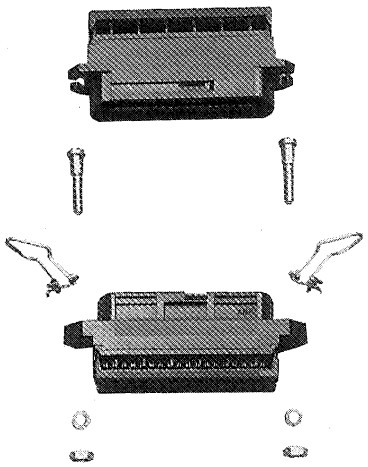
Screw Lock Hardware Kit
Part Number 552568-2
(Rear Panel Mount Application—.062 [1.57] max. panel thickness—one kit required per assembly)



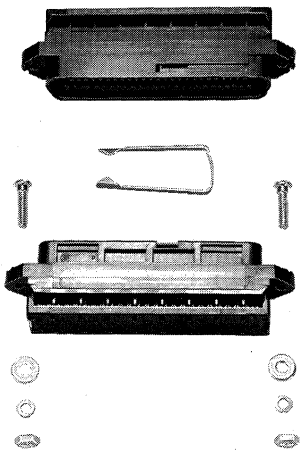
For Front Panel Mount
.062-.125 [1.57-3.18]
Part No. 553636-2

For Rear Panel Mount
.062-.093 [1.57-2.36]
Part No. 553636-3

Metric Screw Lock Hardware Kit for IEEE-488 Application
(one kit required per assembly)



Bail Lock Hardware Kit
Part Number 552567-3
(one kit required per assembly)



CHAMP-LOK Hardware Kit
(one kit required per assembly)
Part Number 553359-1 (for 36 and 50 Pos.)
Part Number 553359-2 (for 24 Pos.)
Part Number 552768-1 (without locking latch)
Use for Front Panel Mount Only

Note: For use with conventional 90° strain relief covers and standard CHAMP Connectors, use Bent Bail Lock Hardware Kit, **Part No. 552561-4.**

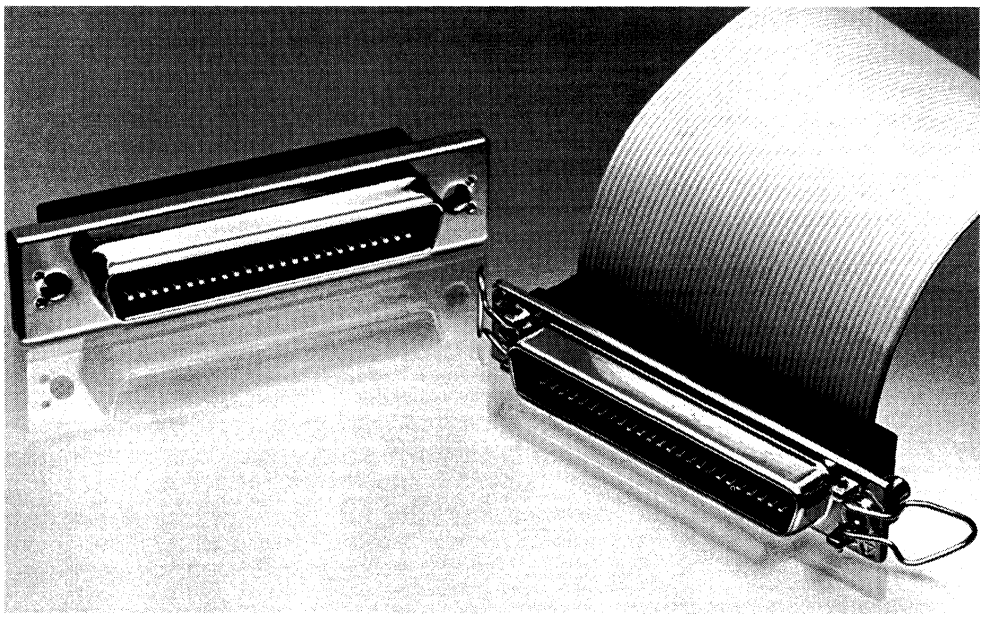
SOURCE: Catalog 82008

CHAMP IDC Connectors
(Continued)

Shielded CHAMP Latch Connectors

Product Facts

- **Ready to use strain relief covers preassembled to connectors**
- **Simple one-step termination**
- **Dead end or daisy-chain applications**
- **Hardware kits available for panel mounting**
- **Terminates conductors without time-consuming soldering**
- **Terminates .050 [1.27] centerline 26 AWG [0.40 mm], 28 AWG [0.32 mm] and 30 AWG [0.25 mm] (solid) or 28 AWG [0.08-0.09 mm²] (stranded) wire**

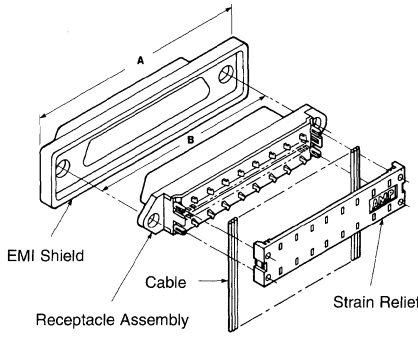


Shielded CHAMP Latch panel mount connectors are designed to provide the optimum in EMI protection at the chassis and still permit mating with CHAMP Connectors and other compatible connectors in 24, 36 and 50 position sizes.

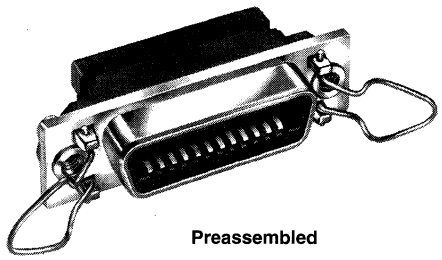
The housing and covers are constructed of black thermoplastic. The terminals are gold over nickel plated high strength copper alloy on the mating face and gold flash over nickel plate on the terminal side. The mating face consists of 2 rows of terminals on .085 [2.16] centers. Terminating side consists of terminals on .100 [2.54] centers for an effective .050 [1.27] staggered termination. Die cast shields are die cast zinc with nickel plating. Hardware kits are available for panel mount in standard or IEEE metric screw lock.

Shielded CHAMP Latch Panel Mount Connectors

CHAMP Latch Connectors for .050 [1.27] Ribbon Cable



Loose Piece



Preassembled

No. of Positions	Loose Piece	Preassembled		
		Bail Lock	Screw Lock	
	Part Number	Part Number	Part Number	
		4-40 Hole	6-32 Hole	4-40 Hole
24	554349-1[4]	—	554434-1[4]	—
36	554348-1	554346-2 555983-1[1]	—	—
50	554350-1	554902-1[1,3] 556297-1[1,3,5]	—	554436-2[2,3]

[1]Does not have boss feature. Boss is a .040 [1.02] shoulder on front of shield.
[2]SCSI applicable with Bail Lock Hardware Kit **Part Number 554818-2**.
[3]SCSI applicable.
[4]Can be used with Interface Bus Applications per IEEE-488.
[5]Has drawn metal shield.

SOURCE: Catalog 82008

Specifications subject to change.

1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

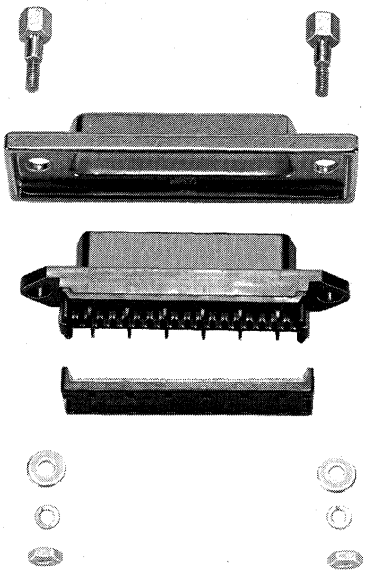
CHAMP IDC Connectors
(Continued)

Shielded CHAMP Latch Panel Mount Connectors
(Continued)

CHAMP Latch Hardware Kits

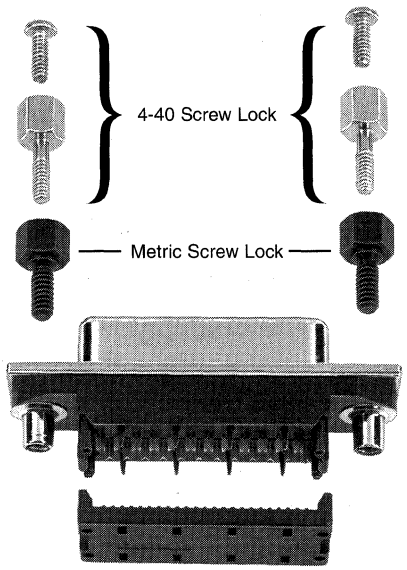
Only fastening hardware supplied, other items shown for reference purposes.

Loose Piece Shield



Screw Lock Hardware Kit
Part No. 553636-1 (shown)
Metric Screw Lock Hardware Kit per IEEE-488 Application
For Front Panel Mount Part No. 553636-2
For Rear Panel Mount Part No. 553636-3

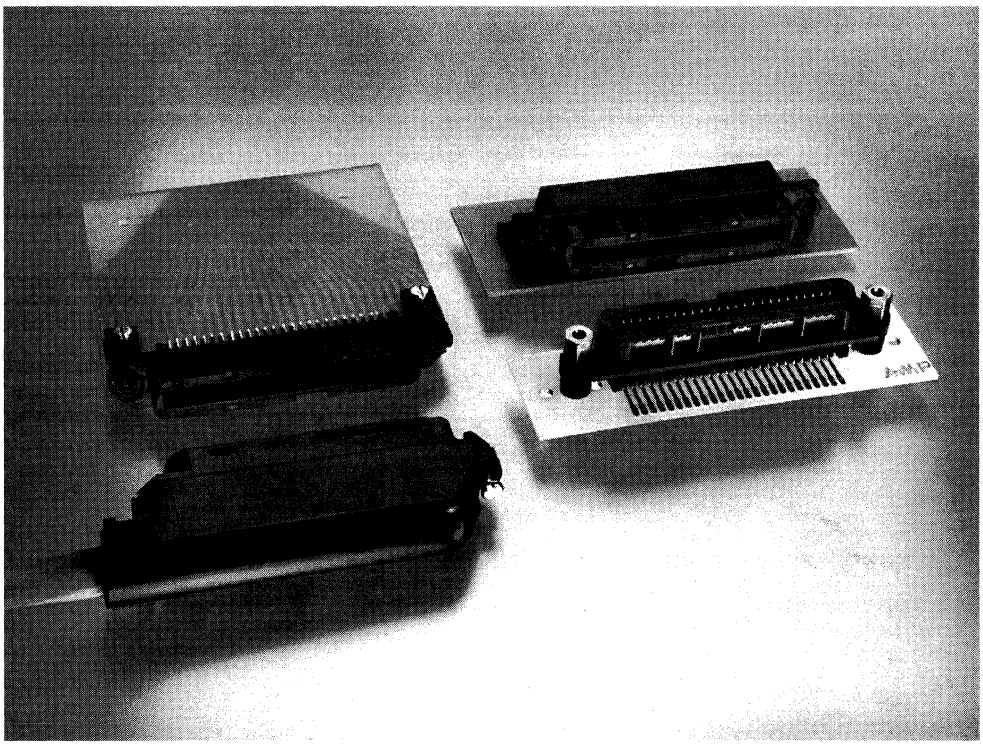
Preassembled Shield



Part No. 554272-1
(for use with 4-40 Screw Lock, Rear Panel Mount Only)
Metric Screw Lock Hardware Kit for 24-Position IEEE-488, Preassembled, Part No. 554808-1 Rear Panel Mount Only

SOURCE: Catalog 82008

CHAMP PC Board Connectors



Product Facts

- **Capable of being used with single- or double-sided printed circuit boards**
- **Eliminates the need to hand solder, except for Edge Mount Connectors**
- **Connectors fully intermateable with others of similar design**
- **UL 94V-O self-extinguishing thermoplastic housings and accessories**
- **Connectors available in 14, 24, 36, 50 and 64 positions with a choice of mounting methods: screw, bail mount, or locking latch types**
- **Capable of accommodating printed circuit board thicknesses of .062 [1.57], .093 [2.36] or .125 [3.18]**
- **Diversifed applications throughout the following markets—medical equipment, data control systems, telephone interconnect systems and electronic instrumentation (commercial and industrial)**
- **Operating temperature range of -40°C to +105°C**

CHAMP Printed Circuit Board Connectors are fully intermateable with existing connectors of a similar design. They are capable of accommodating printed circuit board thicknesses from .062-.125 [1.57-3.18].

Applications for this type of connector are widely diversified and are used in the following markets:

- Medical Equipment
- Data Control Systems
- Telephone Interconnect Systems
- Electronic Instrumentation (Commercial and Industrial)

The connector is designed for high density wave solderable applications, eliminating the need for hand soldering, except for Edge Mount Connectors and can be applied to either single- or double-sided boards. The surface mounting area is minimal and allows full usage of available printed circuit land area.

These connectors are available in 14, 24, 36, 50 and 64 positions with a choice of mounting methods for your specific needs, i.e. screw, bail mount or locking latch types. Board mounting for Right-Angle Connectors is accomplished by nut and bolt, pop riveting or an optional self-tapping screw arrangement. Edge and Vertical Mount Connectors are board mounted by a wide choice of hardware applicable to your specific applications.

The connector requires minimum hardware and installation time and is compatible with conventional printed circuit mass production soldering processes, thereby providing cost savings.

For additional information concerning the CHAMP Printed Circuit Board Connectors, contact your AMP Sales Engineer or AMP.

SOURCE: Catalog 82008

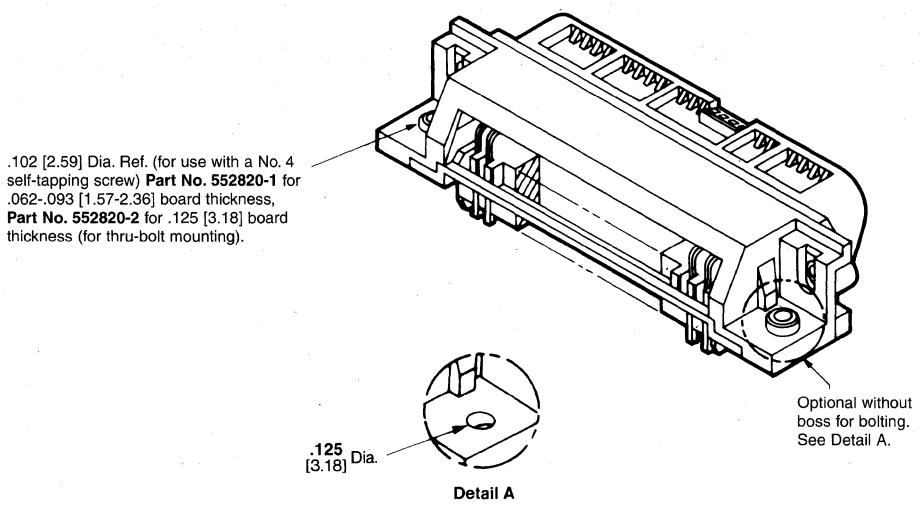
Specifications subject to change.

1-800-522-6752
Product Information Center/ AMP FAX Service

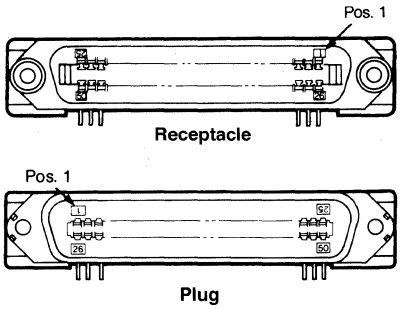
1-800-722-1111
Tooling/Technical Assistance Center

CHAMP PC Board Connectors
(Continued)

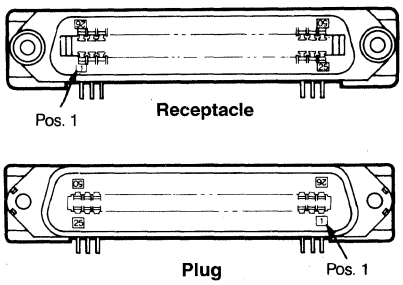
Right-Angle Connectors



Standard Orientation



Reverse Orientation



Self-Tapping

Thru-Bolt Mounting (See Detail A)

Note: 36 Pos. Housing Dim. (Typ.)—2.685 [68.20] L x 1.010 [25.65] W x .630 [16.00] H

No. of Pos.	Part Numbers			
	Standard Orientation		Reverse Orientation	
	Receptacle	Plug	Receptacle	Plug
14	552738-1	—	552738-2	—
24	552740-1 552791-1[1]	552741-1	552740-2 552791-2[1]	—
36	552742-1	552743-1	552742-2	—
50	552725-1	552726-1[2]	552725-3	552726-3
64	552744-1	552745-1	552744-2	—

[1]For IEEE-488 applications.
[2]For filtered connector, order **Part No. 93532-1**.

No. of Pos.	Part Numbers		
	Standard Orientation		Reverse Orientation
	Receptacle	Plug	Receptacle
24	—	—	552791-4[1]
36	552742-3	—	—
50	552725-2	—	—

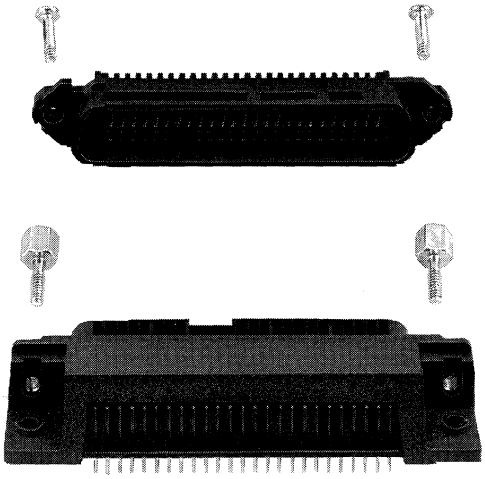
[1]For IEEE-488 applications.

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

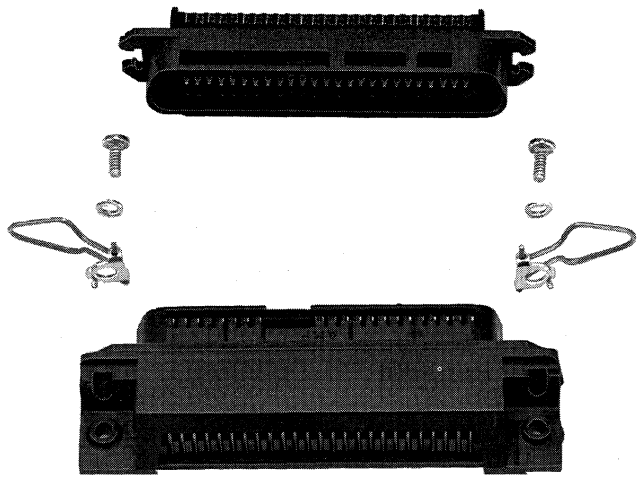
CHAMP PC Board Connectors
(Continued)

Right-Angle Connector Hardware Kits

Only fastening hardware supplied, other items shown for reference purposes

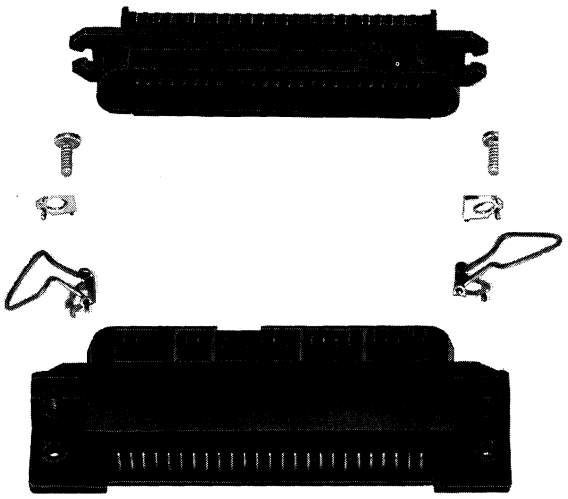


Screw Lock Hardware Kit
Part No. 552631-1
Rear Panel Mount Only
(One kit required per assembly)
For pc board-to-panel applications
(Panel thickness .062 [1.57] max.)

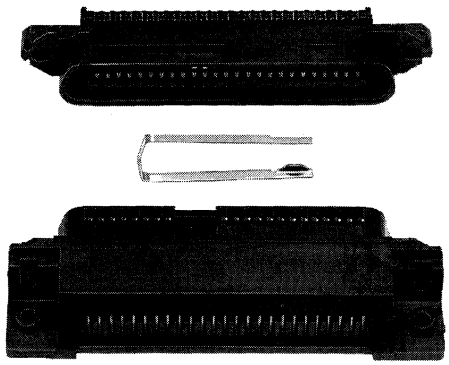


Bail Lock Hardware Kit
Part No. 552561-3
(For use with 180° Strain Relief Cover)
(One kit required per assembly)
For pc board-to-cable applications

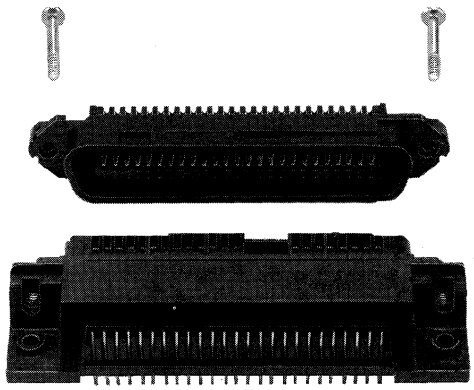
Notes: 1. Recommended right-angle connector pc board mounting hardware to be a No. 4 self-tapping screw, **Part No. 552820-1** for .062-.093 [1.57-2.36] and **Part No. 552820-2** for .125 [3.18] board thickness.
2. Metric hardware is also available for use with the 24 Position Right-Angle Receptacle per IEEE-488 **Part No. 552791-1** or **-2**.
- For Standard Mount—**Part No. 552633-3**
- For Rear Panel Mount—**Part No. 552633-4**



Bent Bail Lock Hardware Kit
Part No. 552561-4
(For use with 90° Strain Relief Cover)
(One kit required per assembly)
For pc board-to-cable applications



CHAMP-LOK Kit
Part Nos. 552723-1 (36 and 50 Position),
552723-2 (14 and 24 Position)
and 552723-3 (64 Position Only)
(One latch required per assembly)
For pc board-to-cable applications



Screw Lock Hardware Kit
Part No. 229911-1
(two required per assembly)
For pc board-to-cable applications

SOURCE: Catalog 82008

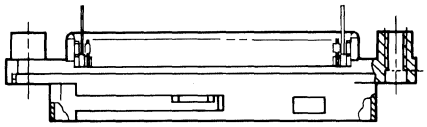
Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

CHAMP PC Board Connectors
(Continued)

Vertical and Edge Mount Connectors

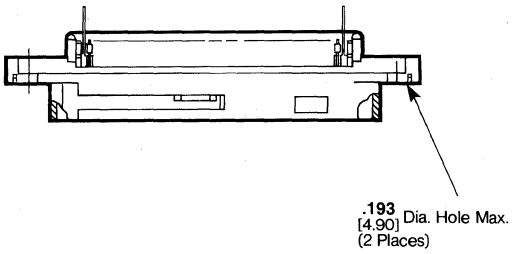
Vertical Mount

Style PV—Plug, Screw Lock

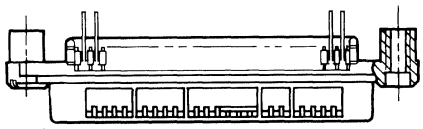


Edge Mount

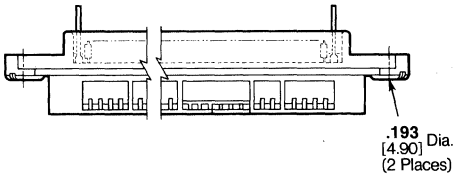
Style PE—Plug, Screw Lock



Style RV—Receptacle, Screw or Bail Lock



Style RE—Receptacle, Screw or Bail Lock



Note: 36 Pos. Housing Dim. (Typ.)—2.685 [68.20] L x .600 [15.24] W x .734 [18.64] H

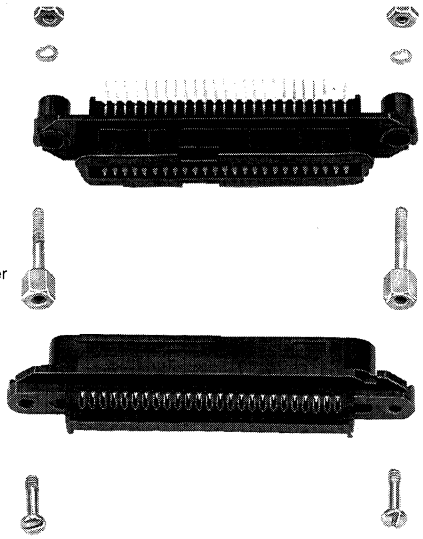
No. of Positions	Part Numbers			
	Plug		Receptacle	
	Style PV Vertical Mount	Style PE Edge Mount	Style RV Vertical Mount	Style RE Edge Mount
14	552209-1	—	552212-1	552218-1
24	552221-1	—	552224-1[1]	552230-1
36	552232-1	552238-1	552235-1	552241-1
50	552116-1	552126-1	552118-1	552130-1
64	552243-1	552249-1	552246-1	552252-1

[1].189 [4.80] Diameter Mounting Hole, for IEEE Application.
Notes: 1. Printed circuit board material—glass-filled polyester 94V-0 rated.
2. Order all hardware required separately.

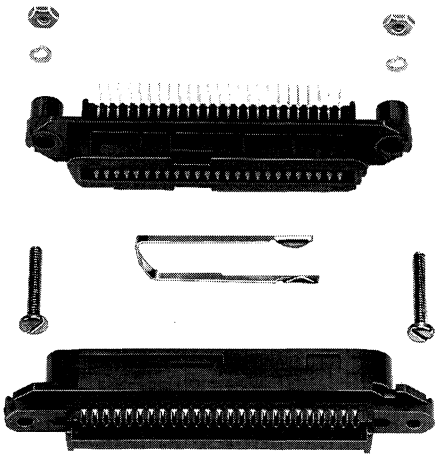
CHAMP PC Board Connectors
(Continued)

Vertical Mount Connector Hardware Kits

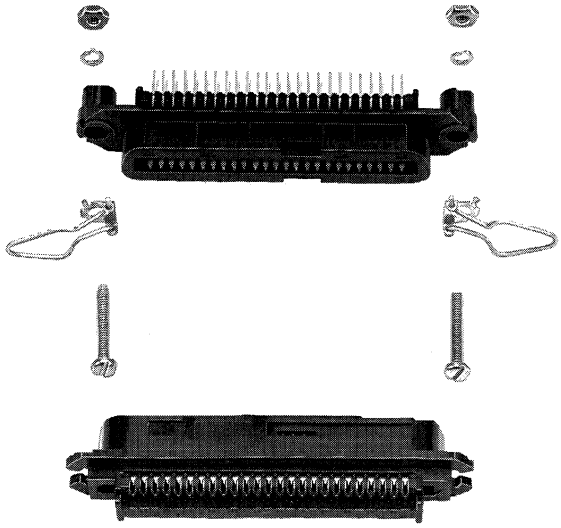
Only fastening hardware supplied, other items shown for reference purposes



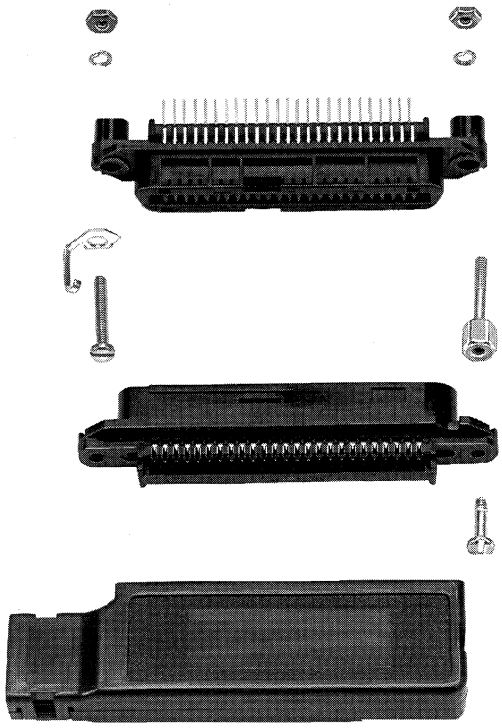
Screw Lock Hardware Kit—Part No. 552563-1
(One kit required per assembly)



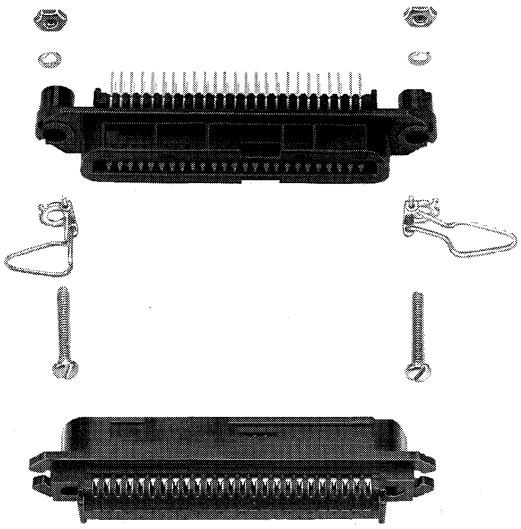
CHAMP-LOK Hardware Kit
Part No. 553357-1 (36 and 50 Pos. Hardware Kit)
Part No. 553357-2 (14 and 24 Pos. Hardware Kit)
(One kit required per assembly)



Bail Lock Hardware Kit—Part No. 552562-1
(One kit required per assembly)



J-Hook Screw Lock Hardware Kit—Part No. 552690-1
(One kit required per assembly)



Bent Bail Lock Hardware Kit—Part No. 552562-2
(One kit required per assembly)

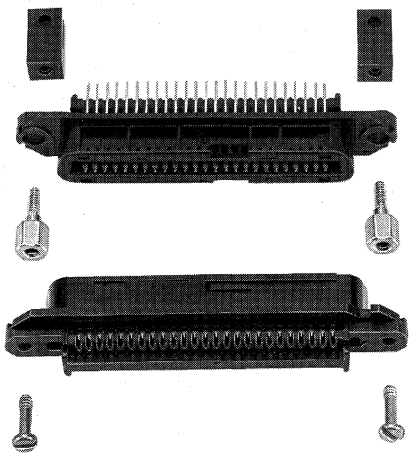
SOURCE: Catalog 82008

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

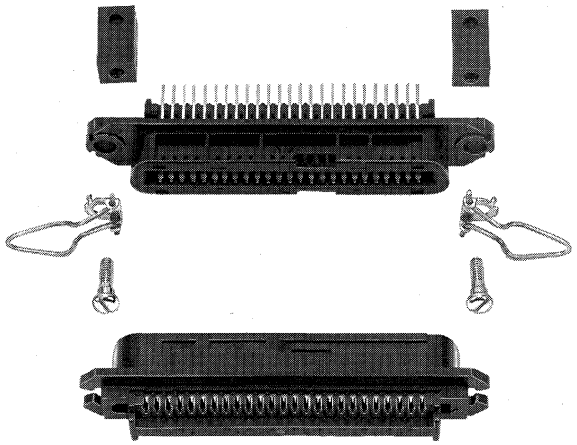
CHAMP PC Board Connectors
(Continued)

Edge Mount Connector Hardware Kits

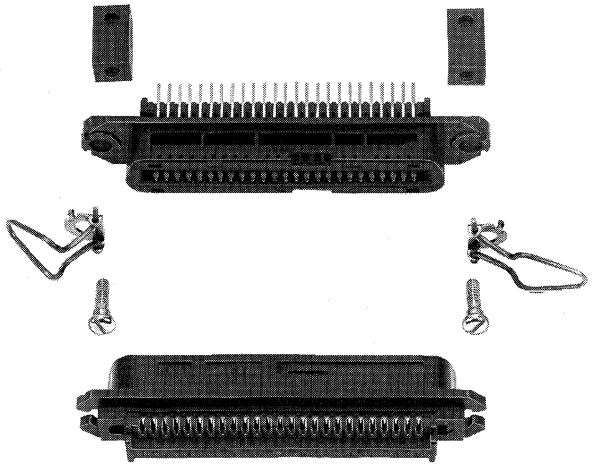
Only fastening hardware supplied, other items shown for reference purposes



Screw Lock Hardware Kit
Part No. 552675-1
(One kit required per assembly)



Straight Bail Lock Hardware Kit Part No. 552676-1
(One kit required per assembly)

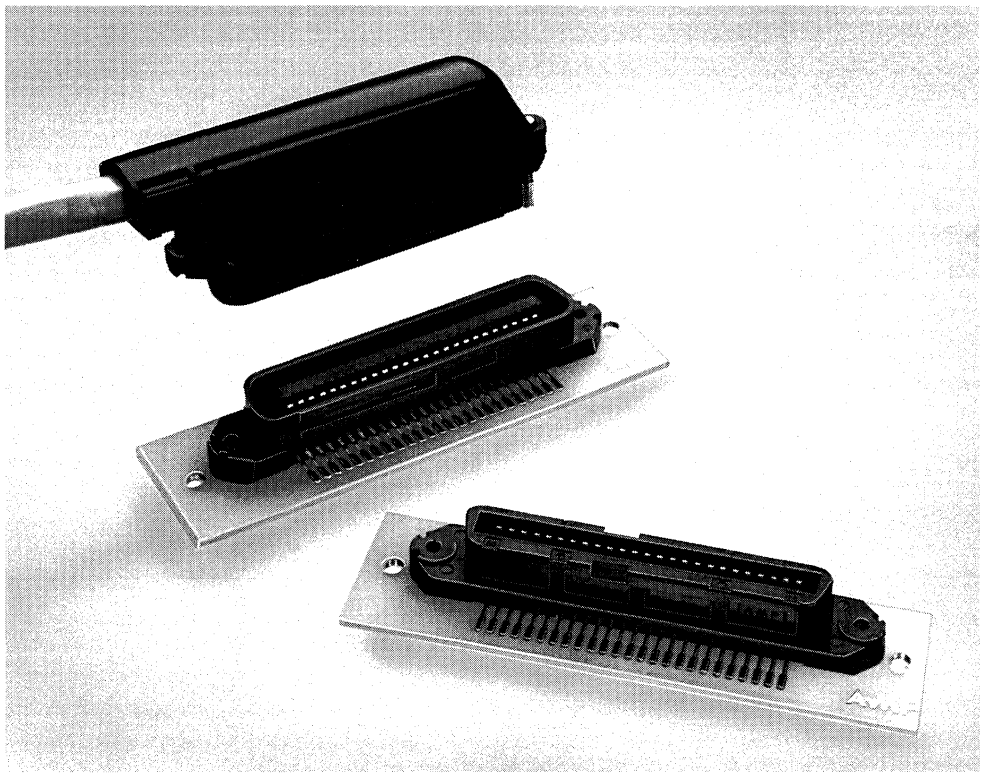


Bent Bail Lock Hardware Kit
Part No. 552676-2
(One kit required per assembly)

SOURCE: Catalog 82008

CHAMP PC Board Connectors
(Continued)

ACTION PIN Connectors



ACTION PIN connectors for printed circuit board applications combine the high reliability of the CHAMP Insulation Displacement connector interface with the utilization and cost savings of ACTION PIN terminals. They are available in both plug and receptacles in 14, 24, 36, 50 and 64 position sizes.

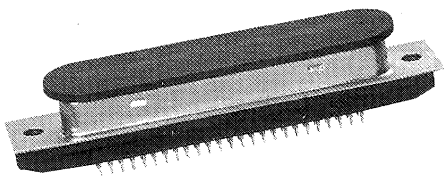
The connectors are supplied preloaded with contacts and a plastic cover which serves as the bearing surface to press the connector into the board. Rapid assembly is made possible by use of a simple arbor tool. The plastic cover also serves as a dust cover which may be left in place until ready to use.

The connectors may be mounted on pc boards with a thickness of .062 [1.57] to .125 [3.18]. They are designed for interface with standard CHAMP IDC cable-to-panel plugs or receptacles and are available for use with screw lock, bail lock or unique CHAMP-LOK connector locking clip hardware.

The design of the ACTION PIN terminal permits insertion into printed circuit boards having either plated-thru or unplated holes. In plated-thru holes, completely reliable termination may be accomplished either by press fit of the pins or by both press fitting and subsequent conventional soldering. In unplated holes, the pins must be soldered in place.

For the connectors with self-retained contacts, hardware to secure connector to the pc board may not be required if unmating force of mating connectors does not exceed 1 lb. [4.45 N] per terminal (50 lbs. [222.4 N] for 50 positions.)

Plug and Receptacle



Note: 36 Pos. Housing Dim. (Typ.)—2.685 [68.20] L x .656 [16.66] W x .615 [15.62] H

No. of Positions	Part Numbers	
	Plug	Receptacle
14	553444-1	553443-1
24*	553444-2	553443-2
36	553444-3	553443-3
50	553444-4 554758-1[1,2]	553443-4 554753-1[1] 557984-1[3]
64	553444-5 554759-1[1]	553443-5

*For IEEE-488 Applications use **Part No. 553609-1**.
[1]Connector contains self-retained terminals.
[2]For filtered connector, order **Part No. 93510-1**. Refer to Catalog 65696 for more information.
[3]Shielded for screw lock application.

SOURCE: Catalog 82008

Specifications subject to change.

1-800-522-6752
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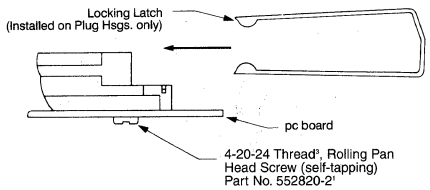
1-800-722-1111
Tooling/Technical Assistance Center

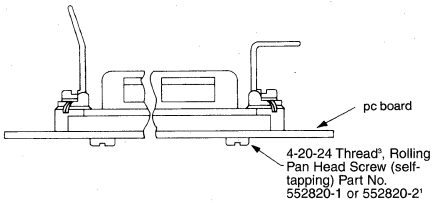
CHAMP PC Board Connectors
(Continued)

ACTION PIN Connector Hardware

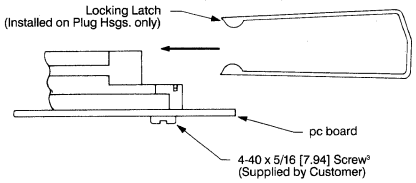
Only fastening hardware supplied, other items shown for reference purposes.



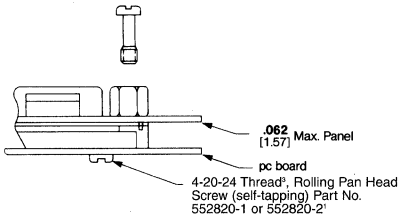
CHAMP-LOK Hardware
Part No. 552723-1 (36 or 50 Pos. Locking Latch)
Part No. 552723-2 (14 or 24 Pos. Locking Latch)
Part No. 552723-3 (64 Pos. Locking Latch)
(one latch required per assembly)
For Pc Board-to-Cable applications



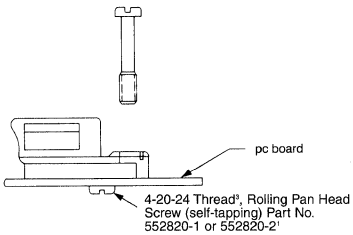
Bent Bail Lock Hardware Kit
Part No. 552561-4
(one kit required per assembly)
For Pc Board-to-Cable with 90° cover applications



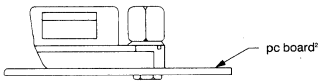
CHAMP-LOK Hardware
Part No. 552723-1 (36 or 50 Pos. Locking Latch)
Part No. 552723-2 (14 or 24 Pos. Locking Latch)
Part No. 552723-3 (64 Pos. Locking Latch)
(one latch required per assembly)
For Pc Board-to-Cable applications



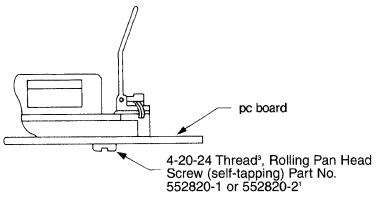
Screw Lock Hardware Kit
Part No. 552631-1
(Rear panel mount applications)
(one kit required per assembly)
For Pc Board-to-Panel-to-Cable applications



Screw Lock Hardware
Part No. 229911-1
(two screws required per assembly)
For Pc Board-to-Cable applications



Screw Lock Metric Hardware Kit
per IEEE-488, 1978
Part No. 552862-1
(one kit required per assembly)
For Pc Board-to-Cable applications
(for use with Connector Part No. 553609-1
with .187 [4.75] dia. mounting holes)



Bail Lock Hardware Kit
Part No. 552561-3
(one kit required per assembly)
For Pc Board-to-Cable with 180° cover applications

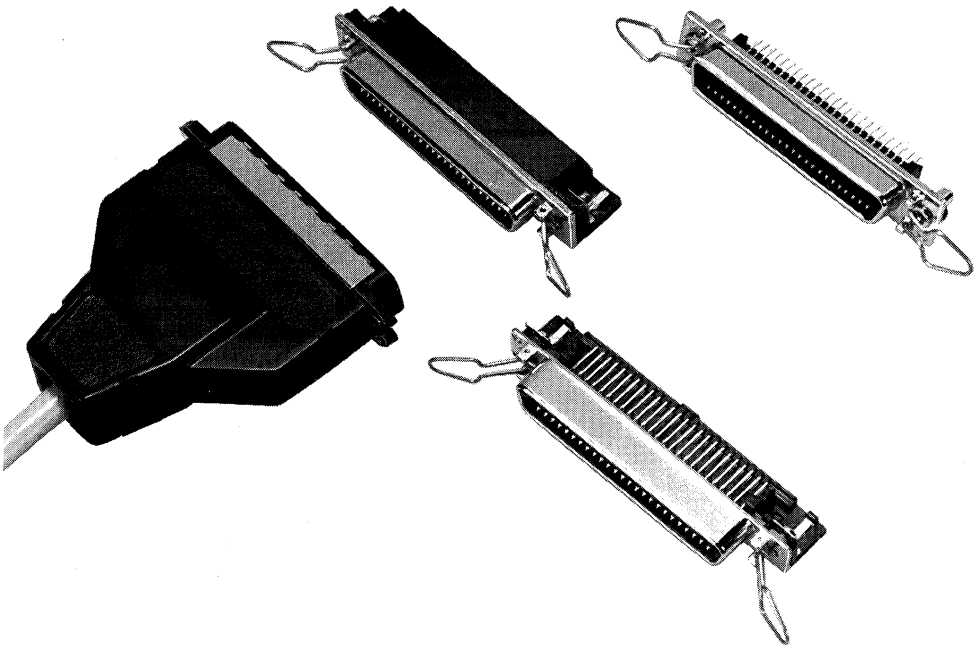
[1]**Part No. 552820-1** used for board thickness .062-.093 [1.57-2.36]; **Part No. 552820-2** used for board thickness .125 [3.18].
[2]Hole in pc board .171 [4.34] to accommodate standoff.
[3]If unmated force of mating connector does not exceed 1 lb. per terminal, 4-40 rolling pan head screw may not be required (for self-retained terminals only.)

CHAMP PC Board Connectors
(Continued)

Shielded Pc Board Connectors

Product Facts

- **Excellent protection from electromagnetic interference or electrostatic discharge to sensitive circuitry**
- **Connectors compatible and intermateable with all others of similar design**
- **Available in three different panel-mount styles**
- **Shielded right-angle, edge-mount and vertical-mount CHAMP connectors for pc board application are rear panel-mounted**
- **Choice of fastening hardware—standard screw lock, bail lock, metric screw locks per IEEE-488 applications**
- **Connectors available in kit form or preassembled versions**
- **Thick die-cast metal shell offers superior shielding over a wide frequency range**
- **Shell protects equipment from inadvertent electrostatic discharge**
- **Housings are stackable**
- **Applied cost savings**
- **Available in 24, 36 and 50 positions**



Shielded CHAMP Connectors afford excellent protection from electromagnetic interference or electrostatic discharge to sensitive circuitry. These connectors are completely compatible and intermateable with all others of a similar design, yet they are unique because of their superior construction.

They are available in three different panel-mount styles. Each style consists of an appropriate CHAMP connector and a rugged die-cast metal shell. The shielded right-angle, edge mount and vertical mount CHAMP connector versions for pc board applications must be rear panel-mounted.

A choice of fastening hardware is available in each of the styles noted above. They include standard screw lock, bail lock or metric screw lock as required by IEEE-488.

Each connector is shipped in bulk or individual kit form and consists of the die cast metal shell and appropriate style connector. After pc board mounting, it is easily installed to the panel with the appropriate hardware kit, which is ordered separately.

The thick die-cast metal shell offers superior shielding over a wider frequency range than drawn sheet metal or plated/filled plastics. This shell also protects the equipment from inadvertent electrostatic discharge because the die-casting, together with the fastening hardware, provides a reliable chassis ground connection.

Due to its inherent rigidity, the die-cast housing may be stacked without distortion or bending of connector flanges and panel. This advantage contributes to the overall effectiveness of the system.

The Shielded CHAMP right-angle pc board connector offers a low-cost transition to or from double-sided circuitry, the Shielded CHAMP edge-mount and vertical-mount connectors also allow accessibility to both sides of double-sided boards. All three of these styles are available in 24, 36 and 50 position sizes.

A 50 position Shielded ACTION PIN receptacle is also available. See page 8077 for part numbers.

SOURCE: Catalog 82008

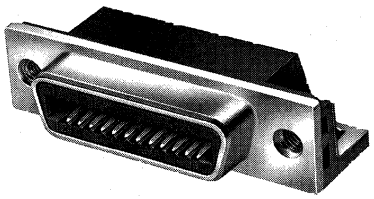
Specifications subject to change.

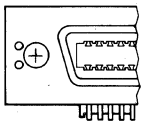
1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

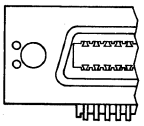
CHAMP PC Board Connectors (Continued)

Shielded Right-Angle Connectors





Standard Orientation



Reverse Orientation

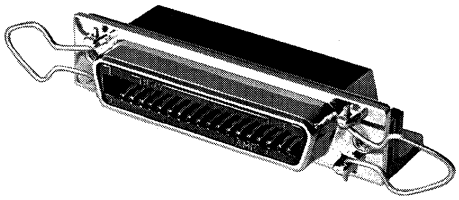
Note: 50 Pos. Housing Dim. (Typ.)—3.305 [83.95] L x .710 [18.03] W x .640 [16.26] H

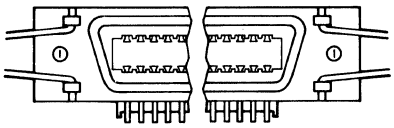
Preassembled Screw Lock

No. of Positions	Preassembled Screw Lock		
	Screw Size	Part Numbers	
		Standard	Reverse
24	6-32	553811-1[2]	553811-2[2]
50	4-40	553813-3[1,3]	553813-4[1]

[1]SCSI applicable with use of bail lock hardware kit **Part No. 554818-2**.
[2]Can be used with Interface Bus Application per IEEE-488.
[3]For filtered connector, order **Part No. 93533-1.** Refer to Catalog 65696 for additional filtered connector information.

Preassembled Bail Lock



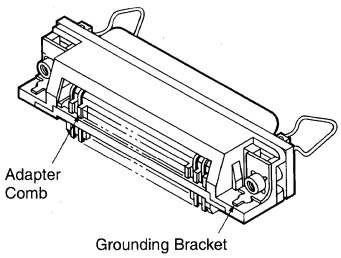


Standard Orientation

No. of Positions	Preassembled Bail Lock	
	Screw Size	Part Numbers
		Standard
36	4-40	555233-1
50	4-40	554901-1[1]

[1]SCSI applicable.

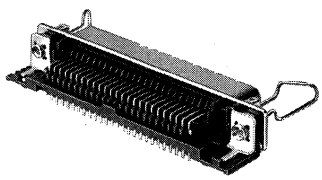
Board Lock Grounding



Note: 36 Pos. Housing Dim. (Typ.)—2.715 [68.96] L x .710 [18.03] W x .640 [16.26] H

No. of Positions	Hardware Type	Screw Size	Part Numbers		
			Standard	Reverse	Low-Profile
24	Screw Lock	6-32	554923-2[1]	554923-1[1]	557724-1[4] 555139-1[5] 555139-2[5]
36	Bail Lock	4-40	555119-1[1] 555520-2[1,3]	—	—
50	Bail Lock	4-40	555057-1[1,2]	—	—
	Screw Lock	4-40	555387-2	555387-1	—

Low-Profile Connector



Special Low-Profile Connectors—Compatible with IBM PC AT and PC XT

No. of Positions	Hardware Type	Screw Size	Part Numbers	
			Standard	Reverse
50	Bail Lock	4-40	555149-1[1,2]	555149-3[1]

[1]Maximum pc board thickness is .062 [1.57]
[2]SCSI applicable
[3]Has drawn metal shield.
[4]Shielded, standard orientation, board lock; compatible with vapor phase and IR reflow.
[5]Shielded with ground bracket 4-40 thread (low profile).

SOURCE: Catalog 82008

Specifications subject to change.
1-800-522-6752
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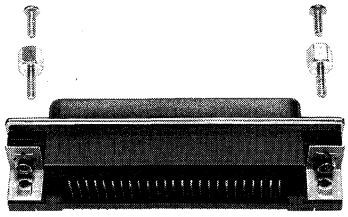
1-800-722-1111
Tooling/Technical Assistance Center

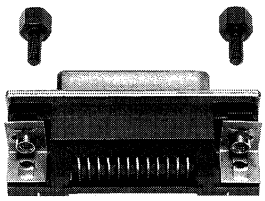
CHAMP PC Board Connectors
(Continued)

Shielded Right-Angle Connector Hardware Kits

Only fastening hardware supplied, other items shown for reference purposes.

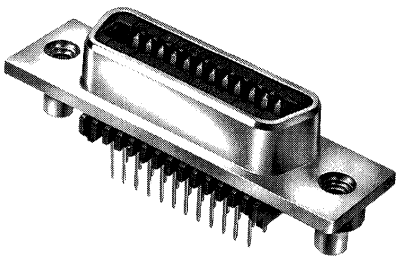


Screw Lock Hardware Kit
Part Number 554272-1
(one kit required per assembly)

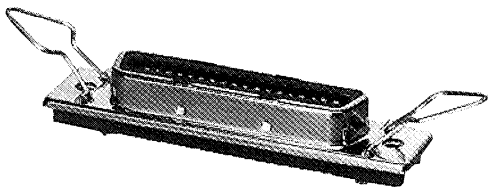


Metric Screw Lock Hardware Kit
for 24-Pos. IEEE-488 Application Only
Part Number 554808-1
(one kit required per assembly)

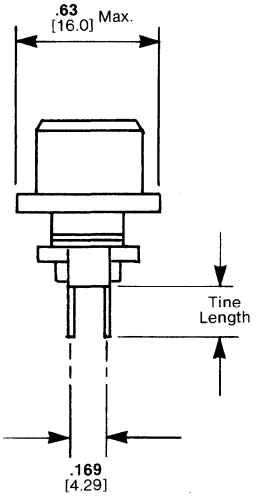
Shielded Vertical Mount Connectors



Screw Lock



Bail Lock

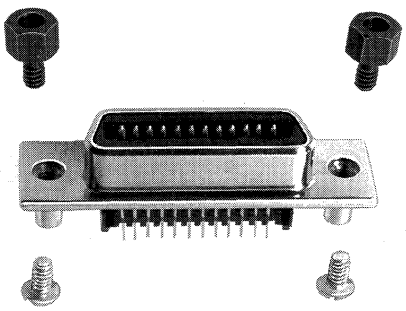


No. of Positions	Tine Length	Part Numbers		
		Screw Lock		Bail Lock
		6-32 Hole	4-40 Hole	4-40 Hole
24	.115 2.92	554501-1[3]	—	—
36	.215 5.46	—	—	555757-2[4] 554145-4 557576-1[5]
50	.115 2.92	—	—	554216-3[2]
	.215 .546	—	554217-4[1]	—

[1]SCSI applicable with use of Bail Lock Hardware Kit **Part No. 554818-2**.
[2]SCSI applicable.
[3]Can be used with Interface Bus Applications per IEEE-488.
[4]Low-profile, stamped shield.
[5]No "boss" on shield.

Shielded Vertical Mount Connector Hardware Kits

Only fastening hardware supplied, other items shown for reference purposes.



Screw Lock Hardware Kit
Part No. 554043-2

Metric Screw Lock Hardware Kit
per IEEE-488 Application
Part No. 554858-1

SOURCE: Catalog 82008

Specifications subject to change.
1-800-522-6752
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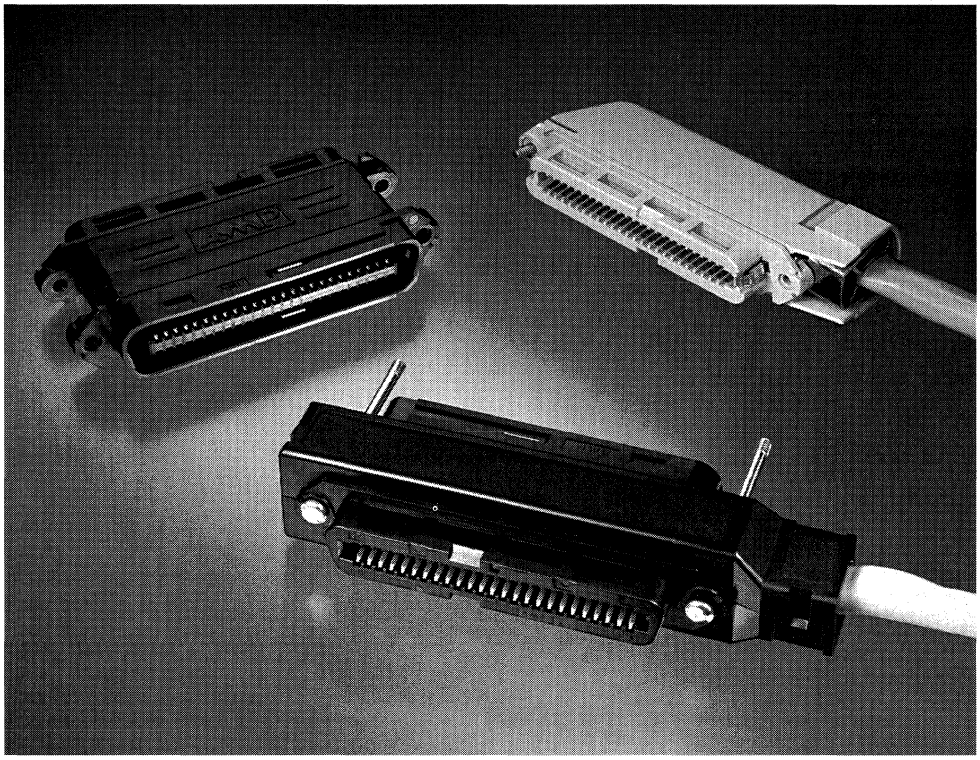
Special Application Connectors

IDC Connectors for Special Application



The CHAMP Connector Systems are widely diversified and have expanded to meet not only the demands of the telecommunications industry, but also the needs of the computer markets. The CHAMP Connector product lines include not only the Standard Connectors, but a growing network of Special and Shielded CHAMP Connectors for various special applications.

All special items are illustrated on the following pages (8083 thru 8094) to assist you in selecting the proper application for your needs.

CHAMP Connector with Crimp Cable Clamp (50 Position Only)

This connector is used for the mass production of 25 Pair Cable Assemblies. The AMP CHAMPOMATOR Machine is used to terminate this style connector. The connector is also available in an Integral Latch version.

Wear Adapter (50 Position Only)

This one-piece disposable assembly saves wear on more expensive mounted test equipment and is applicable when frequent plugging/unplugging is necessary. The Wear Adapter is prewired and can be used with all connectors of similar design.

Multiple Wire Connector (50 Position Only)

This special connector is designed to terminate two unstripped conductors into one terminal position for economical half-tapping and daisy chain (bridging) applications. The panel mount receptacles are preloaded with contacts for 24 or 26 AWG [0.51 or 0.40 mm] solid wire with a maximum insulation diameter of .034 [0.86] per wire.

CHAMP Back-to-Back Connector (50 Position Only)

The 25 pair connector allows systems to grow by adding an electrical connection into an existing cable-to-cable or cable-to-panel application.The kit includes a bonded plug/receptacle assembly, two-piece cover for outer cable diameter range of .380 to .400 [9.65 to 10.16] and two pan head screws. Instruction Sheet 408-6503 describes terminating procedures with an AMP arbor frame applicator and special assembly.

Other specials available are the CHAMP IEEE-488 Cable Assemblies and Connectors in Standard and Shielded versions. The connectors are available in panel mount and pc board styles.

Methods of panel mounting the Small Computer System Interface (SCSI) 50 Position Connectors are shown on page 8094 for reference purposes.

SOURCE: Catalog 82008

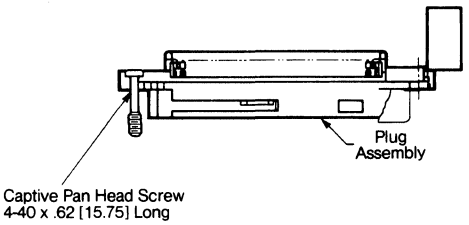
Special Application Connectors
(Continued)

IDC Connectors for Special Applications
(Continued)

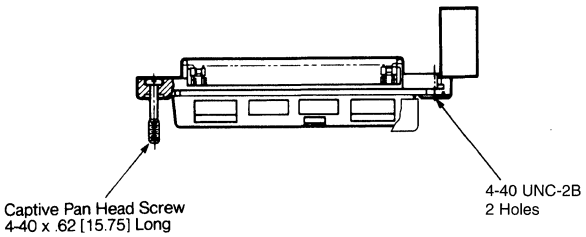
CHAMP Connector with Crimp Cable Clamp (For 50 Position Only)

Product Facts

- For factory cable assembly applications
- Provides for up to a 10% savings in time over conventional cable strain relief methods when used in mass production cable assembly operations
- May be utilized for booted cables
- Metal cable clamp may only be engaged with a special CHAMPOMATOR semi-automatic wire insertion tool
- Once cable clamp is engaged, strain relief is provided
- Maximum cable diameter .450 [11.43]
- Provided with dust covers



50 Position Plug Assembly



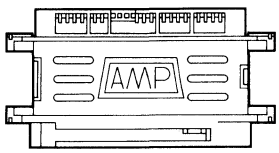
50 Position Receptacle Assembly

Note: 50 Pos. Housing Dim. (Typ.)—3.553 [90.25] L x .600 [15.24] W x 1.296 [32.92] H

Wire Size				Housing Color Dot Description	Contact Letter Code	Housing Color	Part Numbers	
Solid		7 Strand						
AWG	mm	AWG	mm²				Plug	Receptacle
24-26	0.51-0.40	24	0.20	Blue	B	Gray	553213-3	553212-3
24-26	0.51-0.40	24	0.20	Blue	B	Gray	—	554886-2[1]

[1]Integral Locking Latch.

50 Position Wear Adapter (Plug to Receptacle Assembly) Part Number 552705-1



SOURCE: Catalog 82008

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

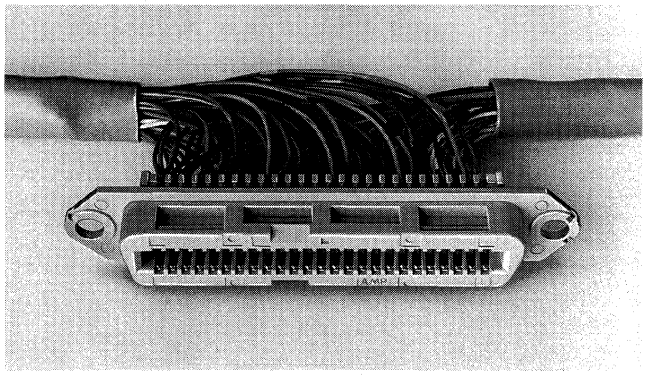
Special Application Connectors
(Continued)

Multiple Wire Connector and Back-to-Back Connector Assembly (50 Position Only)

Multiple Wire Connectors

Product Facts

- **No prestripping of wire required**
- **Positive electrical contact through redundant contact points**
- **Eliminates time-consuming soldering**
- **Standard 50 position receptacle connector configuration**
- **Terminals constructed of high strength copper alloy with gold over nickel plating in contact area**
- **Utilizes standard CHAMP Connector screw lock, bail lock and locking latch hardware**
- **Economical approach to half-tapping and daisy chain applications**



Receptacle Assembly—J Slot
Part Numbers 552827-1 (Gray) and 552827-2 (Black)
Plug Assembly—J Slot Part Number 552826-1 (Gray)

Multiple Wire Strain Relief[1]
Part Number 552851-2 (Black)

[1]Available for use with 50 position thin flange connector only.
Notes: 1. J Slot for 24 AWG [0.51 mm] solid wire only. (Pink Color Dot)
2. Max. insulation dia. .034 (0.86)

For Snap-In Panel Mount Strain Relief, see Panel Mount Connector Accessories on page 8061.

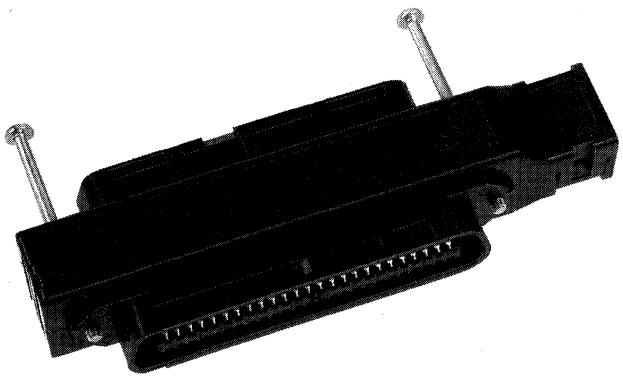
The Multiple Wire CHAMP Connector extends the unique technology of the regular CHAMP connector to provide the capability of terminating two conductors into one terminal position. Use of the Multiple Wire connector offers the labor savings of insulation displacement technology versus the conventional means of hand soldering the terminals. They are available in 50 position receptacle configurations with a molded strain relief and the necessary hardware for panel mount applications. The connector consists of a molded thermoplastic housing with receptacle contacts constructed of high strength copper alloy with gold over nickel plate.

Back-to-Back Connector Assembly

Product Facts

- **No prestripping of wire required**
- **Positive electrical contact through redundant contact points**
- **Leads can be dressed to desired configuration**
- **Terminals constructed of high strength copper alloy with gold over nickel plating**
- **Easy plug-in insertion into existing cables**

Notes:
1. Cable customer supplied.
2. Acceptable cable diameter range is .380-.400 [9.65-10.16].



Plug/Receptacle 50 Position, B-Slot Kit
Part Number 553257-1 (Cable-to-Cable Application)

Plug/Receptacle 50 Position, E-Slot Kit
Part Number 554715-1 (Cable-to-Panel Application)

The 50 Position CHAMP Back-to-Back Connector provides the ability to make an electrical connection into existing cable-to-cable and cable-to-panel applications. The male-to-female connector can be utilized as a bridging connector in central office or PBX Bussing. It also provides a readily accessible interface for test scanning, maintenance or telephone monitoring equipment.

This connector utilizes the insulation displacement technology. To terminate the connector, one half of the unstripped wires are laced through the applicator tool and mass terminated. Reversing the connector allows the mass termination of the remaining connectors.

Wire Ranges—

B-Slot—24 AWG [0.20 mm²] (7-strand) or 26 AWG [0.40 mm] (solid) and 24 AWG [0.51 mm] (solid)

E-Slot—26 AWG [0.14 mm²], 27 AWG [0.10 mm²] or 28 AWG [0.09 mm²] (7-strand)

SOURCE: Catalog 82008

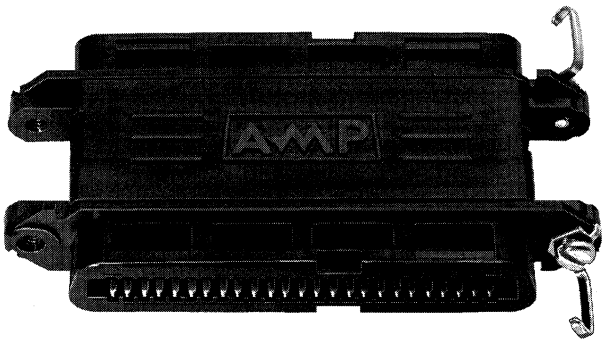
Special Application Connectors
(Continued)

Gender Menders

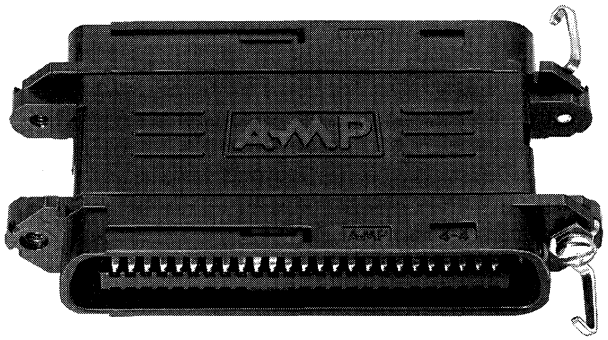
50 Position with J-Hook Hardware

Product Facts

- Kit is preassembled
- Like-numbered contacts on both connectors are electrically common
- Allows connections between plug and plug or receptacle and receptacle interfaces
- Terminals constructed of high strength copper alloy with selectively plated gold over nickel plating in contact area
- Hardware is zinc plated steel
- Housing and covers are polyphenylene black



Receptacle Assembly



Plug Assembly

Style	Part Numbers	
	With J-Hook Hardware	Without J-Hook Hardware
Receptacle	554875-1	554875-2
Plug	554876-1	554876-2

Filtered Plug/Receptacle Adapters

Part Numbers	Capacitance
93552-2	470 pF/200 Vdc
93552-3	100 pF/200 Vdc
93552-4	820 pF/200 Vdc

Note: For additional filtered connector information refer to Catalog 65696.

SOURCE: Catalog 82008

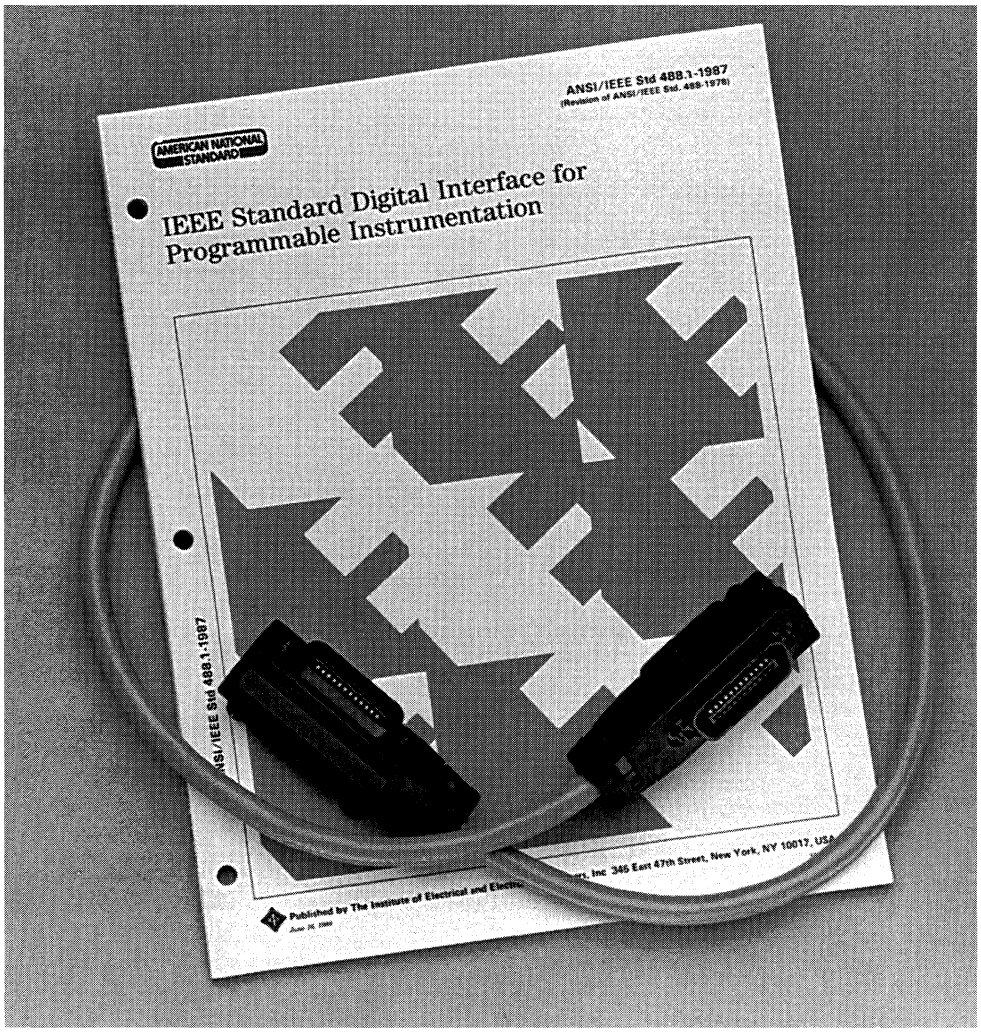
Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

Special Application Connectors
(Continued)

Connectors for Interface Bus Applications per IEEE Std 488

Product Facts

- **Preassembled and pretested CHAMP Interface Bus Cable Assemblies ready to use**
- **Interface Bus Connector Kits and associated applicator tooling**
- **Interfaces with CHAMP Panel Mount IDC Receptacle Connectors**
- **Interfaces with CHAMP Edge Mount, Vertical Mount and Right-Angle Printed Circuit Board Receptacle Connectors**
- **Metric hardware available to meet your specific assembly needs**
- **Insulation displacement technique eliminates costly wire preparation**
- **Terminates unstripped solid or stranded wire multiconductor cables and certain types of laminated cable with maximum reliability**



The CHAMP Interface Bus Cable Assembly is designed for the instrumentation industry and conforms to the applicable standard IEEE-488. The assembly includes two preassembled "back-to-back" 24 position CHAMP connectors in a plug-to-receptacle configuration.

AMP offers the advantage of either ordering these cable assemblies complete and pretested or in kit form for assembly by the customer.

In addition to cable assemblies, and kits, a comprehensive line of compatible 24 position receptacles and associated metric hardware is available for the instrumentation side.

CHAMP Cable-to-Panel IDC Connectors eliminate costly wire preparation by terminating unstripped solid or stranded wire, multiconductor cable and certain types of laminated cable. Positive electrical interconnection is enhanced as a result of redundant contact points. A wide variety of application tooling is available to suit production needs. Cable-to-Printed Circuit Board connectors are available in three styles. Each can be mounted directly to the board, thereby eliminating the need for additional hand wiring. Metric hardware, readily identified by their black finish, is available for all versions to comply with IEEE-488.

For additional information, contact AMP.

SOURCE: Catalog 82008

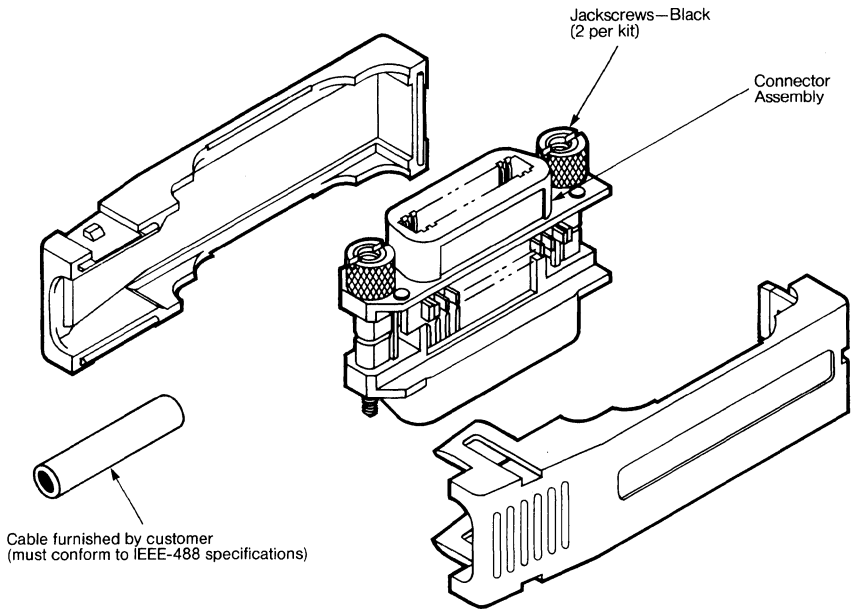
Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

Special Application Connectors
(Continued)

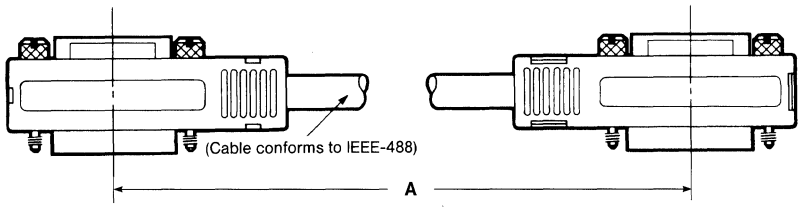
Connectors for Interface Bus Applications per IEEE Std 488
(Continued)

CHAMP 24 Position Interface Bus Connector Part No. 554815-1

Snap-on Covers Part No. 554831-1



CHAMP 24 Position Interface Bus Cable Assemblies



Dimension A		Part
ft.	m	Number
3	.914	552700-1

Note: Cable assemblies are available in special lengths. For further information, contact AMP.

SOURCE: Catalog 82008

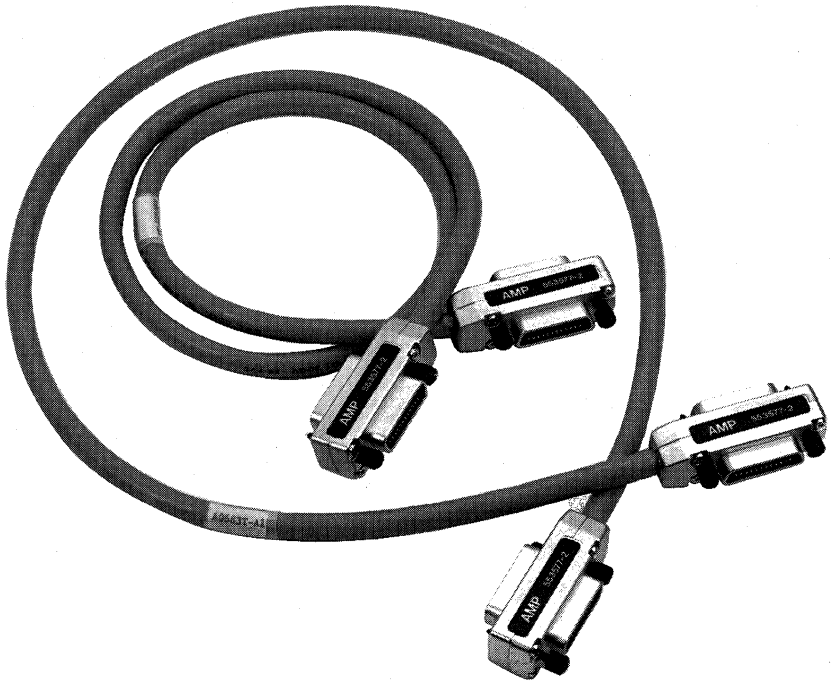
Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

Special Application Connectors
(Continued)

Shielded Cable Assemblies per IEEE Std 488

Product Facts

- Conforms to IEEE-488 specifications
- Optimum shielding effectiveness
- Extremely reliable strain relief design
- Dual braid/dual foil cable
- Fully intermateable and compatible with all other IEEE-488 interfaces
- Cable assemblies available in double-ended version in a variety of popular lengths
- Connector kits and applicator tooling also available for assembly fabrication
- Consists of two rack-and-panel type connectors designed to comply with IEEE-488 specifications
- Design includes a two-piece, die-cast metal RF shield enclosing the 24-position back-to-back CHAMP connectors
- Includes integral ground bus, where required and a shield termination and strain relief



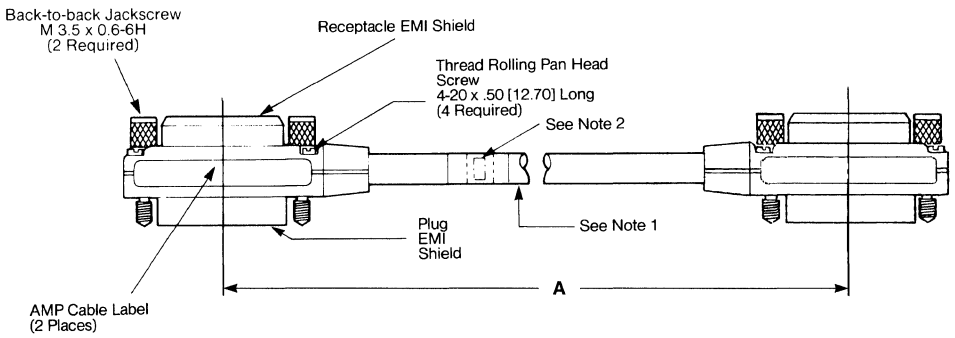
AMP Shielded CHAMP IEEE-488 Cable Assemblies consist of two rack-and-panel type connectors that are designed to comply with IEEE-488 specifications. The design includes a two-piece, die-cast metal RF shield enclosing the precommoned 24-position back-to-back CHAMP connectors, an integral ground bus, where required, a shield termination and strain relief plus twenty-four (24) 26 AWG [0.12-0.15 mm^2] stranded conductors and two (2) 24 AWG [0.2 mm^2] stranded shield drain wires. Preassembled and pretested double-ended cable assemblies are available ready to use.

For high volume users or cable assembly fabricators, connector kits with everything necessary (except the cable) to produce Shielded IEEE-488 cable assemblies are available. The basic AMP-O-LECTRIC Model "K" Terminating Machine and appropriate die set applies the ferrule to the prepped cable prior to connector termination. Upon termination, a special CHAMPOMATOR applicator module and control module is employed to terminate the cable to the preassembled, precommoned back-to-back connector inserts. This type of equipment is conducive to high volume applications.

Special Application Connectors
(Continued)

Shielded Cable Assemblies and Back-to-Back Connector Kits per IEEE Std 488

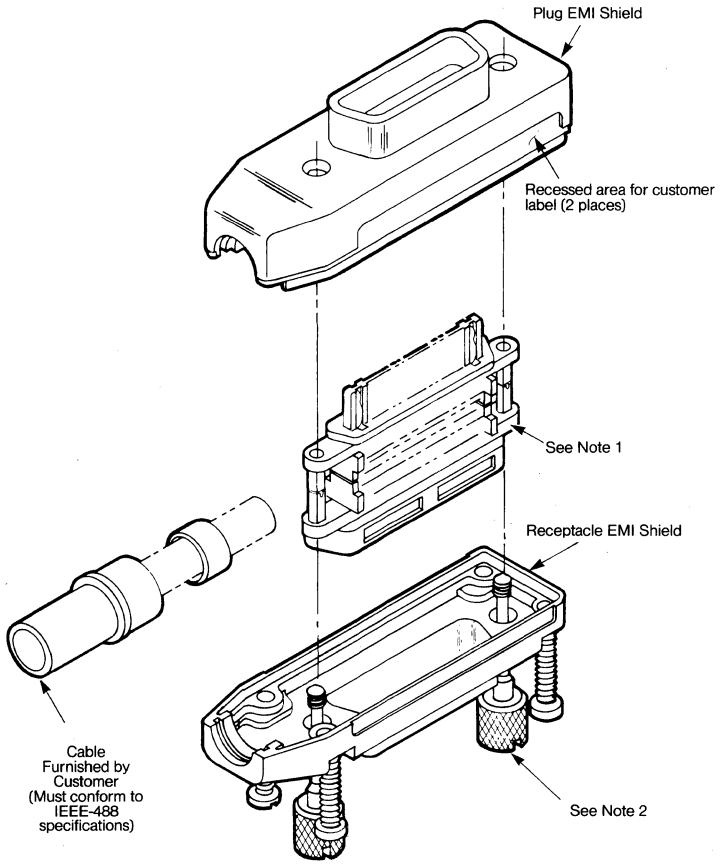
24 Position Shielded CHAMP IEEE-488 Cable Assemblies



Notes:
1. Cable (24) conductors 26 AWG [0.12-0.15 mm²], (2) 24 AWG [0.20 mm²] drain wires with double foil and braided shields.
2. Manufacturer's data code.
3. Cable assemblies are available in special lengths. For further information contact AMP.

Dimension A		Part Numbers
in.	m	
19.68	0.5	553577-1
39.37	1	553577-2
78.74	2	553577-3
118.11	3	553577-4
157.48	4	553577-5
236.22	6	553577-6
314.96	8	553577-7

Shielded CHAMP 24 Position Back-to-Back Connector Kit Part No. 553576-1



Notes:
1. Like-numbered contacts on both connectors are electrically common (1-1, 2-2, etc.).
2. Jackscrew shall be assembled from receptacle side of shield, as shown.
3. Jackscrews and EMI Shield to be assembled after cable is terminated to back-to-back assembly.

SOURCE: Catalog 82008

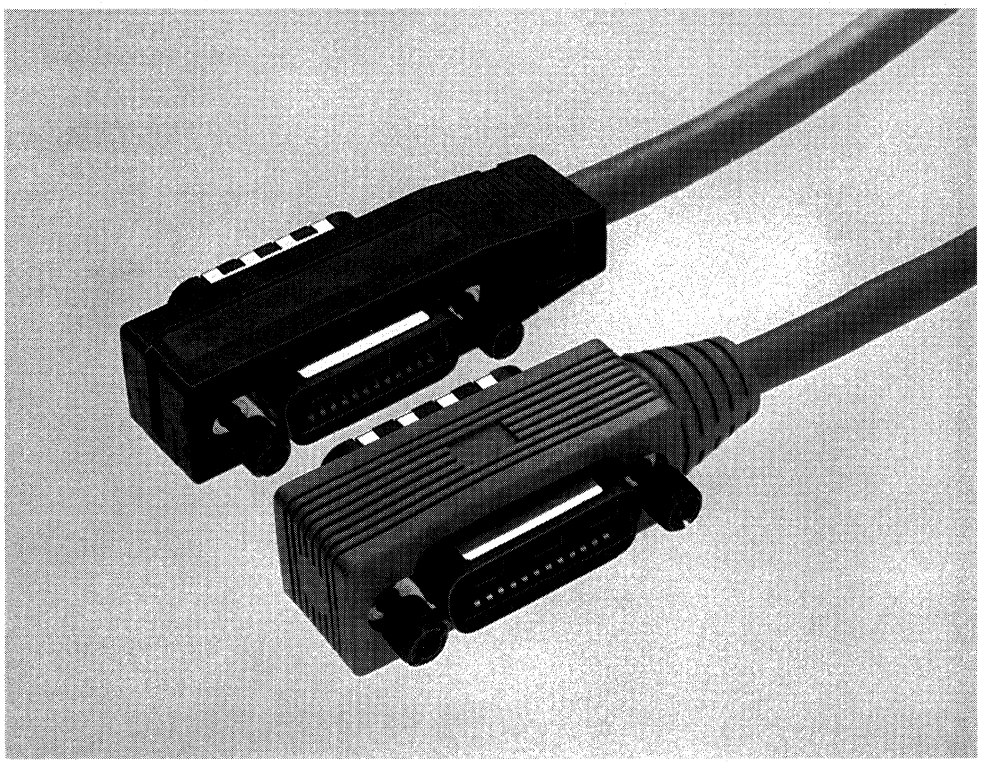
Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

Special Application Connectors
(Continued)

Shielded Back-to-Back Cable Connectors

Product Facts

- **Conforms to IEEE-488 specifications**
- **Superior shielding effectiveness**
- **Fully intermateable and compatible with all other IEEE-488 interfaces**
- **Conducive to post molding techniques**
- **Available in back-to-back configuration**
- **Design includes a two-piece, precision stamped metal shell that encloses the 24 position back-to-back connector**
- **Connector design allows shields to accept a cable range of .300 to .450 [7.62 to 11.43] diameter**
- **Acceptable wire sizes of 26, 27 and 28 AWG [0.12, 0.10 and 0.09 mm²] 7 strand**



The Shielded CHAMP Connector

Back-to-Back Cable Connector Kit is currently available in a true 24 position IEEE-488 configuration.

The IEEE-488 Kit consists of a 24 position back-to-back connector assembly, a plug shield, a receptacle shield and two jackscrews. By ordering different dash numbers of the ferrule, you may obtain the appropriate diameter inner ferrule to accommodate the particular size cable to be terminated.

A two-piece, snap-on strain relief cover kit is also available for those who do not wish to post mold the terminated assembly.

Wire termination of the back-to-back (plug-to-receptacle) connector assembly is facilitated by the unique, one-piece insulation displacement contact design. Applicator tooling is specifically designed to mass terminate unstripped wires into their respective slotted beams. Each wire is cut to length simultaneously as termination occurs, and 24 wires are terminated at the same time.

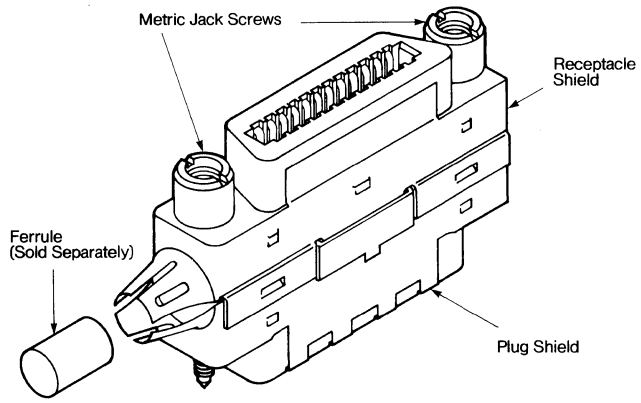
The two precision-stamped shields are then assembled over the terminated connector assembly. The spring fingers of these shield halves captivate and reliably maintain contact with the braid of the cable, previously positioned over the inner ferrule prior to connector assembly termination.

The spring fingers allow the shields to accept a cable range of .300 to .450 [7.62 to 11.43] in diameter, and due to their stored energy design, provide continuity of shield to braid regardless of temperature, shock, vibration and other external influence. Installation of the black, plated metric jackscrews in accordance with IEEE-488 specifications finalize the assembly.

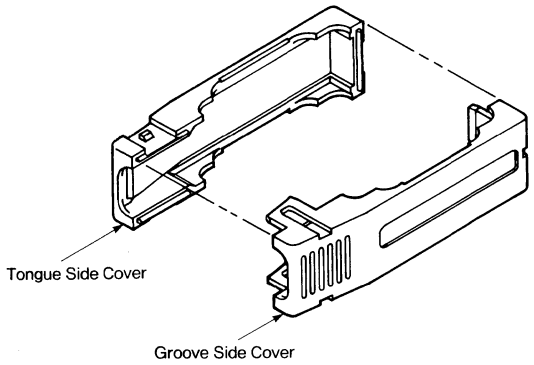
Special Application Connectors
(Continued)

Shielded Back-to-Back Cable Connectors
(Continued)

24-Position Back-to-Back Kit



24-Position Back-to-Back Cover Kit



Cable Connectors

Connector Styles	Cable Diameter Range	Post Moldable	Kit Part Number	Snap-on Cover Part Number
Back-to-Back	.300-.375 7.62-9.53	Yes	555182-1	554831-1

Inner Ferrules

Inside Diameter	Part Numbers
.300 7.62	554725-2
.350 8.89	554725-3
.400 10.16	554725-4

SOURCE: Catalog 82008

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

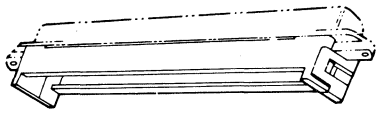
Special Application Connectors
(Continued)

Interface Bus IDC Connector Panel Mount Applications

Panel Mount Receptacle, 24 Position

Wire Size				Housing Color Dot Description	Contact Letter Code	Part Numbers (thin flange)
Solid		7-Strand				
AWG	mm	AWG	mm²			
22	0.64	22	0.40	Green	C	2-552322-1
24-26	0.51-0.40	24	0.20	Blue	B	2-552273-1
—	—	26-27-28	0.14-0.10-0.09	Yellow	E	2-552474-1

Snap-On Strain Relief, 24 Position (2 parts required per each assembly)



Low Profile
Part No. 1-552298-1

Panel Mount Metric Screw Lock Hardware Kits (one kit required per each assembly)

For Front Panel Mount
Part No. 552633-3

For Rear Panel Mount
Part No. 552633-4

SOURCE: Catalog 82008

Special Application Connectors
(Continued)

Interface Bus Pc Board Connector Applications

Edge Mount Style RE, 24 Position Receptacle Part No. 552230-1
(See Page 8074)

Vertical Mount Style RV, 24 Position Receptacle Part No. 552224-1
(See Page 8074)

Right-Angle Mount, 24 Position Receptacles

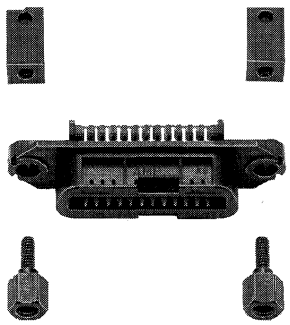
Part No. 552791-1 (Standard Orientation,
See Page 8072)

Part No. 552791-2 (Reverse Orientation,
See Page 8072)

Edge Mount Screw Lock Hardware Kits (one kit required per assembly)

Metric Standoff Stud
Part No. 552634-3

Metric Standoff Stud for Rear Panel Mount
Part No. 552634-4



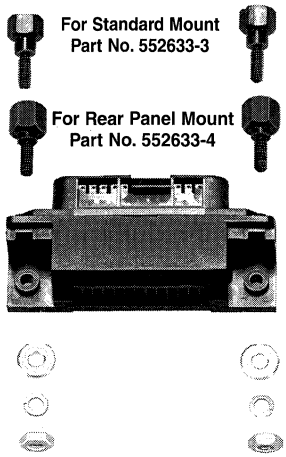
For Standard Mount
Part No. 552674-1

Vertical Mount Screw Lock Hardware Kits (one kit required per assembly)

Order all hardware separately

Right-Angle Mount Hardware Kit

Only fastening hardware supplied, other items shown for reference purposes

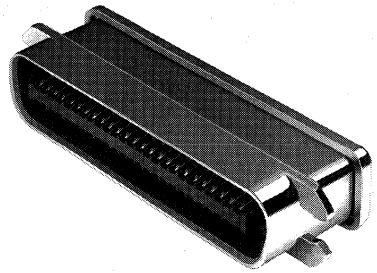


Special Application Connectors
(Continued)

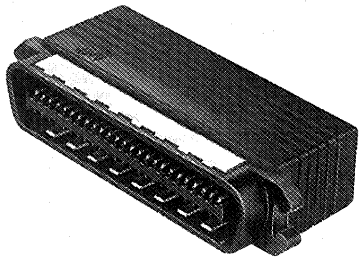
CHAMP SCSI Terminator Connectors

Product Facts

- **Dead-end configuration for terminating an open port**
- **Compatible with SCSI Specification ANSI X3.131-1986**
- **Single-ended and differential versions**
- **Laser-trimmed screened resistor network for close resistance tolerances of ±5%**
- **Soldered connection points for reliability**
- **Bail lock plug connector for SCSI mating compatibility**



Die-Cast Connector



Post Molded Connector

CHAMP SCSI Terminator connectors provide a dead-end impedance-matching termination of the Small Computer System Interface (SCSI). The connectors conform to all applicable requirements of ANSI X3.131-1986. Versions are available for either single-ended or differential transmission modes.

These 50-position plug connectors use an integral screened thick-film resistor network on an alumina substrate. The network is laser trimmed to provide a tight tolerance of ±5% on resistance values. The result is excellent stability over the entire SCSI operating range.

The rugged die-cast zinc body or post molded assembly combines durability, shielding effectiveness and handy gripping surfaces for easy use. The nickel plating provides an attractive tarnish-resistant finish. The connectors use a tough, thermoplastic insert and gold over nickel plated phosphor bronze contacts.

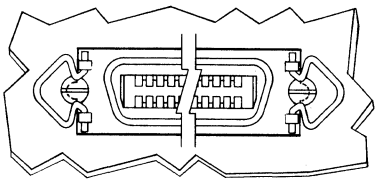
The connector's slots are compatible with SCSI-specified bail lock hardware.

Configuration	Part No.
Die Cast Single-Ended	868875-1
Die Cast Differential	868875-2
Post Molded Single-Ended	556578-1
Post Molded Differential	555867-1

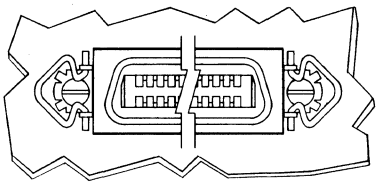
Note: Order customer drawing for Single-Ended and Differential Schematics.

Connector Panel Cutouts for SCSI Applications

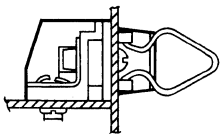
Methods of panel mounting the Small Computer System Interface (SCSI) 50 Position Connectors.



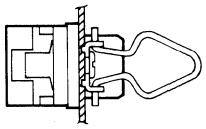
Connector Position from Front of Panel



Connector Position from Front of Panel



SCSI Mounted Preassembled Screw Lock Connector



SCSI Mounted Preassembled Bail Lock Connector

Loose Piece Shielded Connectors (Rear Mount of Bails)[1]

Connector Type	Applicable Base Part Number
CHAMP Latch	554350[2]

Loose Piece Shielded Connectors (Front Mount of Bails)

Connector Type	Applicable Base Part Number
CHAMP Latch	554350[2]

Preassembled Shielded Bail Lock Connectors[1]

CHAMP Latch	554902
Vertical Mount	554216
Right-Angle	554901 555057

Preassembled Shielded Screw Lock Connectors (Front Mount of Bail Clips by Use of Hardware Kit No. 554818-2)

CHAMP Latch	554436
Right-Angle	553813
Vertical Mount	554217

[1]Panel thickness: .062 [1.57] max.
[2]For SCSI mount of bails, two 4-40 screws .750 [19.05] long and two 4-40 hex nuts are required.

SOURCE: Catalog 82008

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

Miscellaneous Mounting Hardware

Standoff Mounting Screw
Part No. 552657-1

Standoff Mounting Studs

Screw Size	Part Number
4-40	229995-1
	229995-2
	552113-1
M 3.5 x .6	552634-3
	552634-4
	552634-7
	552634-9

Note: Thread Size 4-40

Standoff Mounting Stud
Part No. 554043-1
(Screw Size M 3.5 x .6, Thread Size 6-32)

Metric Jackscrew per IEEE-488
Part No. 553489-1
(Screw Size M 3.5 x .6)

Standoff Shoulder Screw

Part Number
552102-7
552102-2
552102-1

Captive Pan Head Screw

Part Number
229911-1
229911-2
229911-3
229996-2
229996-3

4-40 Hex Nut
Part No. 21068-4

No. 4 Spring Lock Washer
Part No. 21074-2

Mounting Bracket
Part No. 552656-1

J-Hook Latch for Panel Mount Receptacle to 90° Cable Exit Plug
Part No. 552655-1

SOURCE: Catalog 82008

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

LGH High Voltage Lead Assemblies and Receptacles

LGH leads and receptacles find wide application where high voltage is used in hostile environments. LGH leads and receptacles are lightweight, miniature, extremely reliable and they maintain peak performance under high temperature, high altitude applications. They are equally applicable to low temperature, low altitude devices. **For custom-made assemblies, contact AMP.**

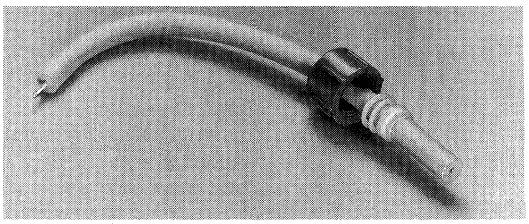
Voltage Ratings (10 A load)

The voltage ratings tabulated here and noted elsewhere apply to LGH molded-end lead assemblies properly mated with appropriate LGH receptacles, which are properly potted or otherwise protected on the back end.

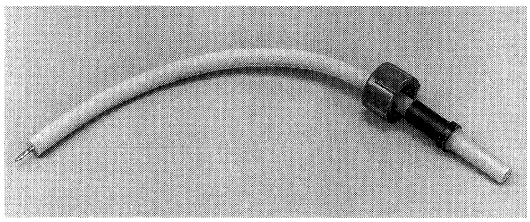
LGH Series	Mating Length/Depth in.	mm	Normal Capacitance pF/ft.	pF/m	Operating Voltage* Kilovolts DC	3 Min. Hipot** Kilovolts DC
LGH ½I	**.53**	[13.46]	55	180	10	15
LGH ½LI	**.89**	[22.61]	55	180	15	23
LGH 1I	**.88**	[22.35]	35	115	20	30
LGH 1LI	**1.69**	[42.93]	35	115	25	38
LGH 2I	**1.44**	[36.58]	28	144	30	45
LGH 3I	**1.81**	[45.97]	35	115	40	55
LGH 4I	**2.00**	[50.80]	28	144	50	60

*Sea level to 70,000 ft. [21,336 m], -55°C to +125°C [-67°F to +257°F].
**Sea level at 25°C (77°F).

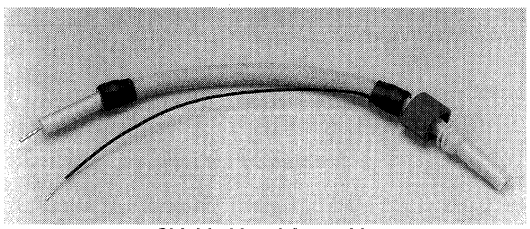
LGH Lead Assemblies are manufactured with a silicone rubber end having a specified mating length (see above table) molded onto a 16 AWG white silicone rubber wire. These assemblies provide extreme reliability and safety for high voltage applications in severe environments



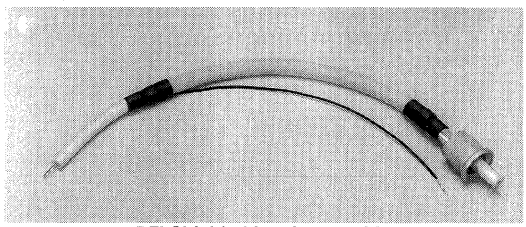
Single End Lead Assembly



Single End Lead Assembly with Positive Stop Ferrule

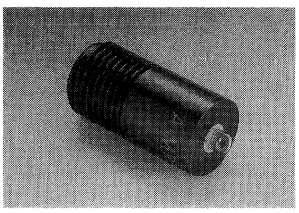


Shielded Lead Assembly

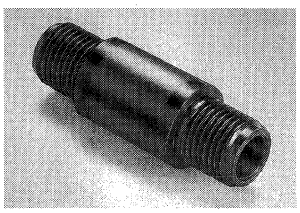


RFI Shielded Lead Assembly

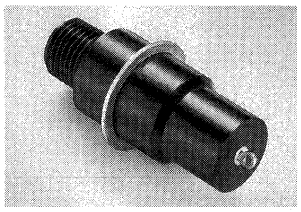
LGH Receptacles are manufactured in molded glass epoxy having a specified mating depth (see above table). When used with LGH lead assemblies they offer the ultimate in dependability, even under most hostile environmental conditions.



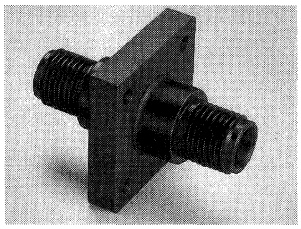
Glass-epoxy receptacle for encapsulated units



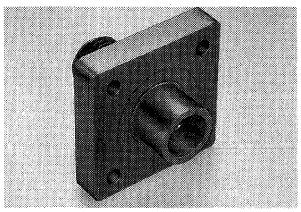
Glass-epoxy receptacle for splice application



Hermetically sealed, glass-epoxy receptacle for canned units



Glass-epoxy, flanged receptacle for bulkhead splice applications



Glass-epoxy, flanged receptacle for bulkhead applications

SOURCE: Catalog 82024

Specifications subject to change.

1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

LGH ½I Lead Assemblies

Description	Assembly Length inches	mm	Part Number
Single End Lead Assemblies	6	[152.4]	2-830611-1
	12	[304.8]	4-830611-8
	18	[457.2]	2-830611-5
	24	[609.6]	830611-1
	36	[914.4]	1-830611-0
	48	[1219.2]	2-830611-3
Double End Lead Assemblies	6	[152.4]	830612-3
	12	[304.8]	830612-2
	18	[457.2]	830612-8
	24	[609.6]	830612-1
	36	[914.4]	2-830612-6
	48	[1219.2]	830612-4
Single End Lead Assemblies (with Positive Stop Ferrules)	6	[152.4]	862545-1
	12	[304.8]	862545-4
	18	[457.2]	862545-6
	24	[609.6]	862545-8
	36	[914.4]	1-862545-8
	48	[1219.2]	1-862545-1
Double End Lead Assemblies (with Positive Stop Ferrules)	6	[152.4]	862546-1
	12	[304.8]	862546-4
	18	[457.2]	862546-6
	24	[609.6]	862546-8
	36	[914.4]	1-862546-0
	48	[1219.2]	1-862546-5
Shielded Single End Lead Assemblies (with Ground Lead)	12	[304.8]	846985-9
	18	[457.2]	2-846985-2
	24	[609.6]	2-846985-3
	36	[914.4]	1-846985-8
Shielded Double End Lead Assemblies (with Ground Leads)	18	[457.2]	2-858885-7
	24	[609.6]	858885-4
	36	[914.4]	2-858885-5
	48	[1219.2]	858885-6
RFI Shielded Single End Lead Assemblies*	12	[304.8]	861807-1
	24	[609.6]	861807-7
	36	[914.4]	861807-9
RFI Shielded Double End Lead Assemblies*	36	[914.4]	1-861808-2

* These RFI Shielded Lead Assemblies mate with Receptacle **Part No. 861252-1.**

LGH ½I Receptacles

Description	Part Number
Flanged, for hermetic seal	861252-1*
Flanged, bolt mount	830395-1
For encapsulated units	830178-1
Bolt-mount, feed-through	830174-1
Splice	830177-1
T Connector	849418-1

*Mates with RFI Shielded Lead Assemblies above.
Notes: 1. All Receptacles feature 5/16-32 UNEF thread.
2. Receptacles available wtih gold plated contacts.

LGH ½LI Lead Assemblies

Description	Assembly Length inches	mm	Part Number
Single End Lead Assemblies	6	[152.4]	1-830613-0
	12	[304.8]	830613-2
	18	[457.2]	1-830613-2
	24	[609.6]	830613-1
	36	[914.4]	830613-7
	48	[1219.2]	1-830613-4
Double End Lead Assemblies	6	[152.4]	1-830614-5
	12	[304.8]	830614-2
	18	[457.2]	830614-3
	24	[609.6]	830614-1
	36	[914.4]	1-830614-6
	48	[1219.2]	2-830614-5
Single End Lead Assemblies (with Positive Stop Ferrules)	6	[152.4]	862547-1
	12	[304.8]	862547-4
	18	[457.2]	862547-6
	24	[609.6]	862547-8
	36	[914.4]	862547-9
	48	[1219.2]	1-862547-9
Double End Lead Assemblies (with Positive Stop Ferrules)	6	[152.4]	862548-1
	12	[304.8]	862548-4
	18	[457.2]	862548-6
	24	[609.6]	862548-8
	36	[914.4]	1-862548-6
	48	[1219.2]	1-862548-4
Shielded Single End Lead Assemblies	12	[304.8]	858886-2†
	18	[457.2]	1-858886-4
	24	[609.6]	1-858886-8
	36	[914.4]	858886-1△
			858886-6†
Shielded Double End Lead Assemblies	48	[1219.2]	1-858945-4
RFI Shielded Single End Lead Assemblies*	12	[304.8]	861809-1
RFI Shielded Double End Lead Assemblies*	12	[304.8]	861810-1

* These RFI Shielded Lead Assemblies mate with Receptacle **Part No. 861253-1**.
△ One ground lead, pigtail end only.
† One ground lead, terminated end only.

LGH ½ LI Receptacles

Description	Part Number
Flanged, for hermetic seal	861253-1*
Flanged, bolt mount	858857-1
For encapsulated units	858855-1
Bolt-mount, feed-through	858856-1
Splice	858082-1
T Connector	850736-1

* Mates with RFI Shielded Lead Assemblies above.
Notes: 1. All Receptacles feature 5/16-32 UNEF thread.
2. Receptacles available with gold plated contacts.

SOURCE: Catalog 82024

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

LGH 1I Lead Assemblies

Description	Assembly Length		Part Numbers			
	inches	mm	Polycarbonate Cap	Glass-Filled Polyester Cap	Glass Epoxy Cap	Metal Cap
Single End Lead Assemblies	6	[152.4]	837655-7	—	—	—
	12	[304.8]	1-837655-1	1-863701-1	—	—
	18	[457.2]	1-837655-0	1-863701-0	—	—
	24	[609.6]	837655-8	863701-8	—	—
	36	[914.4]	837655-5	863701-5	—	—
	48	[1219.2]	1-837655-3	1-863701-3	—	—
Double End Lead Assemblies	6	[152.4]	—	—	830126-2	—
	12	[304.8]	1-830126-3	1-863702-3	—	—
	18	[457.2]	1-830126-2	—	—	—
	24	[609.6]	1-830126-6	—	—	—
	36	[914.4]	1-830126-7	1-863702-7	—	—
	48	[1219.2]	2-830126-1	2-863702-1	—	—
Single End Lead Assemblies (with Positive Stop Ferrules)	6	[152.4]	862549-1	863703-1	—	—
	12	[304.8]	862549-4	863703-4	—	—
	18	[457.2]	862549-6	863703-6	—	—
	24	[609.6]	862549-8	863703-8	—	—
	36	[914.4]	862549-9	863703-9	—	—
Double End Lead Assemblies (with Positive Stop Ferrules)	6	[152.4]	862550-1	—	—	—
	12	[304.8]	862550-4	—	—	—
	18	[457.2]	862550-6	—	—	—
	24	[609.6]	862550-8	—	—	—
	36	[914.4]	862550-9	—	—	—
	48	[1219.2]	1-862550-3	—	—	
Shielded Single End Lead Assemblies	18	[457.2]	—	—	849103-5	—
	24	[609.6]	—	—	849103-1†	
	36	[914.4]	—	—	849099-4	—
	48	[1219.2]	—	—	1-849103-9	—
Shielded Double End Lead Assemblies	18	[457.2]	—	—	1-849104-5	—
	36	[914.4]	—	—	1-849104-7	—
					1-849104-9**	—
	48	[1219.2]	—	—	849104-3	—
RFI Shielded Double End Lead Assemblies*	12	[304.8]	—	—	—	861812-1

*These RFI Shielded Lead Assemblies mate with Receptacle **Part No. 861254-1**.
**Two ground leads, 6 [152.4] each.
†One ground lead, terminated end only.

LGH 1I Lead Assemblies
(Continued)

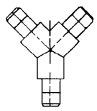
LGH 1I Receptacles

Description	Part Number
Flanged, for hermetic seal	861254-1*
Flanged, bolt mount	858827-1
For encapsulated units	834333-2
For encapsulated units (with recessed terminal)	849610-3
Bolt-mount, feed-through	846793-1
Splice	830149-1
T-Connector	836674-1

*Mates wtih RFI Shielded Lead Assemblies on preceding page.

LGH 1I L-Shape Receptacles

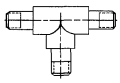
Description	Pin Plating	Part Number
Splice	Tin	849662-1
Splice, screw mount	Tin	862406-1
For encapsulated units	Tin	849668-1
	Gold	849668-2

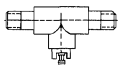

Style A

Style B

LGH 1I Y-Shape Receptacles

Style	Description	Pin Plating	Part Number
A	Splice	Tin	849693-1
B	For encapsulated units	Tin	849694-1
		Gold	849694-2


Style D


Style E

LGH 1I T-Shape Receptacles

Style	Description	Pin Plating	Part Number
D	Splice	Tin	849671-1
		Gold	849671-2
E	For encapsulated units	Tin	849682-1

Notes: 1. All Receptacles feature 1/2-20 UNF thread.
2. Receptacles available with gold plated contacts.

LGH 1LI Lead Assemblies

Description	Assembly Length inches	Assembly Length mm	Part Numbers Polycarbonate Cap	Glass-Filled Polyester Cap	Glass Expoxy Cap	Metal Cap
Single End Lead Assemblies	6	[152.4]	2-830637-1	—	—	—
	12	[304.8]	1-830637-2	1-863705-2	—	—
	18	[457.2]	1-830637-3	—	—	—
	24	[609.6]	2-830637-8	2-863705-8	—	—
	36	[914.4]	830637-5	863705-5	—	—
	48	[1219.2]	2-830637-4	—	—	—
Double End Lead Assemblies	6	[152.4]	—	—	830638-2	—
	12	[304.8]	1-830638-5	1-863706-5	—	—
	18	[457.2]	2-830638-0	—	—	—
	24	[609.6]	—	863706-9	—	—
	36	[914.4]	830638-6	—	—	—
	48	[1219.2]	1-830638-9	—	—	—
Single End Lead Assemblies (with Positive Stop Ferrules)	6	[152.4]	862551-1	—	—	—
	12	[304.8]	862551-4	—	—	—
	18	[457.2]	862551-6	863707-6	—	—
	24	[609.6]	862551-8	863707-8	—	—
	36	[914.4]	—	1-863707-5	—	—
	48	[1219.2]	—	1-863707-2	—	—
Double End Lead Assemblies (with Positive Stop Ferrules)	12	[304.8]	862552-4	—	—	—
	18	[457.2]	862552-6	—	—	—
	24	[609.6]	862552-8	—	—	—
	36	[914.4]	1-862552-3	—	—	—
	48	[1219.2]	1-862552-0	—	—	—
Shielded Single End Lead Assemblies	18	[457.2]	—	—	2-846938-0	—
	24	[609.6]	—	—	2-846938-1	—
	36	[914.4]	—	—	1-846938-6††	—
	48	[1219.2]	—	—	846938-8†	—
Shielded Double End Lead Assemblies	12	[304.8]	—	—	849616-7	—
	36	[914.4]	—	—	1-849616-0**	—
	60	[1524]	—	—	2-849616-2**	—
RFI Shielded Single End Lead Assemblies*	12	[304.8]	—	—	—	861813-1
RFI Shielded Double End Lead Assemblies*	12	[304.8]	—	—	—	861814-1
	24	[609.6]	—	—	—	2-861814-1
	48	[1219.2]	—	—	—	1-861814-6

*These RFI Shielded Lead Assemblies mate with Receptacle **Part No. 861255-1.**
**Two equal length ground leads.
†One ground lead, pigtail end only.
††One ground lead, terminated end only.

LGH 1LI Receptacles

Description	Part Number
Flanged, for hermetic seal	861255-1*
Flanged, bolt mount	846814-1
For encapsulated units (with recessed terminal)	859058-3
For encapsulated units	858868-1
Bolt-mount, feed-through	858873-1
Splice	858030-1
T Connector	830699-1

* Mates with RFI Shielded Lead Assemblies above.
Note: Receptacles available with gold plated contacts.

LGH 2I Lead Assemblies

Description	Assembly Length inches	Assembly Length mm	Part Number
Single End Lead Assemblies	6	[152.4]	1-839564-8
	12	[304.8]	839564-1
	18	[457.2]	2-839564-9
	24	[609.6]	839564-2
	36	[914.4]	1-839564-9
	48	[1219.2]	1-839564-3
Double End Lead Assemblies	8	[203.2]	1-839565-3
	12	[304.8]	839565-1
	18	[457.2]	2-839565-9
	24	[609.6]	839565-9
	36	[914.4]	2-839565-5
	48	[1219.2]	839565-6
Shielded Single End Lead Assemblies	12	[304.8]	849371-2
Shielded Double End Lead Assemblies	36	[914.4]	1-848075-6
	48	[1219.2]	2-848075-2**
RFI Shielded Single End Lead Assemblies*	24	[609.6]	867447-2
RFI Shielded Double End Lead Assemblies*	12	[304.8]	867448-1

* These RFI Shielded Lead Assemblies mate with Receptacle **Part No. 861256-1**.
**Two ground leads, 6 [152.4] each.

LGH 2I Receptacles

Description	Part Number
Flanged, for hermetic seal	861256-1*
Flanged, bolt mount	850910-1
For encapsulated units	1-849587-1
For encapsulated units (with recessed terminal)	849588-1
Bolt-mount, feed-through	850735-1
Splice	850555-1

*Mates wtih RFI Shielded Lead Assemblies above.
Notes: 1. All Receptacles feature 3/4-16 UNF thread.
2. Receptacles available with gold plated contacts.

LGH 3I Lead Assemblies

Description	Assembly Length inches	Assembly Length mm	Part Number
Single End Lead Assemblies	6	[152.4]	837975-6
	12	[304.8]	837975-8
	18	[457.2]	837975-3
	24	[609.6]	1-837975-6
	36	[914.4]	837975-2
	48	[1219.2]	837975-9
Double End Lead Assemblies	12	[304.8]	830649-1
	18	[457.2]	830649-3
	24	[609.6]	1-830649-0
	36	[914.4]	830649-2
	48	[1219.2]	830649-6
Shielded Single End Lead Assemblies	18	[457.2]	848076-5
	48	[1219.2]	848076-3
Shielded Double End Lead Assemblies	48	[1219.2]	848077-3

LGH 3I Receptacles

Description	Part Number
Flanged, for hermetic seal	861257-1
Flanged, bolt mount	850911-1
For encapsulated units	849587-9
For encapsulated units (with recessed terminal)	849588-3
Bolt-mount, feed-through	850909-1
Splice	850908-1
T-Connector	860708-1

Notes: 1. All Receptacles feature 3/4-16 UNF thread.
2. Receptacles available with gold plated contacts.

SOURCE: Catalog 82024

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

LGH 4I Lead Assemblies

Description	Assembly Length inches	Assembly Length mm	Part Number
Single End Lead Assemblies	**6**	[152.4]	1-846290-7
	12	[304.8]	846290-1
	18	[457.2]	1-846290-6
	24	[609.6]	846290-3
	36	[914.4]	846290-6
	48	[1219.2]	846290-4
Double End Lead Assemblies	**12**	[304.8]	846291-1
	18	[457.2]	1-846291-1
	24	[609.6]	846291-3
	36	[914.4]	846291-4
Shielded Single End Lead Assemblies	**48**	[1219.2]	848078-2
Shielded Double End Lead Assemblies	**12**	[304.8]	846950-7**
	48	[1219.2]	1-846950-0
RFI Shielded Single End Lead Assemblies*	**48**	[1219.2]	865089-8
RFI Shielded Double End Lead Assemblies*	**12**	[304.8]	865090-4
	24	[609.6]	865090-1
	36	[914.4]	865090-5

*These RFI Shielded Lead Assemblies mate with Receptacle **Part No. 861258-1.**
**Ground Lead Length—24 [609.6]

LGH 4I Receptacles

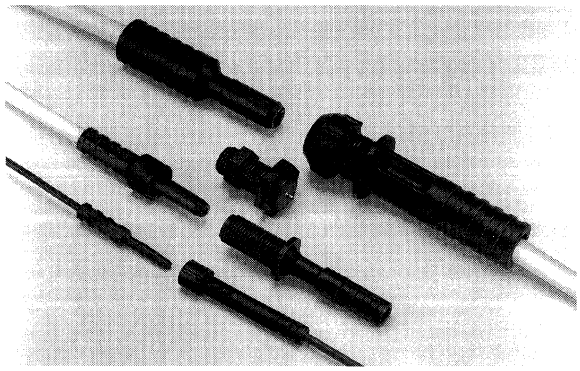
Description	Part Number
Flanged, for hermetic seal	861258-1*
Flanged, bolt mount	850912-1
For encapsulated units	836567-1
For encapsulated units (with recessed terminal)	849853-1
Bolt-mount, feed-through	840468-1
Splice	840467-1
T-Connector	850554-1

* Mates with RFI Shielded Lead Assemblies above.
Notes: 1. All Receptacles feature 1-14 UNS thread.
2. Receptacles available with gold plated contacts.

Commercial Single Line Connectors

Product Facts

- **All parts made of UL Recognized, 94V-0 rated, plastic material**
- **Designed to exceed minimum creepage and clearance for specified voltages per applicable international specifications**
- **Available with or without leads**
- **Maximum flexibility of application through elimination of predetermined lead lengths**
- **Machine applied terminations provide for lowest applied cost**



10 KVDC Connectors
Voltage: 10 KVDC
Current: 5 amperes, continuous, rms

20 KVDC Connectors
Voltage: 8 KVAC, rms, 60 Hz; 20 KVDC
Current: 7.5 amperes, continuous, rms

30 KVDC Connectors
Voltage: 12 KVAC, rms, 60 Hz; 30 KVDC
Current: 35 amperes, continuous, rms

Voltage Rating	Description	Wire Size AWG	Wire Size mm²	Max. Ins. Dia.	Contact Part Number	Kit Part Number	Tooling Part No. Hand Tool	Tooling Part No. Extraction Tool
10 KVDC	Plug Kits*	20-24	[0.2-0.6]	**.105** 2.66	Type XI Socket	867157-1	90260-1	91038-3
				.160 4.06	Type XI Socket	867157-2	90260-1	91038-3
	Receptacle Kit*	20-24	[0.2-0.6]	**.160** 4.06	Type XI Pin	867156-1	90260-1	91038-3
20 KVDC	Plug Kits*	22-20	[0.3-0.6]	**.185** 4.7	66399-1	861610-1	90067-5	861751-1
		18-16	[0.8-1.4]		66101-2	861610-3	90067-4	861751-1
		—	—		none	861610-5	—	861751-1
		22-20	[0.3-0.6]	**.302** 7.67	66399-1	861610-4	90067-5	861751-1
		18-16	[0.8-1.4]		66101-2	861610-2	90067-4	861751-1
		—	—		none	861610-6	—	861751-1
	Free-Hanging Receptacle Kits*	22-20	[0.3-0.6]	**.185** 4.7	66400-1	861753-1	90067-5	861751-1
		18-16	[0.8-1.4]		66099-2	861753-2	90067-4	861751-1
		22-20	[0.3-0.6]	**.302** 7.67	66400-1	861753-4	90067-5	861751-1
		18-16	[0.8-1.4]		66099-2	861753-2	90067-4	861751-1
	Bulkhead-Mounted Receptacle Kits*	—	—	—	none	861611-1	—	861751-1
		—	—	—	60789-1 (Straight)**	861611-2	90204-4	861751-1
		—	—	—	61276-2 (Right-Angle)**	861611-3	90204-4	861751-1
	Bulkhead-Mounted Receptacle Kits* (with Rear Insulation Collar)	22-20	[0.3-0.6]	**.185** 4.7	66400-1	862197-1	90067-5	861751-1
		18-16	[0.8-1.4]		66099-2	862197-3	90067-4	861751-1
		—	—		none	862197-5	—	861751-1
		22-20	[0.3-0.6]	**.302** 7.67	66400-1	862197-4	90067-5	861751-1
		18-16	[0.8-1.4]		66099-2	862197-2	90067-4	861751-1
		—	—		none	862197-6	—	861751-1
30 KVDC	Plug Kits*	10-8	[5-8]	**.50** 12.7	66741-8 (Type XII)	863103-1	90384-1	863558-1
		14-12	[2-3]		66740-8 (Type XII)	863103-2	90382-2	863558-1
		16	[1.4]		66740-8 (Type XII)	863103-3	90145-2	863558-1
	Free Hanging Receptacle Kits*	10-8	[5-8]	**.51** 12.95	66259-1 (Type XII)	863104-1	90384-1	863558-1
		16	[1.4]		66261-1 (Type XII)	863104-3	90145-2	863558-1
	Bulkhead-Mounted Receptacle Kits*	10-8	[5-8]	**.50** 12.7	66259-1 (Type XII)	863350-1	90384-1	863558-1
		14-12	[2-3]		66261-1 (Type XII)	863350-2	90145-1	863558-1
		16	[1.4]		66261-1 (Type XII)	863350-3	90145-2	863558-1

* Contact included with kit
** Crimp-on Contacts

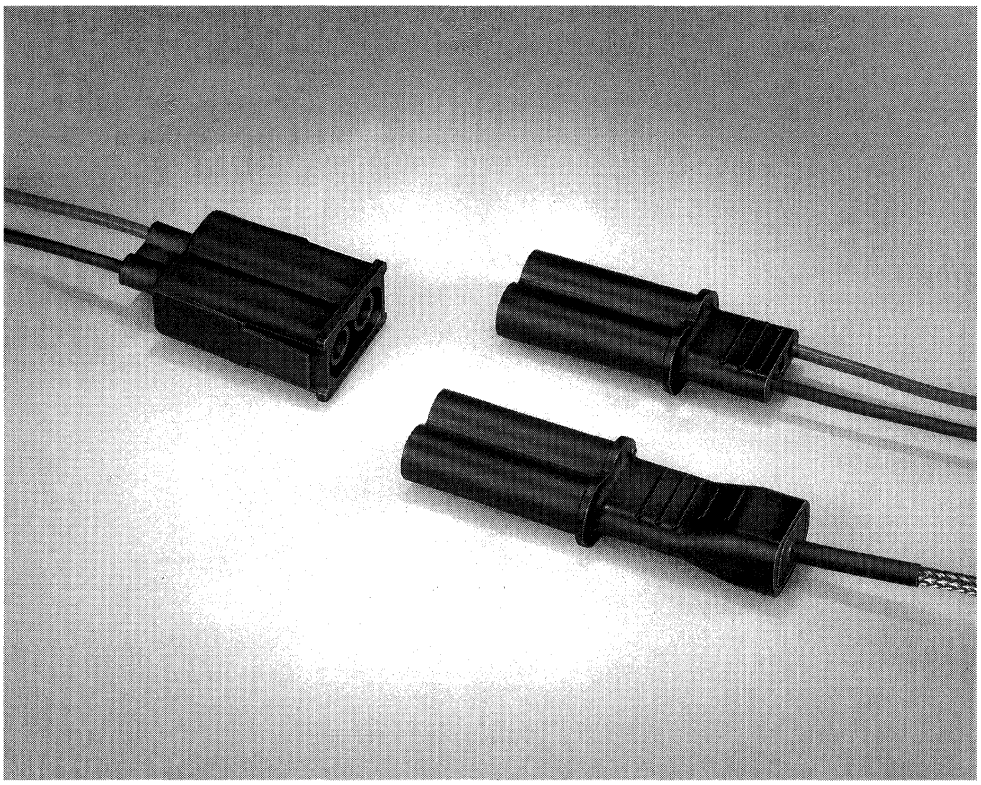
SOURCE: Catalog 82024

Specifications subject to change.

1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

Two-Position Connectors 10 KVDC



Product Facts

- UL Recognized 94V-0 rated glass-filled polyester housing
- Standard housing color is black—other colors available
- Operates up to 10 KVDC
- Will withstand a 15 KVDC hipot 3-minute test
- Safe handling of high voltage—deeply recessed contacts and staggered pins
- Lightweight, compact design
- Preassembled connectors furnished with attached leads of virtually any color/length combination
- Connector kits for shielded and unshielded applications include plug, receptacle and contacts
- Crimp, snap-in contacts; pin diameter .062 [1.57]
- Snap-in panel mount receptacle housings—no mounting hardware required
- Temperature range: -15°C to +85°C [5°F to 190°F]

Note: Receptacle Housing Dim. (Typ.)—1.25 [31.75] L x 2.36 [59.94] W x .81 [20.57] H

Connector Type	Bulkhead Thickness	Wire Range (AWG)	Insulation Diameter (Max.)	Plug Part Nos.				Receptacle Part No			Kit Part Nos. (Includes Plug, Receptacle and Contacts)
				Assembly	Housing	Pin (Type III+) (2 required)	End Plate	Assembly	Housing	Socket (Type III+) (2 required)	
Shielded	.030 .762	18-16 [0.8-1.4]	.125 [3.18]	862528-1	862498-1	66099-2	861276-1	—	—	—	—
			.200 [5.08]	862528-1	862498-1	66099-2	861276-1	—	—	—	—
		22-20 [0.3-0.6]	.125 [3.18]	862528-2	862498-1	66400-1	861276-1	—	—	—	—
			.200 [5.08]	862528-2	862498-1	66400-1	861276-1	—	—	—	—
	.062 1.57	18-16 [0.8-1.4]	.125 [3.18]	862528-1	862498-1	66099-2	861276-1	862435-1	862382-1	66101-2	862525-1
			.200 [5.08]	862528-1	862498-1	66099-2	861276-1	862435-3	862382-4	66101-2	862525-3
		22-20 [0.3-0.6]	.125 [3.18]	862528-2	862498-1	66400-1	861276-1	862435-2	862382-1	66399-1	862525-2
			.200 [5.08]	862528-2	862498-1	66400-1	861276-1	862435-4	862382-4	66399-1	862525-4
	.090 2.29	18-16 [0.8-1.4]	.125 [3.18]	862528-1	862498-1	66099-2	861276-1	862435-8	862382-3	66101-2	862525-7
			.200 [5.08]	862528-1	862498-1	66099-2	861276-1	862435-6	862382-6	66101-2	862525-5
		22-20 [0.3-0.6]	.125 [3.18]	862528-2	862498-1	66400-1	861276-1	862435-9	862382-3	66399-1	862525-8
			.200 [5.08]	862528-2	862498-1	66400-1	861276-1	862435-7	862382-6	66399-1	862525-6
Unshielded	.030 .762	18-16 [0.8-1.4]	.125 [3.18]	862434-1	862383-1	66099-2	—	—	—	—	—
			.200 [5.08]	862434-3	862383-2	66099-2	—	—	—	—	—
		22-20 [0.3-0.6]	.125 [3.18]	862434-2	862383-1	66400-1	—	—	—	—	—
			.200 [5.08]	862434-4	862383-2	66400-1	—	—	—	—	—
	.062 1.57	18-16 [0.8-1.4]	.125 [3.18]	862434-1	862383-1	66099-2	—	862435-1	862382-1	66101-2	862322-1
			.200 [5.08]	862434-3	862383-2	66099-2	—	862435-3	862382-4	66101-2	862322-3
		22-20 [0.3-0.6]	.125 [3.18]	862434-2	862383-1	66400-1	—	862435-2	862382-1	66399-1	862322-2
			.200 [5.08]	862434-4	862383-2	66400-1	—	862435-4	862382-4	66399-1	862322-4
	.090 2.29	18-16 [0.8-1.4]	.125 [3.18]	862434-1	862383-1	66099-2	—	862435-8	862382-3	66101-2	—
			.200 [5.08]	862434-3	862383-2	66099-2	—	862435-6	862382-6	66101-2	—
		22-20 [0.3-0.6]	.125 [3.18]	862434-2	862383-1	66400-1	—	862435-9	862382-3	66101-2	862322-8
			.200 [5.08]	862434-4	862383-2	66400-1	—	862435-7	862382-6	66399-1	862322-9

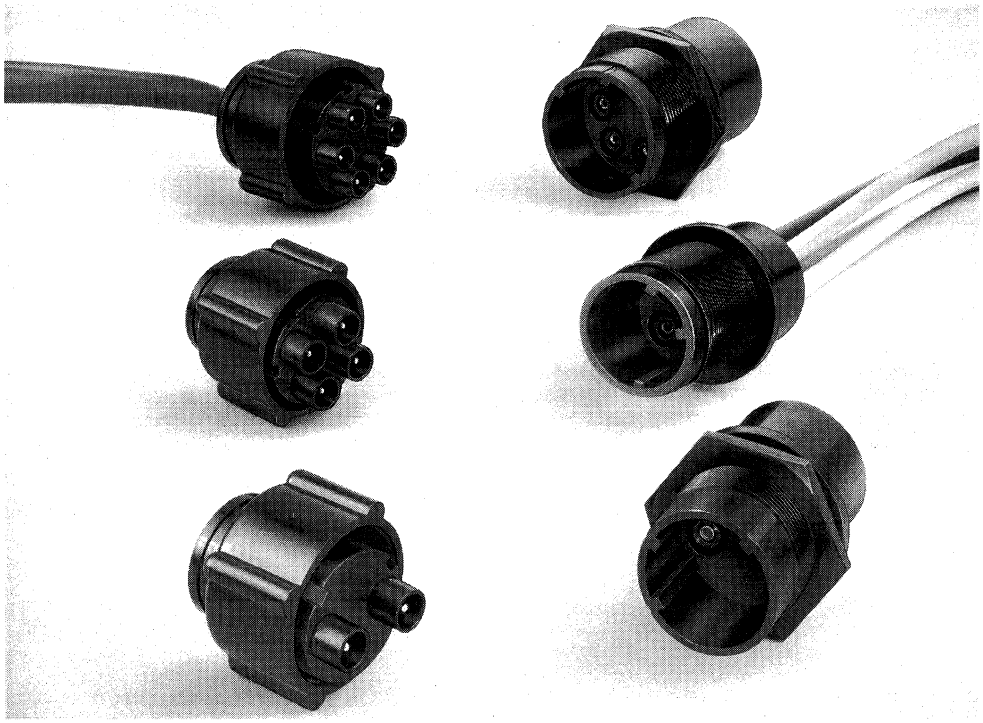
Notes: 1. Hand Tool **Part No. 90067-2** and Extraction Tool **Part No. 861751-1** are recommended for all contacts; contacts can be machine-applied.
2. Fully assembled connectors terminated on specified length leads are available. Consult AMP.

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

Multi-Pin Circular Commercial Connectors 27 KVDC

Product Facts

- Housing made of UL Recognized, 94V-0 rated, self-extinguishing polyester materials
- Standard housing color is black—other colors available
- Operating and storage temperature range: -55°C to +125°C [-67°F to +257°F]
- Operates up to 27 KVDC
- Will withstand a 35 KVDC hipot test
- Safe handling of high-voltage—no exposed contacts
- Lightweight, compact design
- Threaded coupling provides positive, quick connect/ disconnect
- Resilient silicone rubber "O" rings provide positive sealing for mated connectors
- Can be panel or bulkhead mounted or used in free-hanging applications
- Size 16 gold-plated contacts with 13 ampere rating accommodate wide range of wire sizes—24-20 AWG and 18-16-14 AWG—may be hand tool or machine crimped or soldered
- Two shell sizes available: smaller size offers 2-, 3- and 4-contact configurations; larger diameter shell contains 6 or 7 contacts



Note: 4-Pos. Receptacle Housing Dim. (Typ.)—1.75 [44.45] L x 1.25 [31.75] Dia.

Number of Contacts	Wire Range		Receptacle Kit (with sockets)	Plug Kit (with pins)	Plug Kit with Strain Relief	Plug (with Strain Relief) and Receptacle Kit
	AWG	mm²				
2	24-20	0.2-0.6	859529-4	860261-4	863020-1	863015-1
	18-16	0.8-1.4	859529-5	860261-5	863020-2	863015-2
	14*	2	859529-6	—	863020-3	863015-3
3	24-20	0.2-0.6	859528-4	860263-4	863021-1	863016-1
	18-16	0.8-1.4	859528-5	860263-5	863021-2	863016-2
	14*	2	859528-6	—	863021-3	863016-3
4	24-20	0.2-0.6	859526-4	860265-4	863022-1	863017-1
	18-16	0.8-1.4	859526-5	860265-5	863022-2	863017-2
	14*	2	859526-6	—	863022-3	863017-3
6	24-20	0.2-0.6	859527-4	860267-4	863023-1	863018-1
	18-16	0.8-1.4	859527-5	860267-5	863023-2	863018-2
	14*	2	859527-6	—	863023-3	863018-3
7	24-20	0.2-0.6	861647-7	861648-7	863024-1	863019-1
	18-16	0.8-1.4	861647-8	861648-8	863024-2	863019-2
	14*	2	861647-9	861648-9	863024-3	863019-3

Note: Contacts are packaged separately within the connector kit for shipment. Connectors are available with leads attached.
*Use Type II, Size 16 contacts, with a wire barrel sized to accept 14 AWG conductor.

Hand Tools

24-20 AWG [0.2-0.6 mm²]—**Part Number 45099**

18-16 AWG [0.8-1.4 mm²]—**Part Number 45098**

14 AWG [2 mm²]—**Part Number 45098**

Extraction Tool

Part Number 861751-1

Component Parts

Pin (loose piece)
24-20 AWG [0.2-0.6 mm²]
Part No. 200679-1

18-16 AWG [0.8-1.4 mm²]
Part No. 200681-1

14 AWG [2 mm²]
Part No. 201645-1

Socket (loose piece)
24-20 AWG [0.2-0.6 mm²]
Part No. 201328-1

18-16 AWG [0.8-1.4 mm²]
Part No. 200333-1

14 AWG [2 mm²]
Part No. 201568-1

O-ring (package of 50)
Part No. 862798-1

Potting shell/strain relief
(2, 3 and 4 contact plugs)
Part No. 862544-1

Potting shell/strain relief
(6 and 7 contact plugs)
Part No. 862695-1

Potting shell (short, for 6 and 7 contact plugs, 1.125 [28.58] long)
Part No. 863995-1

SOURCE: Catalog 82024

Specifications subject to change.

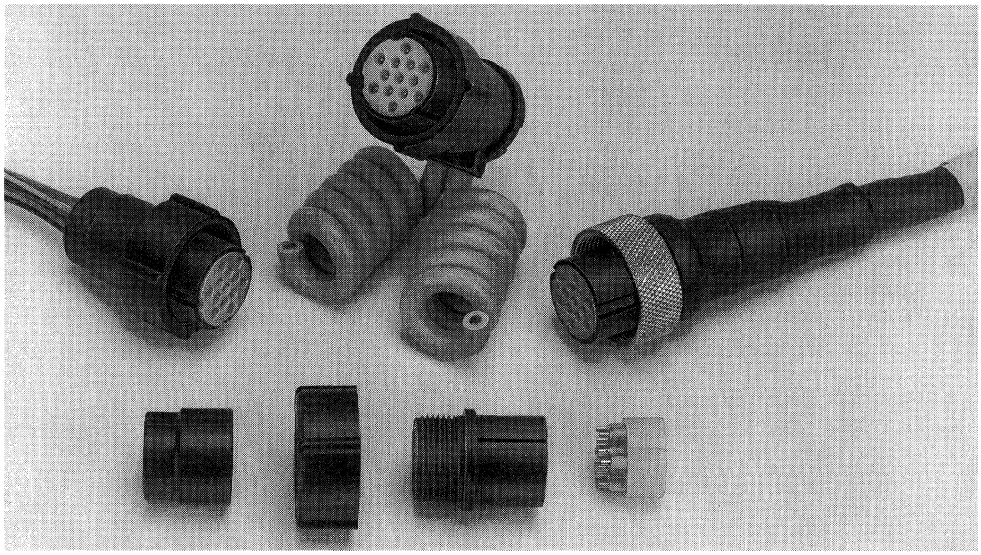
1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

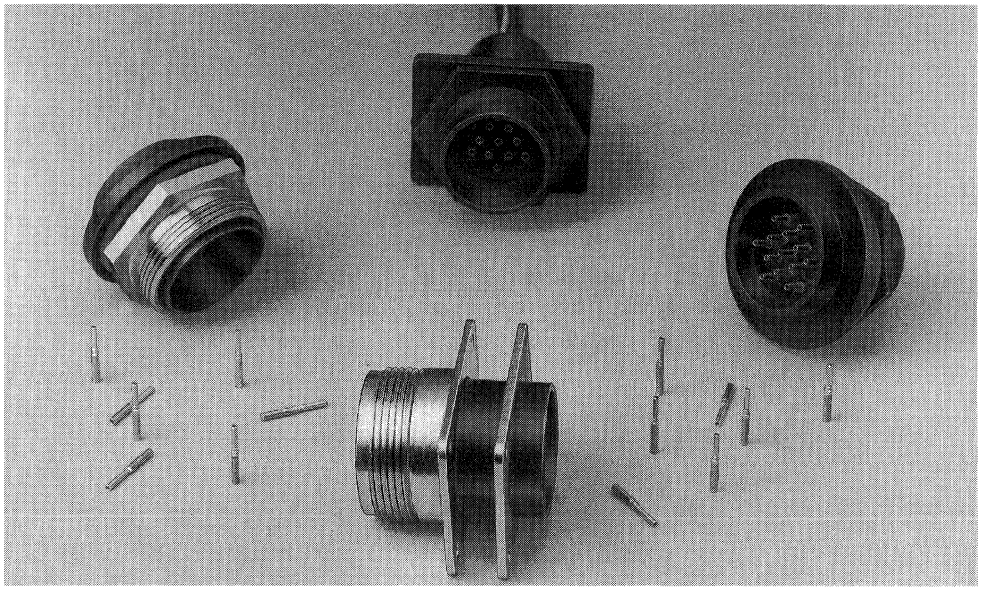
13-Pin Circular Connectors, 5 KVDC

Product Facts

- No exposed high voltage contacts
- Lightweight, compact design
- Polarized plug and receptacle
- Available as assembled units or in kit form
- Preassembled connectors furnished with attached leads of virtually any color/length combination
- Right-angle strain relief option available
- Threaded coupling provides positive, quick connect/ disconnect
- Will withstand a 10 KVDC hipot test
- Metal shell available for complete shielding and rugged operation
- Pins and sockets are 22-gauge, gold-plated bronze
- UL Recognized, 94V-0 rated, self-extinguishing, glass reinforced polyester material, where specified
- Wire range—28-22 AWG
- Operating temperature range—-55°C to +125°C [-67°F to +257°F]
- Voltage rating—5 KVDC at 70,000 ft. [21,336 m]



Plugs



Receptacles

Description	Material	Part Number	Mating Connector Part Number
Plug with right-angle boot	Metal Shell	865799-1	865574-1 863293-1
Plug with straight boot	Metal Shell	865799-2	865574-1 863293-1
Receptacle, Panel Mount*	Metal Sleeve	865574-1	865799-1, -2
Receptacle, Flange-Mount	Metal Flange & Sleeve	863293-1	865799-1, -2
Plug, Straight	Polyester, 94V-0	865628-1†	863612-1 863863-1, -2
Plug, Right-Angle	Polyester, 94V-0	864840-1†	863612-1 863863-1, -2
Receptacle, Panel Mount*	Glass Filled Epoxy	863612-1	865628-1 864840-1
Receptacle, Channel Mount* (without hex nut)	Polyester, 94V-0	863863-1	865628-1 864840-1
Receptacle, Channel Mount* (with hex nut)	Polyester, 94 V-0	863863-2	865628-1 864840-1

*Panel Thickness— .060/.125 [1.52/3.18]

†Also available pre-assemblied.

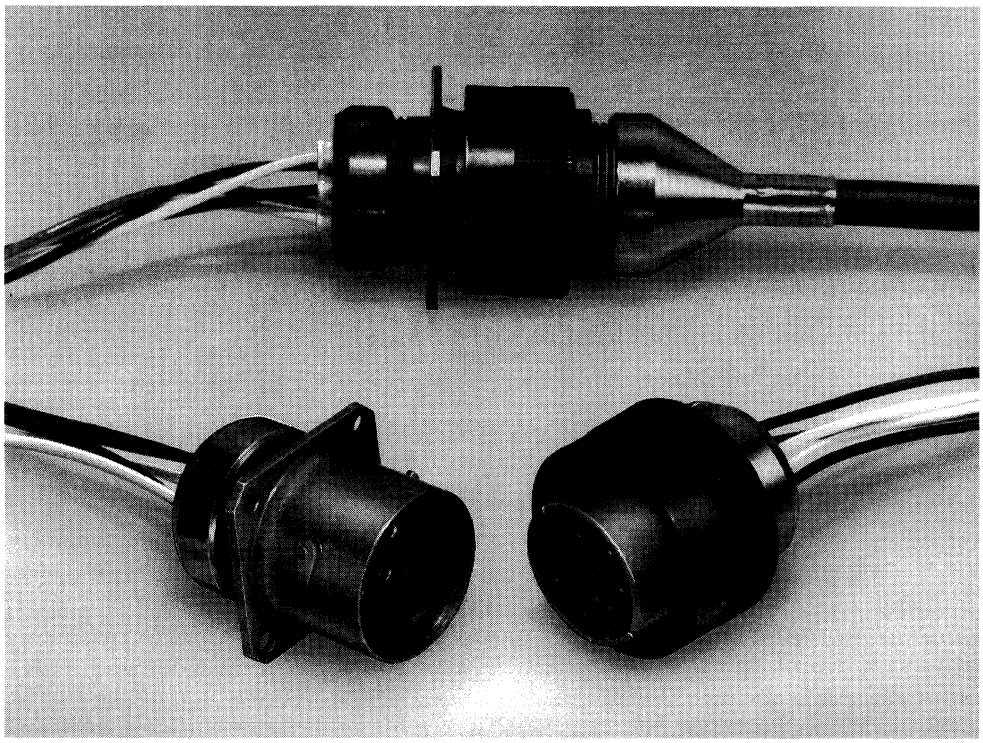
SOURCE: Catalog 82024

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

5-Pin, Metal-Shell Circular Connector, Military-Type

Product Facts

- Field installable and repairable
- Environmentally sealed
- Bayonet locking cap
- Single dot polarization helps prevent mismating
- Accepts any MIL-C-38999 backshell arrangement
- Three insert polarizations available
- Rated for 10 KVDC and 10 amps
- Withstands 15 KVDC hipot test
- Safe handling of high voltage—no exposed contacts
- Lightweight, compact design
- Size 16 gold plated contacts with 10 ampere rating accommodate wire range 24-16 AWG [0.2-1.4 mm²] and may be hand tool crimped, machine crimped, or soldered
- Can be panel or bulkhead mounted or used in free-hanging applications
- Preassembled connectors furnished with attached leads of virtually any color/length combination
- Removable inserts interchangeable between shell halves
- Positions numbered for easy circuit identification
- Backshell available for bundle shielding
- Operating and storage temperature range: -55°C to +125°C [-67°F to +257°F]



Kits

Description	Part Numbers	
	Kit with Contacts for 16 AWG [1.25-1.4 mm²]	Kit with Contacts for 20 AWG [0.5-0.6 mm²]
Receptacle, Flange-Mount with Socket Contacts	863754-1	864062-1
Plug with Pin Contacts	863753-1	864063-1
Receptacle, Flange-Mount with Pin Contacts	863755-1	864064-1
Plug with Socket Contacts	863752-1	864065-1

Note: Backshell is not included with any kits; any MIL-C-38999 backshell may be used or AMP **Part No. 864639-2**.

Tooling

Tool Application	Manufacturer's Name and Part Numbers	
Insert Removal	AMP	864437-1
Contact Removal	AMP	305183
Crimp Tool Contact Positioner	Daniels	TP-581
Crimp Tool	Daniels	M22520/1-01
Instruction Sheet	AMP	864886

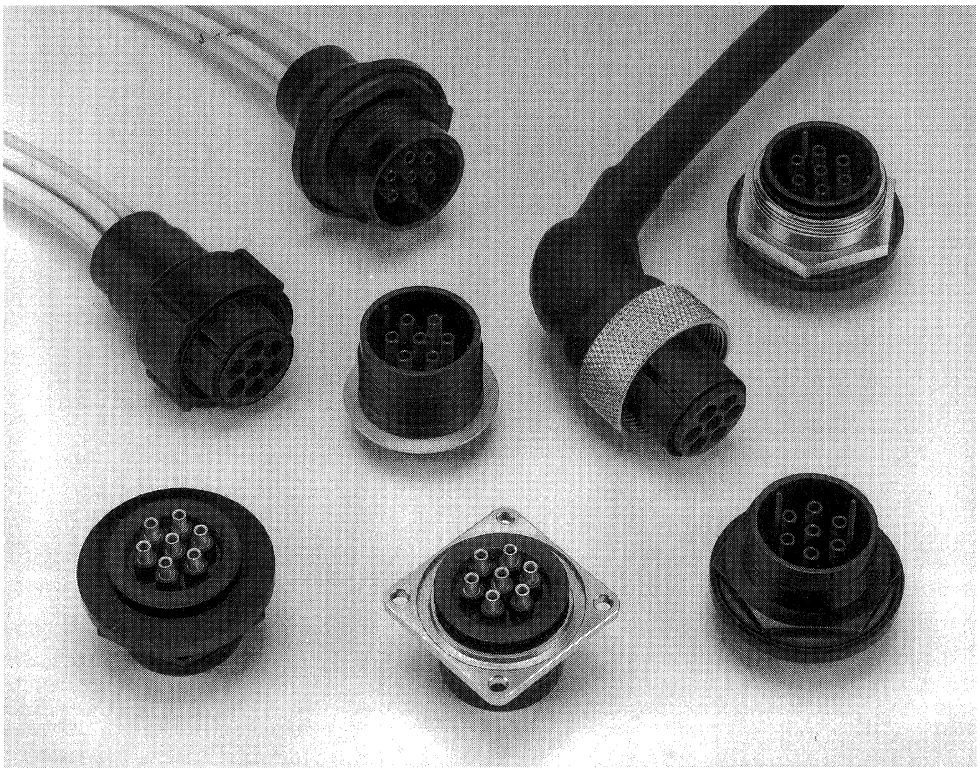
SOURCE: Catalog 82024

Specifications subject to change.
1-800-522-6752 Product Information Center/ AMP FAX Service
1-800-722-1111 Tooling/Technical Assistance Center

7-Pin, Metal-Shell Circular Connector, Military-Type

Product Facts

- 15 KVDC operating voltage, up to 70,000 feet [21,336 m]
- Current carrying capacity—7.5 A continuous per line for 20 AWG wire
- Metal shell available for complete shielding and rugged operation
- Molded-in Size 20 contacts are fully shrouded
- Molded glass epoxy and silicone rubber interface for positive sealing
- Polarized plug and receptacle housings help prevent mismating
- Designed to meet applicable specifications
- Hermetically sealed receptacles available
- Operating temperature range from -55°C to +125°C [-67°F to +257°F]
- Moisture resistant
- Corona resistant



Note: Plug Cap Dia. (Typ.)—1.19 [30.23] (Plastic Shell); 1.25 [31.75] Metal Shell

Style	Description	Part Number
Plastic Shell	Potted Plug Kit	865594-1
	Potted Receptacle (Non-hermetic)	861999-1
	Potted Receptacle (Hermetic seal)	862794-1
	Receptacle for hermetic seal (solder-flange-mount)	862005-1
Potting Shells	Plug Potting Shell	862544-1
	Receptacle Potting Shell	862256-1
Metal Shell†	Plug Kit (Straight boot)	865656-1
	Plug Kit (Right-Angle boot)	865656-2
	Receptacle (Non-hermetic)	862004-1
	Receptacle (Hermetic seal)	866182-1

†For RFI shielding and rugged handling

Specifications subject to change.
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1-800-722-1111
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6-Pin, Subminiature Rectangular Connectors

Product Facts

- Extremely lightweight—total weight of mated pair is less than 14 grams
- Compact design—requires less than .6 square inch [387 mm²] of mounting surface; occupies less than .750 cubic inch [.229 mm³] of volume per mated pair
- Resilient silicone rubber insert in plug half provides positive interfacial seal for mated connector
- Withstands 10 KVDC hipot test
- Housing styles for potting, chassis slot (channel) mounting, panel mounting and free-hanging applications
- Size 22, gold plated contacts with 5 ampere rating accommodate 28 to 22 AWG [0.08 to 0.4 mm²] wire

Commercial Versions

- 7.5 KVDC at 10,000 ft. [3048 m] (pin-to-pin and pin-to-ground); -15°C to +85°C [5°F to 190°F] operating storage temperature
- Potting color—red

Military Versions

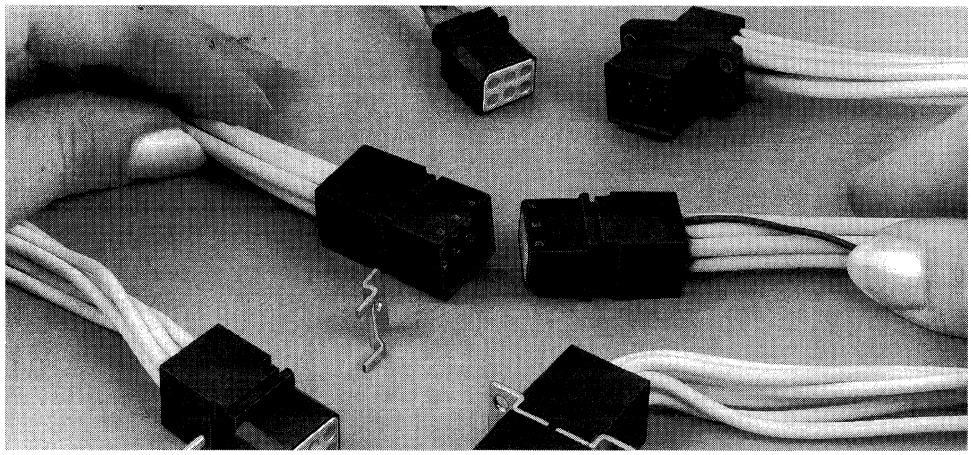
- 6 KVDC at 70,000 ft. [21,336m]; -55°C to +125°C [-67°F to +257°F] operating storage temperature
- Potting color—white

Mounting Brackets, Slip-on

(for Commercial or Military Assemblies with slotted housings)

Part Number 861214-2 (two, .106 [2.69] Dia. Mounting Holes)

Part Number 861215-2 (one, .106 [2.69] Dia. Mounting Hole)



Commercial

Description		Lead Length inches	Lead Length mm²	Part Numbers Assembly with 22 AWG Silicone	Part Numbers Assembly with 24 AWG Teflon	Part Numbers Kit
Plug	Slotted housings with no potting shell	—	—	—	—	863519-1[1] 863075-1[2]
	Slotted version Right-Angle, with Potting Shell	—	—	—	—	864888-1
	Slotted version with Right-Angle, Molded Mounting Flange Potting Shell	—	—	—	—	445015-1
	Slotted version with potting shell	24	[609.6]	867463-2	—	867482-1
		36	[914.4]	867463-3	867462-3	
Receptacle	Slotted	12	[304.8]	867469-1	867468-1	867483-1
		24	[609.6]	867469-2	867468-2	
		36	[914.4]	—	867468-3	
	Slotted with Mounting Bracket Part No. 861215-2	30	[762.0]	863633-1	—	—
		45	[1143.0]	863633-2	—	
	Straight, Molded Mounting Flange	12	[304.8]	867473-1	—	—
	Right-Angle, Molded Mounting Flange	12	[304.8]	867477-1	—	866047-1
		24	[609.6]	867477-2	—	
		36	[914.4]	867477-3	—	

[1].065 [1.65] dia. max. Silicone wire

[2].060 [1.52] dia. max. Teflon wire

Military

Description		Lead Length inches	Lead Length mm²	Part Numbers Assembly with 22 AWG Silicone	Part Numbers Assembly with 24 AWG Teflon
Plug	Slotted	12	[304.8]	867461-1	867460-1
		24	[609.6]	867461-2	—
		36	[914.4]	867461-3	867460-3
	Straight, Molded Mounting Flange	12	[304.8]	867465-1	867464-1
		24	[609.6]	867465-2	—
		36	[914.4]	867465-3	867464-3
Receptacle	Slotted	12	[304.8]	867471-1	867470-1
		24	[609.6]	867471-2	867470-2
		36	[914.4]	867471-3	867470-3
	Slotted with Mounting Bracket Part No. 861215-2	30	[762.0]	863632-1	—
	Straight, Molded Mounting Flange	12	[304.8]	—	867472-1
		24	[609.6]	—	867472-2
		36	[914.4]	—	867472-3
	Right-Angle, Molded Mounting Flange	12	[304.8]	867479-1	867478-1
		24	[609.6]	867479-2	—

SOURCE: Catalog 82024

Note: Other versions can be made available, consult AMP.

Specifications subject to change.

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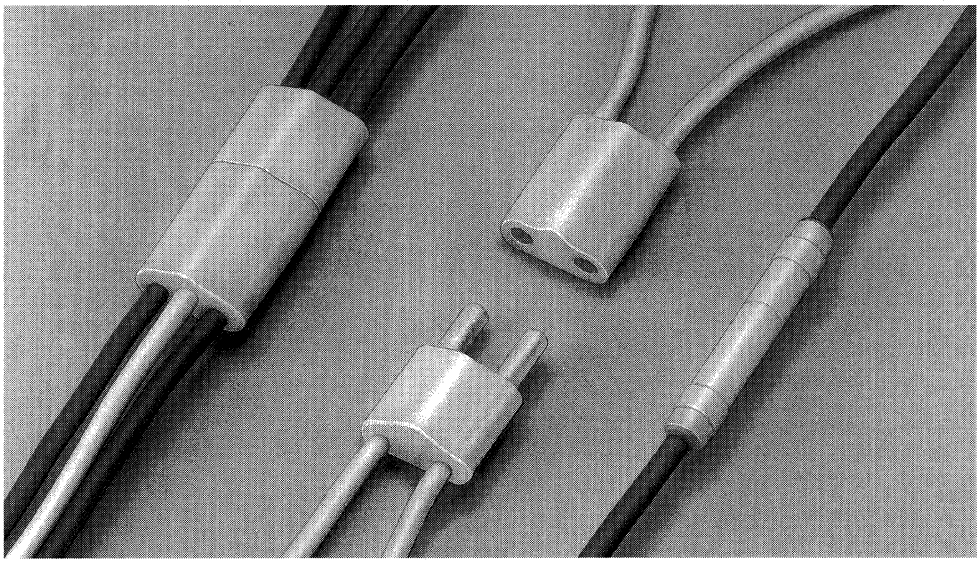
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

Micro-Miniature Connectors

Product Facts

- **Extremely lightweight and compact**
- **Deeply recessed contacts and staggered pins**
- **Quick connect and disconnect**
- **Free-hanging**
- **Connectors are preassembled and fully tested**
- **Vibration and shock resistant**
- **Other lead colors and lengths available on request**



Specifications

Wire—22 AWG, silicone insulation
Contacts—Size 22, rated 5 A
Voltage—7.5 KVDC
Hipot—12 KVDC for 3 minutes

No. of Pos.	Description	Lead Length inches	Lead Length mm	Lead Color	Part Number
3	Plugs (w/sockets)	**12**	[305]	Brown	863743-1
				Green/Yellow/Blue	862424-1
		16	[406]	Brown	863743-2
		18	[457]	Green/Yellow/Blue	862424-2
		24	[610]	Brown	863743-3
		48	[1219]	Green/Yellow/Blue	862424-4
	Receptacles (w/pin)	**12**	[305]	Green/Yellow/Blue	862425-1
		18	[457]	Green/Yellow/Blue	862425-2
		24	[610]	Green/Yellow/Blue	862425-3
		48	[1219]	Green/Yellow/Blue	862425-4
2	Plugs (w/sockets)	**12**	[305]	Brown	866559-1
		16	[406]	Brown	866559-5
		24	[610]	Brown	866559-3
		48	[1219]	Brown	866559-4
	Receptacles (w/pin)	**12**	[305]	Brown	866196-1
		18	[457]	Brown	866196-2
		24	[610]	Brown	866196-3
		48	[1219]	Brown	866196-4
1	Plug (w/socket)	**15**	[381]	White	867823-1
	Receptacle (w/pin)	**24**	[610]	White	867824-1

Custom-Designed Multi-Pin Connectors

In addition to those shown on the preceding pages, a variety of multi-pin connectors, with and without metal shells, are available. For special requirements, connectors can be custom designed.

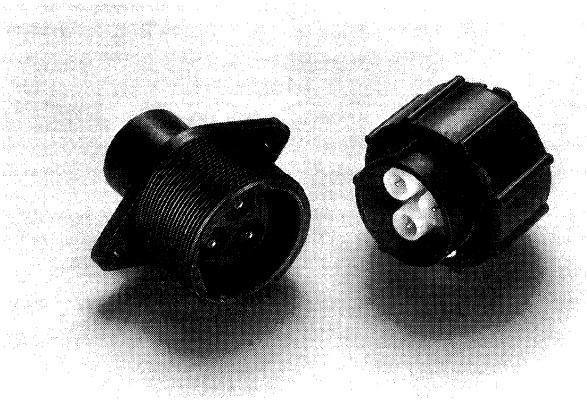
Product Facts

- **15 KVDC**
- **Hermetically sealed receptacles available**
- **Recessed contacts**

3-Pin Assembly with Size 20 Contacts

Plug
Part Number 859290-1

Receptacle
Part Number 859291-1

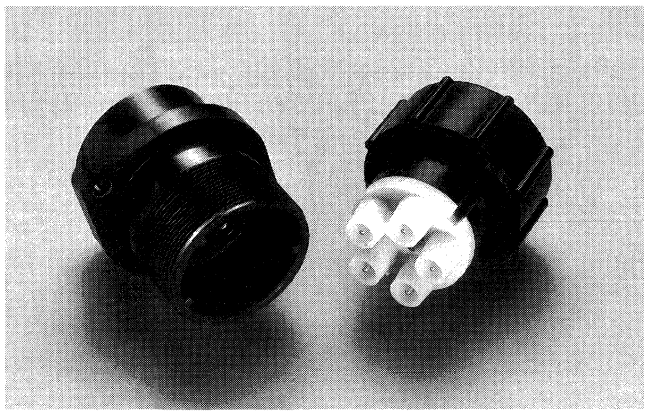


- **15 KVDC**
- **Hermetically sealed receptacles available**

5-Pin Assembly

Plug
Part Number 860143-1

Receptacle
Part Number 859465-2



SOURCE: Catalog 82024

Specifications subject to change.
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1-800-722-1111
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Connectors for Special Applications

AMP designs and manufactures hundreds of high voltage connectors for special applications. The examples shown here are representative of the ability to meet special requirements. For modifications, or new designs for particular requirements, consult AMP.

Product Facts

- **Molded epoxy housings per MIL-M-24357 (GEI-5)**
- **Small, lightweight, leakproof**

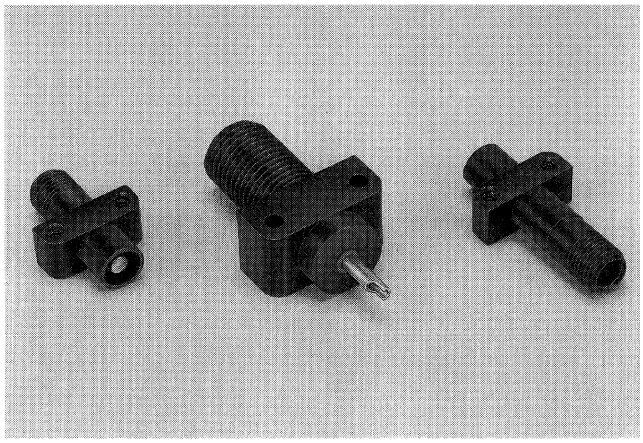
PCB Receptacles

10 KV, LGH ½I

Part Number 866803-1
(with mounting holes)

15 KV, LGH ½LI

Part Number 866806-1
(with mounting holes)

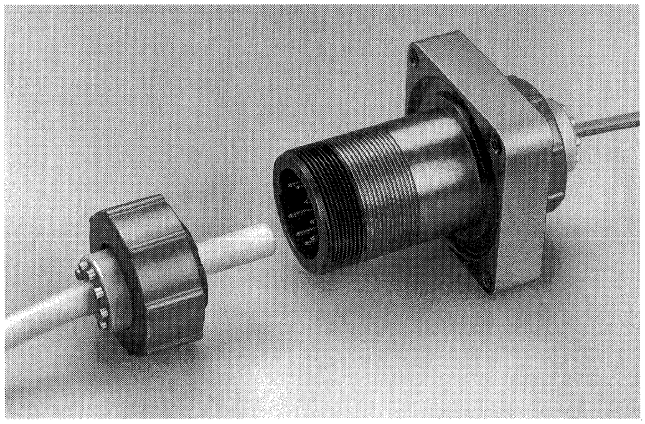


- **1 Pin: 5 KVDC**
  8 Pins: Low voltage

Bulkhead Feed-Through Connector, Hermetically Sealed, 9-Pin

Plug, air side
Part Number 846906-2

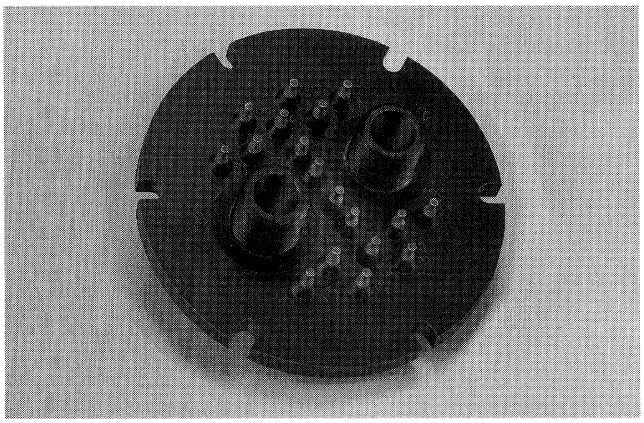
Plug, oil side
Part Number 846907-2



- **2 Pins: 20 KVDC**
  18 Pins: Low voltage

Interface Connector, Hermetically Sealed, 20-Pin

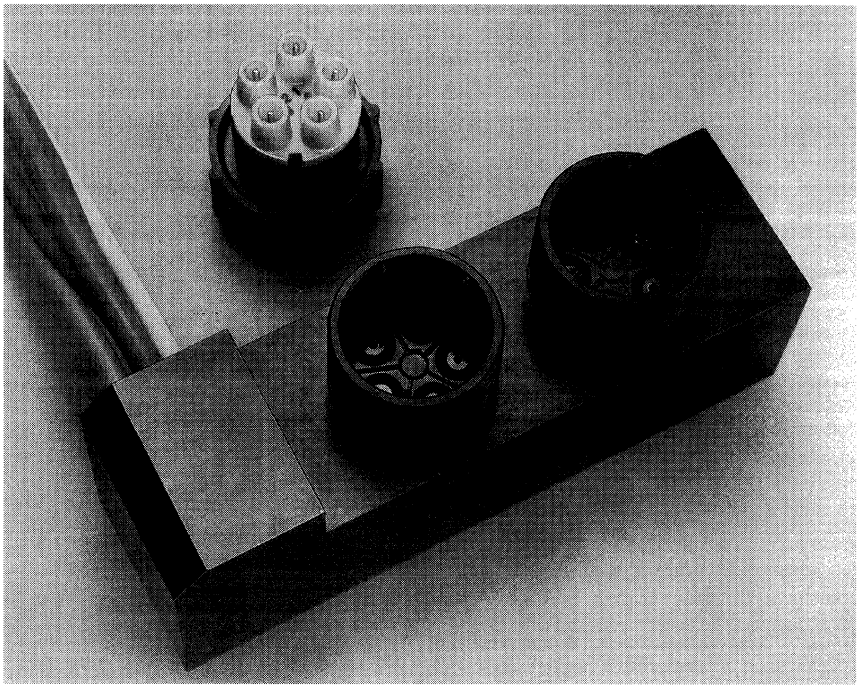
Part Number 849515-1



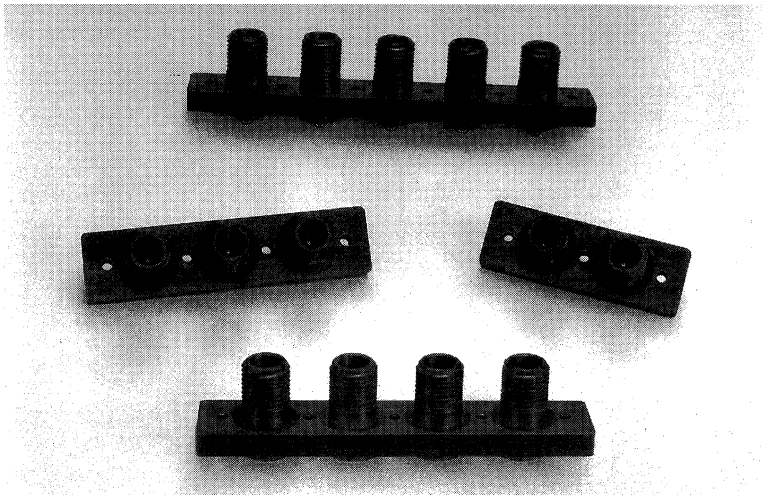
SOURCE: Catalog 82024

Connectors for Special Applications
(Continued)

Dual, 5-Pin Receptacle Block with Flying Leads
Part Number 859928-2



Multiple Receptacle with Integral, Molded Flange for Bulkhead Applications (Gold Pins)
Single, Part Number 867606-4
Dual, Part Number 861662-4
Triple, Part Number 861660-4
Quadruple, Part Number 861658-4
Quintuple, Part Number 861657-4



SOURCE: Catalog 82024

Specifications subject to change.
1-800-522-6752
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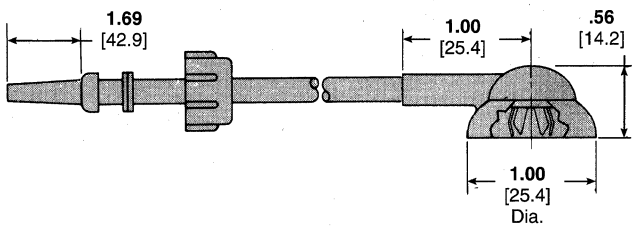
1-800-722-1111
Tooling/Technical Assistance Center

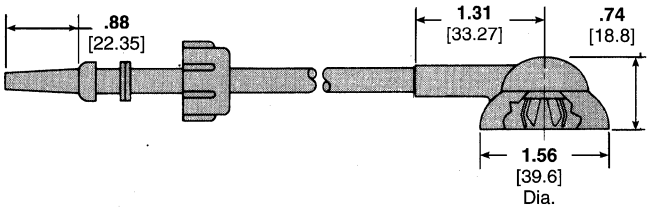
CRT Lead Assemblies

J1-21, 25 KV, LGH 1LI



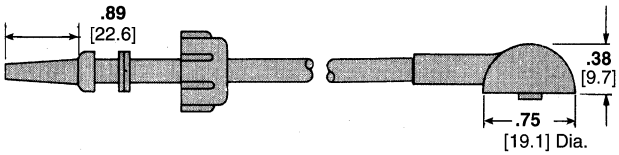
12 [304.8] **Assembly—Part Number 846977-8**
18 [457.2] **Assembly—Part Number 1-846977-1**

J1-21, 20 KV, LGH 1I



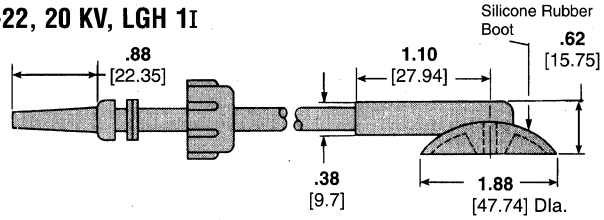
Assembly Length	Part Number
6 152.4	848588-7
12 304.8	848588-1
18 457.2	858588-4
24 609.6	848588-2
36 914.4	848588-3
48 1219.2	848588-8

J1-22, 15 KV, LGH 1/2LI



12 [304.8]—**Part Number 862345-2**
18 [457.2]—**Part Number 862345-1**

J1-22, 20 KV, LGH 1I



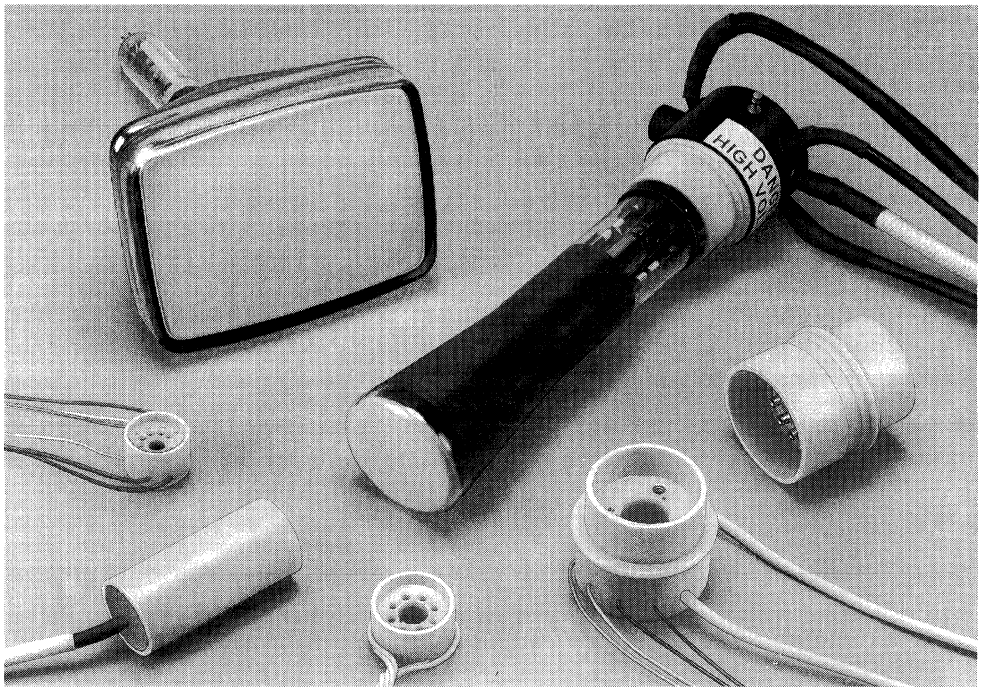
18 [457.2]—**Part Number 849424-4**

Note: Standard length leads are tabulated here. AMP can make available numerous variations in length and material to suit almost any application. Choices of insulation materials include Teflon insulation, UL listed silicone and UL listed PVC. Other materials, colors, wire and configurations can be used in manufacture. For more information, consult AMP.

CRT-Base Connectors

Product Facts

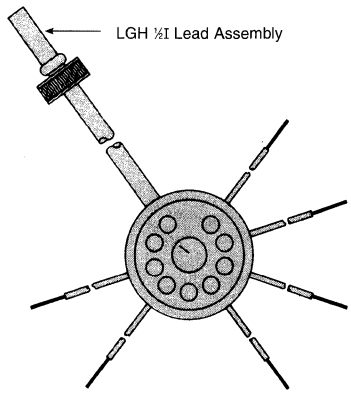
- Base connections without potting
- Right-angle and straight connections available
- One-piece molded construction
- Environmentally sealed for trouble-free performance
- Operates at rated DC voltages at 70,000 ft. [21.336 m]
- Operating temperature range: -55°C to +125°C [-67°F to +257°F]
- Withstands shock tests per MIL-STD-202, Test Method 102, Condition C
- Excellent system serviceability
- High reliability
- Fully tested harnesses
- Lower applied cost



In addition to the connectors listed here, AMP can furnish a wide variety of CRT-base connectors. Consult AMP for details.

9-Position CRT-Base Connector

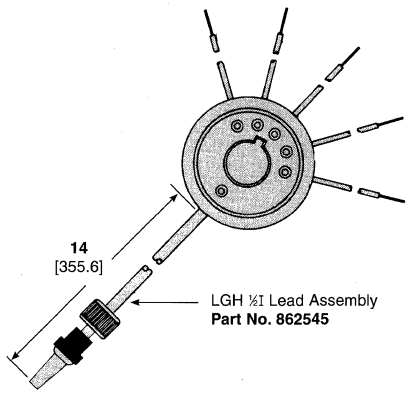
Part Number 862481-1



This connector is one of many available from AMP for mating with standard JEDEC tube base E9-37.

Typical Right-Angle Lead Exit CRT-Base Connector

B6-63—Part Number 867121-1



This connector is typical of those available from AMP for mating with standard JEDEC tube base B5-57, B6-63, B7-51, B10-75, and B12-43.

SOURCE: Catalog 82024

Specifications subject to change.
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1-800-722-1111
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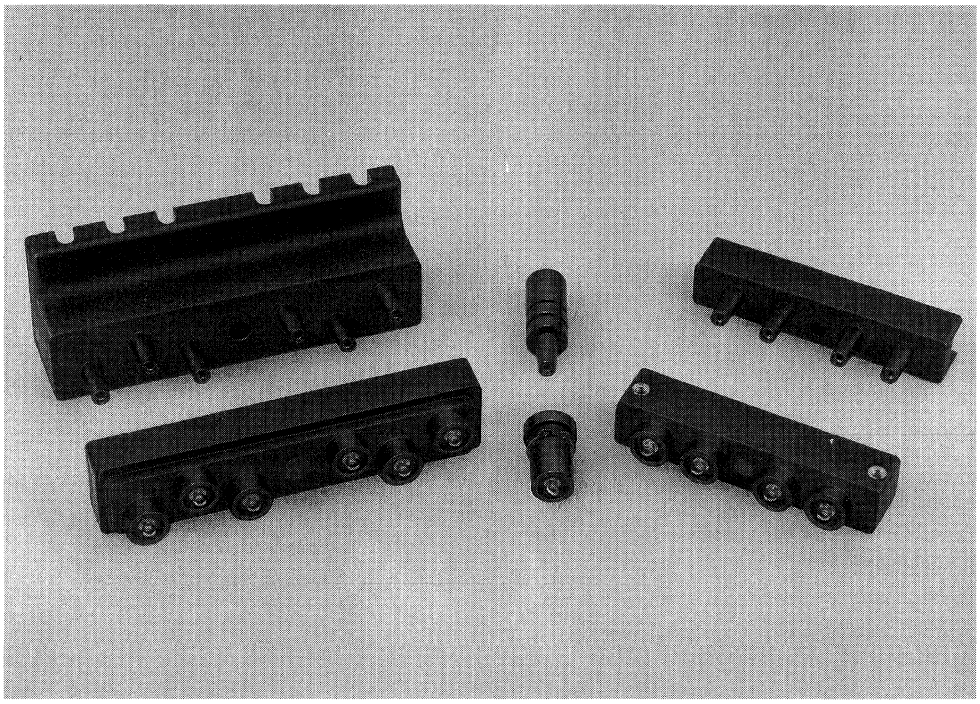
Rack and Panel Connectors

Product Facts

- 15 KVDC rating up to 70,000 feet [21,336 m] (continuous)
- Extremely compact
- All plastic design
- Housings can be molded from a variety of materials
- Provides highly reliable drawer-type connections
- Low insertion and extraction forces
- Hipot—30 KVDC at sea level, two minutes
- Pins and sockets (10-amp rating) are recessed for maximum safety; will accept conductor sizes to 16 AWG [1.25 mm²]
- Hermetically sealed version available for soldering to metal bulkhead on single pin connector
- Available with or without leads
- No tools required for field use
- Can be readily adapted for in-line splice applications



Note: 6-Pin Plug Housing Dim. (Typ.)—3.44 [87.38] L x 1.18 [29.97] W x 1.25 [31.75] H

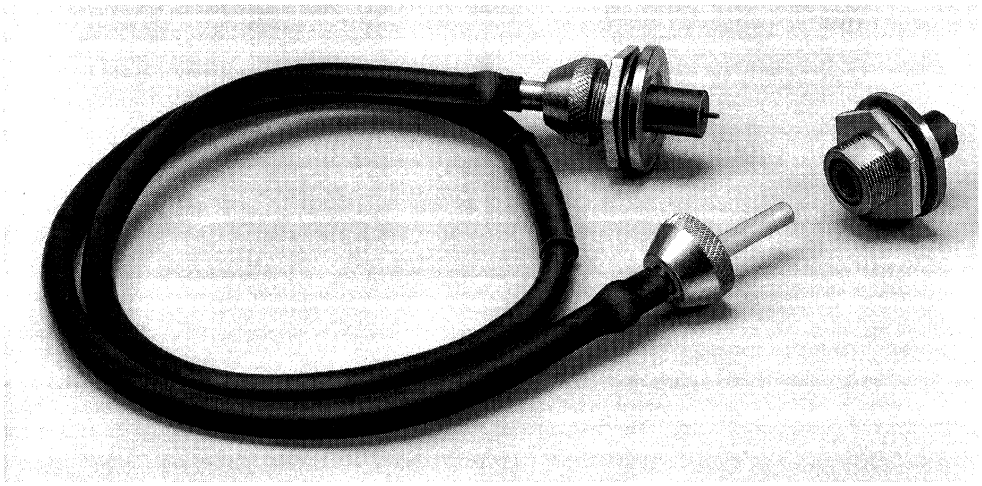
No. of Pins	Description	Part Number
1	Receptacle-Standard	859111-1
	Receptacle-Hermetic	862123-1
	Plug-Standard	859113-1
	Plug-Hermetic	862124-1
4	Receptacle	862909-1
	Plug	862908-1
6	Receptacle	862536-1
	Plug	862672-1

Notes: 1. If bulkhead and mounting hardware are metallic and at ground potential, provisions must be made to protect the back end of the receptacle against arc-over and breakdown.
2. Connectors are available with or without leads. Leads can be furnished in virtually any length, with various insulation materials, in either standard white or a variety of optional colors, and with conductor sizes to 16 AWG [1.25 mm²].
For the High Voltage Rack and Panel Connector to meet your specific requirements, consult AMP.

Heavy Duty (VRL) RFI-Shielded Lead Assemblies and Receptacles

Product Facts

- **Extremely rugged design**
- **Fully shielded against RFI**
- **Operating and storage temperature range: -55°C to +125°C [-67°F to +257°F]**
- **Meets wide range of military requirements**
- **Metal housings can be readily altered to meet a wide variety of mounting and operational requirements**



Lead Assemblies and Receptacles

LGH Series	Lead Assemblies			Receptacles		
	Length	Single End	Double End	Jam Nut	Square Flange	Dimensions
½LI 15 KVDC	**36** 914.4	—	1-862294-0	862295-1	862363-1	1/2-28 UNEF Thread **.60** [15.24] Behind Panel **.98** [24.89] Overall Length
1LI 25 KVDC	**12** 304.6	—	862444-3	862443-1	—	5/8-18 UNEF Thread **1.10** [27.94] Behind Panel **1.84** [46.74] Overall Length
4I 50 KVDC	**12** 304.6	—	863254-1	863125-1	863253-1	1-3/16-18 UNEF Thread **1.55** [39.37] Behind Panel **2.15** [54.61] Overall Length
	24 609.6	863124-2	—			
	48 1219.2	863124-6	863254-4			

Field Installable Connectors

Mate with—Standard LGH Receptacles. Recommended cable is W.L. Gore High Voltage wire or equivalent.

Accessories Available*

- Removable Cap Kits (for Lead Assemblies)
- Dirt-Protective Caps (for Receptacles)
- Arcing-Protective Caps (for Receptacles)

*Contact AMP.

Kits for Teflon Insulated Wire

Connector Description	Wire Diameter	Part Numbers		
		Molded End	Positive Stop	Instruction Sheet*
LGH ½I	**.081-.087** 2.06-2.21	861076-1	—	408-9891
	.107-.113 2.72-3.37	861076-2	—	
	.107-.113 2.72-3.37	—	862514-1	862600-1
LGH ½LI	**.107-.113** 2.72-3.37	—	862515-1	
LGH 1I	**.155-.165** 3.94-4.19	—	862128-1	862129-1
	.200-.210 5.08-5.33	—	862128-2	
	.122-.132 3.1-3.35	—	862128-3	

*Included with kit.

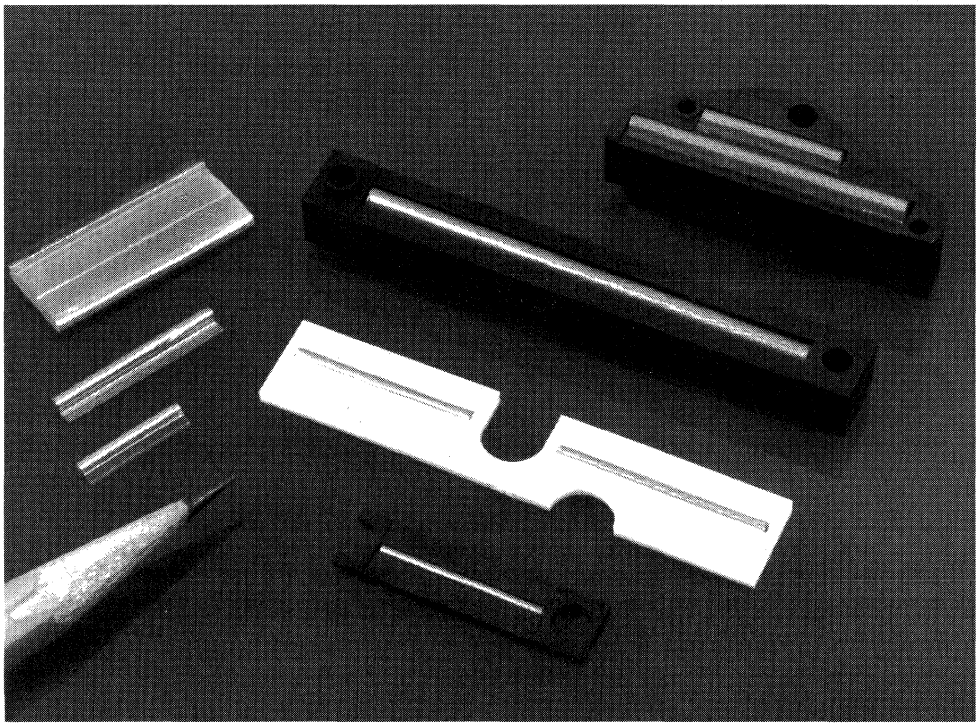
SOURCE: Catalog 82024

Specifications subject to change.

1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

AMPLIFLEX Connectors



Product Facts

- **Inexpensive, reliable gold interconnect provides low resistance, stable connector paths**
- **Eliminates conventional spring contacts or solder connections which allows:**
  - **Lower packaging costs**
  - **Higher assembly speeds**
  - **Reduced package volume**
  - **Convenient assembly, repair and replacement of connected item**
  - **No heat during assembly**
  - **Increased quality and reliability**
- **Low profile, high density interconnection system for high speed, low level signal applications**
- **Wide variety of low-profile cross-sections and lengths available**
- **Capable of small centerline, high-density packaging—usable with centerlines .015 [0.38] to .100 [2.54]**
- **Extremely tolerant of misalignment allowing non-critical assembly**
- **High speed signals capable of low distortion with signals having rise times in the low picosecond range**
- **Compensates for interconnection surface irregularities**
- **Silicone rubber core resists compression set and provides contact pressure over a wide temperature range**
- **Contact interface is provided by copper circuits with gold-over-nickel plating on stable polyimide film**

The AMPLIFLEX Connector is a unique, simple and reliable connector which fulfills the surface-to-surface interconnection requirements for high density packaging with centerline spacing between .015 [0.38] and .100 [2.54]. This versatile system satisfies an array of applications including ceramic substrate-to-board, flex cable-to-board, flex cable-to-ceramic, flex cable-to-flex cable, display-to-board and chip-to-board. Shielded and impedance controlled variations are also available.

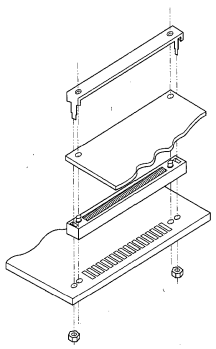
The AMPLIFLEX Connector incorporates an extremely simple design concept; a thin flexible polyimide film on which individual parallel lines of 1/2 oz. [14.17 g] etched copper circuitry plated with gold over nickel is wrapped around a soft, non-conducting silicone rubber core. The core is formulated to resist permanent set under long-term compression. When the connector is compressed between two flat planes, the plated circuit lines interconnect the circuit pads on each plane.

The standard film pattern consists of .003 [0.08] wide lines on .007 [0.18] centerlines. This provides interconnection redundancy on virtually any centerline, even with board pads as small as .015 [0.38] wide on .025 [0.64] centers. Smaller film centerline patterns are also available for smaller pad sizes.

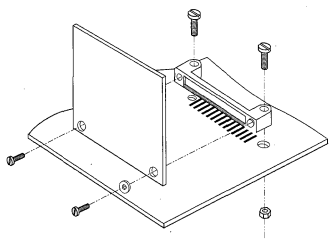
The contact area is pliable and conforms to irregular surfaces providing good electrical contact over a large surface area. This is especially advantageous when connecting thin, deposited pads on displays, ceramics, glass, etc. The resiliency of the connector core also helps create a sealed area around the contacts which provides environmental protection at the contact interface.

Typical Applications

Contact AMP for applications similar to those shown, as well as for applications to meet your specific needs.



Flex Cable-to-Pc Board



Right-Angle Pc Board-to-Pc Board

SOURCE: Catalog 82161

Sizes and Configurations

Materials

Core—50 Shore A non-conducting silicone rubber

Film—.001 [0.03] polyimide with 1/2 oz. [14.7 g] copper circuitry plated with .000020 [0.00051] gold over .000050 [0.00127] nickel

Performance Specifications*

Contact Resistance—
Bulk Resistance < 13 milliohms per 1mm
Contact Resistance < 1 milliohm per pad

Contact Rating—Less than 100 milliohms, typical

Operating Temperature—

-55°C to 85°C
-55°C to 125°C
-55°C to 175°C (Burn-in applications)

Dielectric Withstanding Voltage—
500 V rms, min.

Insulation Resistance—
100,000 megohms, min.

Capacitance—< .3 picofarads between pads***

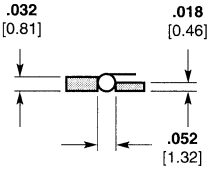
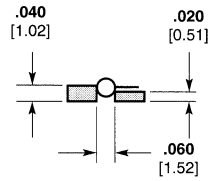
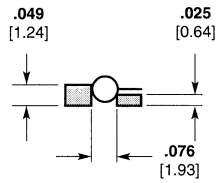
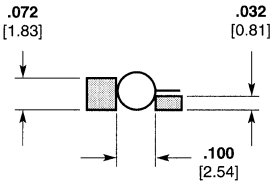
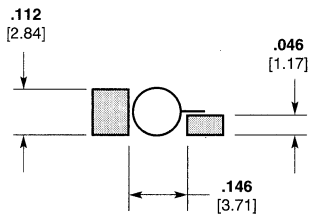
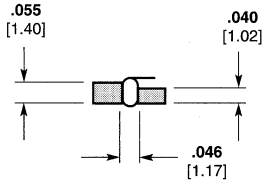
Inductance—< .05 nanohenries through the circuit

High Frequency Electrical Performance [65 ohms]—Signal drive at 250 picoseconds rise time measured in signal/ground pattern***

Characteristic Impedance — 70 ohms
Propagation Delay — < 20 picoseconds
Noise Voltage (crosstalk plus ground bounce) — < 4%
Circuit Impedance Variation — < 1ohm

Information for specific sizes and various grounding patterns for your specific application is available upon request.

*Performance is based on Product Specification 108-1419—measured with 2 or 3 redundant connector paths between gold plated connector and gold plated printed circuit board pads .015 [0.38] wide on .025 [0.64] centers, at <50 millivolts open-circuit potential.
***Measured with .030 [0.76] wide pads on .050 [1.27] centerlines using Part Number 485352.

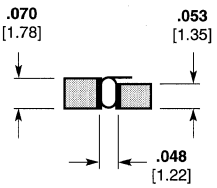
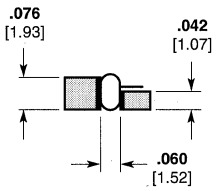
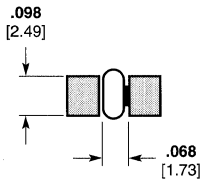
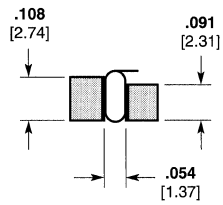
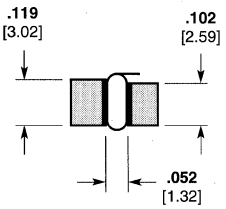
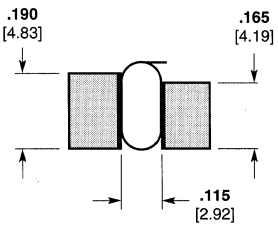
Configuration	Free Height Dimension	Cavity Dimensions	Base Part Number**
	.040 [1.02] Dia.		485351
	.047 [1.19] Dia.		485289
	.060 [1.52] Dia.		485347
	.088 [2.24] Dia.		485341
	.125 [3.18] Dia.		485408
	.035 x .068 [0.89 x 1.73]		485352

**Base part number designates size and cross-sectional configuration as illustrated. Length must also be specified when ordering.

SOURCE: Catalog 82161

Specifications subject to change.
1-800-522-6752 Product Information Center/ AMP FAX Service
1-800-722-1111 Tooling/Technical Assistance Center

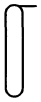
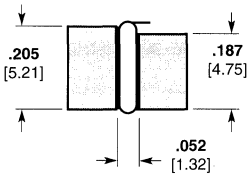
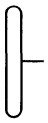
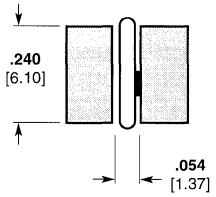
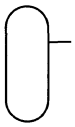
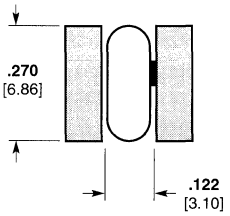
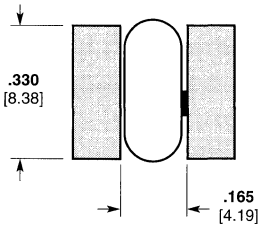
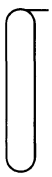
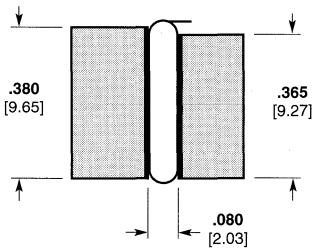
Sizes and Configurations
(Continued)

Configuration	Free Height Dimension	Cavity Dimensions	Base Part Number**
	.035 × .080 [0.89 × 2.03]		485353
	.048 × .089 [1.22 × 2.26]		487096
	.045 × .120 [1.14 × 3.05]		487116
	.045 × .120 [1.14 × 3.05]		485355
	.040 × .140 [1.02 × 3.56]		485356
	.100 × .215 [2.54 × 5.46]		485446

**Base part number designates size and cross-sectional configuration as illustrated. Length must also be specified when ordering.

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

Sizes and Configurations
(Continued)

Configuration	Free Height Dimension	Cavity Dimensions	Base Part Number**
	.040 × .230 [1.02 × 5.84]		485419
	.040 × .270 [1.02 × 6.86]		485423
	.100 × .295 [2.54 × 7.49]		485364
	.145 × .360 [3.68 × 9.14]		485357
	.070 × .410 [1.78 × 10.41]		485444

**Base part number designates size and cross-sectional configuration as illustrated. Length must also be specified when ordering.

SOURCE: Catalog 82161

Specifications subject to change.

1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

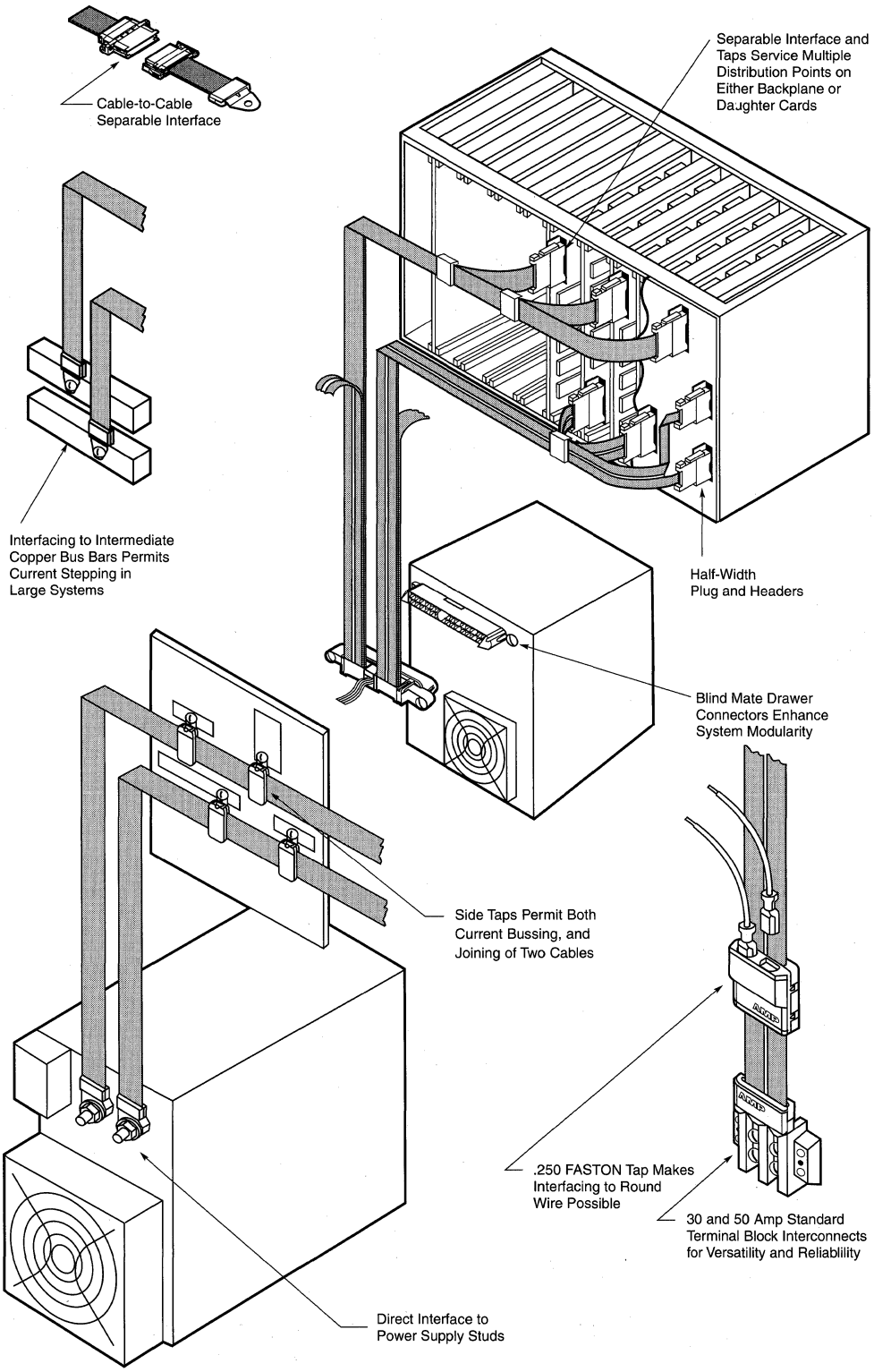
AMPOWER Wave Crimp System

Product Facts

- **Wave crimp termination of flat cable requires no stripping, does not reduce cable cross section and provides a reliable, low resistance, gas-tight interface**
- **Separable interfaces have positive locking, polarization and contact shrouding**
- **Right-angle and vertical headers on .100 [2.54] centers, accommodate standard .040 [1.02] PCB hole diameters**
- **Four cable self-aligning connector can pickup .080 [2.03] misalignment off a common axis and measures 80 amps per cable (at 30°C temperature rise) depending upon the application**
- **Unique tap permits branching of trunk lines to serve multiple distribution points**
- **Assemblies are measured at 70–110 amps (with 30°C temperature rise) depending upon mounting interface**
- **Recognized under the Component Program of Underwriters Laboratories Inc., File No. E28476, No. E13288, and No. E53799**
- **Certified by Canadian Standards Association, File No. LR7189A-149**
- **Free 3D and 2D CAD images— See page 56**

Interfaces

The variety of interfaces available make insulated flat copper cable a versatile and innovative systems solution to power distribution.



SOURCE: Catalog 82271

Specifications subject to change.

1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

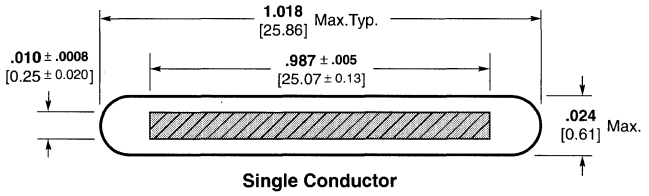
EADS CD-ROM

Copper Cable Variations

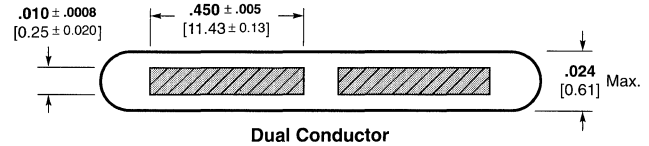
Copper cable used in AMPOWER Wave Crimp System assemblies is available in dual or single conductor in .010 [0.25] or .020 [0.51] thick copper.

Conductor Thickness	DC Resistance	
	Single	Dual
.010 0.25	.912	2.030
.020 0.51	.456	.996

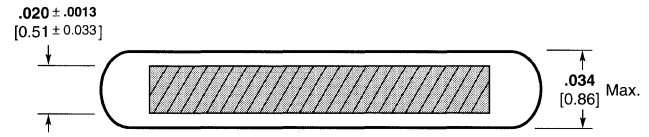
Note: The DC resistance of a 12.0 [304.80] length of conductor, when measured at 25°C and 10 amps, shall be < this figure (in milliohms).



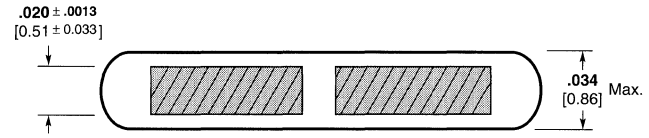
Single Conductor



Dual Conductor



Single Conductor

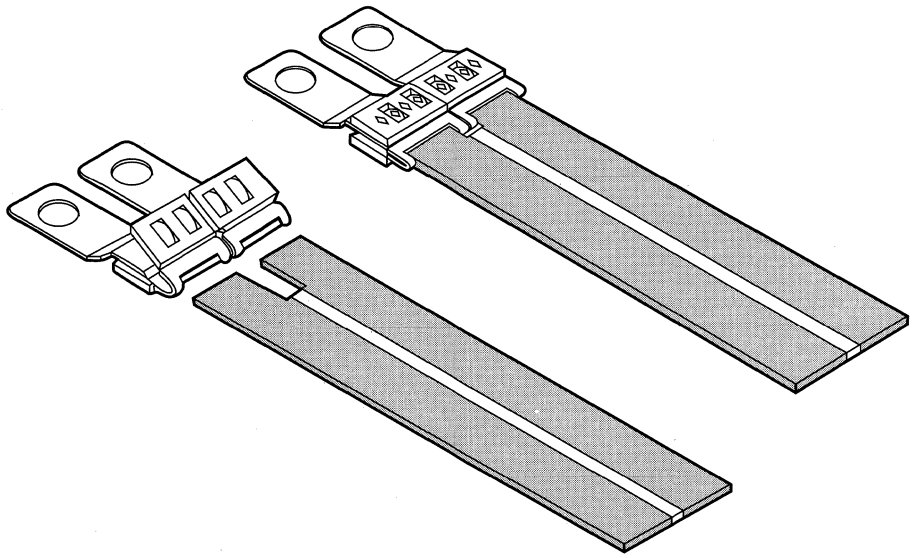


Dual Conductor

Circular MILS Per Conductor	Approx. AWG Per Conductor
12,566	9
5,729	13
25,133	6
11,459	10

Wave Crimp

The most unique feature of the AMPOWER system is the wave crimp itself. Comprised of a hard copper transition sandwiched between soft copper profile plates, it is forced closed on the prepared cable end. The resultant sheared edges of the cable make a termination interface larger in area than the cable cross section itself. For reliability, diamond-shaped indents spread each wave, creating a stored energy crimp that is a mechanically sound, low resistance, gas-tight interface without cable stripping.



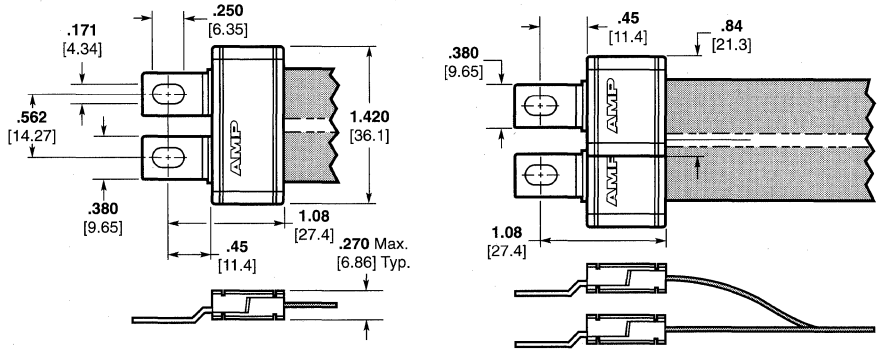
SOURCE: Catalog 82271

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

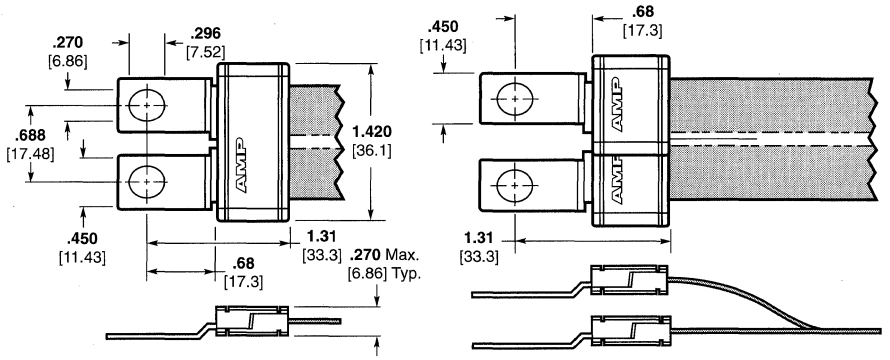
Terminal Block and Stud Interface

Terminal Block Interface

.562 [14.27] Centerline

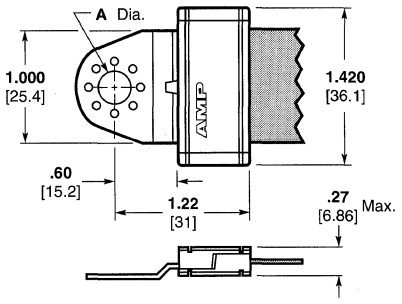


.688 [17.48] Centerline



Centerline Spacing	Part Numbers	
	Termination Assembly	Cover
.562 14.27	765216-1	765228-1 Full-Width
—	765216-1	765229-1 Half-Width
.688 17.48	765225-1	765228-1 Full-Width
—	765225-1	765229-1 Half-Width

Stud Interface



Stud Size	Hole Dia. A	Part Numbers	
		Termination Assembly	Cover
1/4"	.266 6.76	765226-1	765228-1
5/16"	.328 8.33	765226-2	765228-1

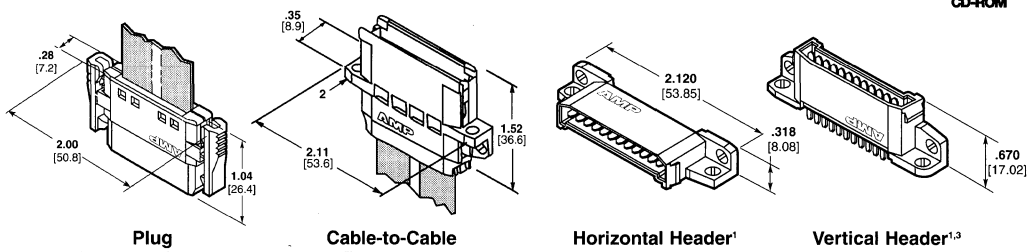
SOURCE: Catalog 82271

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

Separable Interface

Full-Width Plug, Receptacle and Headers

EADS CD-ROM



Plug
Part No. 765191-1

Cable-to-Cable Receptacle
Part No. 765478-1[1,2]

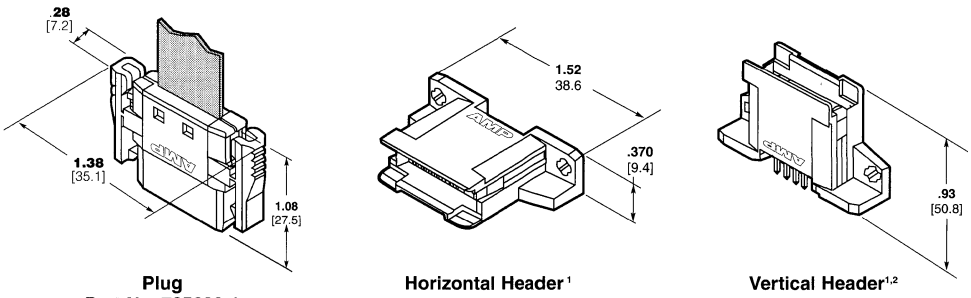
Horizontal Header[1]

Vertical Header[1,3]

Centerline Spacing	Type	Tail Length Min.	Header Part Numbers[1]			
			Horizontal		Vertical	
			Std. Housing	High-Temp.	Std. Housing	High-Temp.
.100 2.54	Solder Tail	.124 3.15	765204-1	765204-5	765206-1	765206-5
		.165 4.19	765204-2	765204-6	765206-2	765206-6
		.225 5.72	765204-4	765204-8	765206-4	765206-8
		.295 7.49	765204-3	765204-7	765206-3	765206-7
	ACTION PIN Tail	.144 3.66	—	—	765271-1	—

[1]Recommended mounting hardware: 2, #4-40 screws and nuts or, 2 eyelets **Part Number 748572-2**, customer supplied.
[2]Also available without mounting flange.
[3]Allow .262 [5.65] for mating cable to pc board.

Half-Width Plug and Headers



Plug
Part No. 765622-1

Horizontal Header[1]

Vertical Header[1,2]

Centerline Spacing	Type	Tail Length Min.	Header Part Numbers[1]			
			Horizontal		Vertical	
			Std. Housing	High-Temp.	Std. Housing	High-Temp.
.100 2.54	Solder Tail	.124 3.15	765450-1	765450-5	765449-1	765449-5
		.165 4.19	765450-2	765450-6	765449-2	765449-6
		.225 5.72	765450-4	765450-8	765449-4	765449-8
		.295 7.49	765450-3	765450-7	765449-3	765449-7
	ACTION PIN Tail	.144 3.66	—	—	765451-1	—

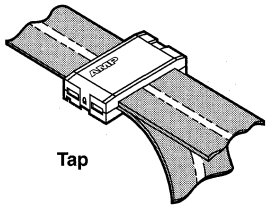
[1]Recommended mounting hardware: 2, #4-40 screws and nuts or, 2 eyelets **Part Number 748572-2**, customer supplied.
[2]Allow .262 [5.65] for mating cable to pc board.

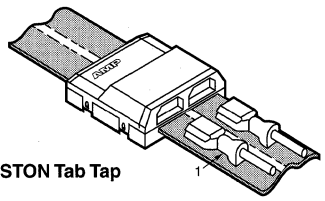
SOURCE: Catalog 82271

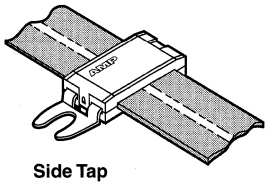
Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

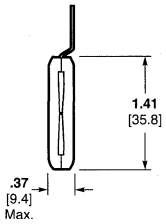
Mid-Cable Terminations

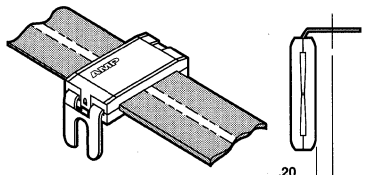
EADS CD-ROM

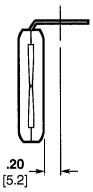

Tap


.250 FASTON Tab Tap [1]


Side Tap



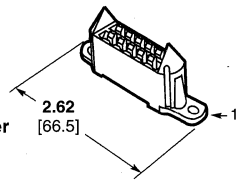

Right-Angle Side Tap



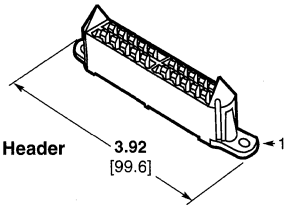
Termination Type	Part Numbers		
	Termination Assembly	Housing Cover	Housing Base
Tap	765277-1	765278-1	—
.250 FASTON Tab Tap	765276-1	765295-1	765296-1
Side Tap (¼" stud)	765275-1	765278-1	—
Right-Angle Side Tap (¼" stud)	765311-1	765278-1	—

Note: Three connectors are capable of terminating up to two .020 [0.51] thick cables.
[1] FASTON receptacles not included. Use Ultra-Pod fully insulated FASTON receptacles with 18 AWG to 12 AWG wire. See Catalog 82274.

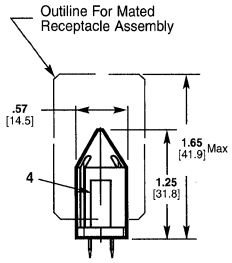
Self-Aligning Headers



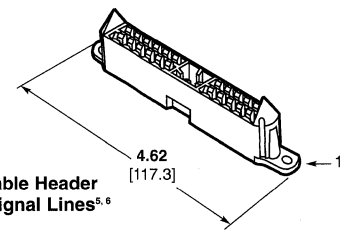
2 Cable Header



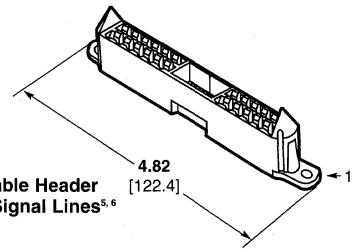
4 Cable Header



Typical For All Vertical Headers



4 Cable Header w/8 Signal Lines[5,6]



4 Cable Header w/21 Signal Lines[5,6]

Centerline Spacing[3]	Type	Tail Length	Header Part Numbers[2]							
			2 Cable		4 Cable		4 Cable wtih 8 Signal Lines[5]		4 Cable with 21 Signal Lines[5]	
			Std. Housing	High-Temp.	Std. Housing	High-Temp.	Std. Housing	High -Temp.	Std. Housing	High-Temp.
.100 [2.54]	Solder Tail	.122 .310	765527-1	765527-6	765208-1	765208-6	765249-1	765249-7	765265-1	765265-6
		.156 3.96	765527-2	765527-7	765208-2	765208-7	765249-2	765249-8	765265-2	765265-7
		.226 5.74	765527-3	765527-8	765208-3	765208-8	765249-3	765249-9	765265-3	765265-8
		.296 7.52	765527-4	765527-9	765208-4	765208-9	765249-4	1-765249-0	765265-4	765265-9
	ACTION PIN Tail	.144 3.66	765527-5	—	765208-5	—	765249-5	—	765265-5	—

[1] Mounting holes offset from centerline of part .030 [.76].
[2] Recommended mounting hardware: 2, #4-40 screws and nuts or, 2 eyelets **Part Number 748572-2,** customer supplied.
[3] Row-to-row spacing—.250 [6.35]
[4] Polarizing slot, 2 places.
[5] Mates with Mini-Tandem spring receptacle contacts, **Part Number 530553-□** See page 3157.
[6] Signal pins not shown for clarity.

SOURCE: Catalog 82271

Specifications subject to change.
1-800-522-6752
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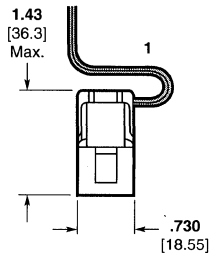
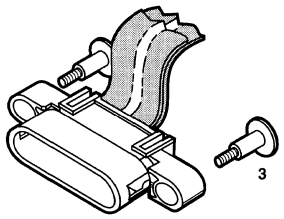
1-800-722-1111
Tooling/Technical Assistance Center

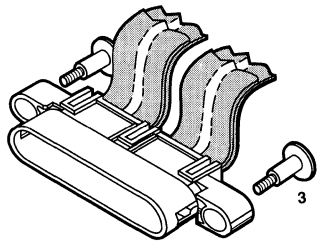
Self-Aligning Receptacles (Float Mount)



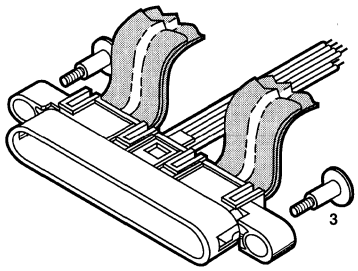
Typical for all Self-Aligning Receptacles



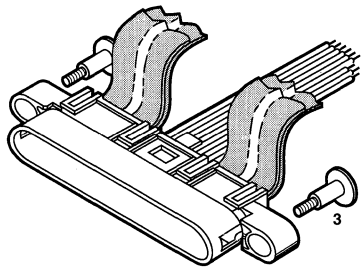
2 Cable Receptacle



4 Cable Receptacle



4 Cable Receptacle w/8 Signal Lines[4]

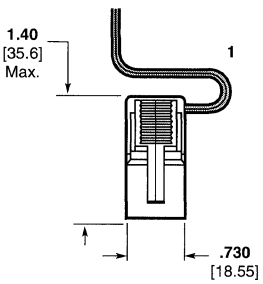


4 Cable Receptacle w/21 Signal Lines[4]

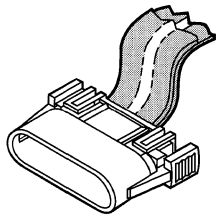
Description	Receptacle Part Numbers			
	2 Cable	4 Cable	4 Cable with 8 Signal Lines	4 Cable with 21 Signal Lines
Housing	765528-1	765247-1	765224-1	765261-1
Strain Relief	765530-1	765250-1	765238-1	765238-1
Ground Contacts[2]	765209-1	765209-1	765209-1	765209-1
Power Contacts	765209-2	765209-2	765209-2	765209-2

[1]Service loop suggested, allows for connector float.
[2]Ground contacts are longer and mate before power contacts.
[3]Recommended mounting hardware: **Part Number 208211-4**, 2 required per kit and 2 #6-32 nuts (customer supplied).
[4]Self-Aligning Receptacles used with Signal Module Assemblies, see page 8128.

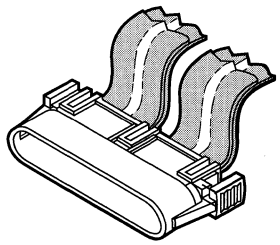
Self-Aligning Receptacles (Latching)



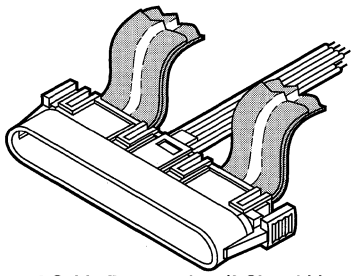
Typical for all Self-Aligning Receptacles



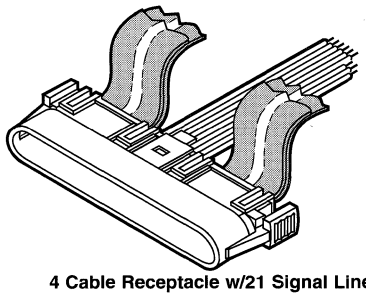
2 Cable Receptacle



4 Cable Receptacle



4 Cable Receptacle w/8 Signal Lines[3]



4 Cable Receptacle w/21 Signal Lines[3]

Description	Receptacle Part Numbers			
	2 Cable	4 Cable	4 Cable with 8 Signal Lines	4 Cable with 21 Signal Lines
Housing	765528-1	765247-1	765224-1	765261-1
Strain Relief	765529-1	765248-1	765251-1	765251-1
Ground Contacts[2]	765209-1	765209-1	765209-1	765209-1
Power Contacts	765209-2	765209-2	765209-2	765209-2

[1]Service loop suggested, allows for connector disconnection.
[2]Ground contacts are longer and mate before power contacts.
[3]Self-Aligning Receptacles used with Signal Module Assemblies, see page 8128.

SOURCE: Catalog 82271

Specifications subject to change.
1-800-522-6752
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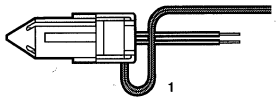
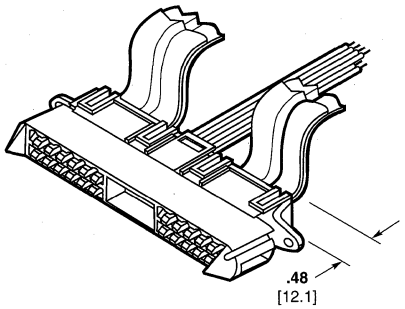
1-800-722-1111
Tooling/Technical Assistance Center

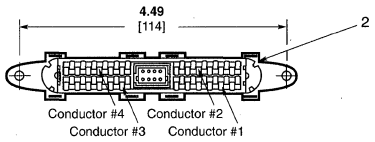
Self-Aligning Plug Connector 4 Cable w/8 Signal Lines



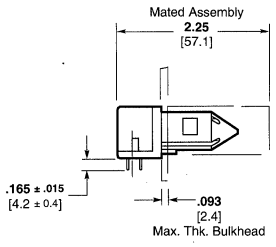


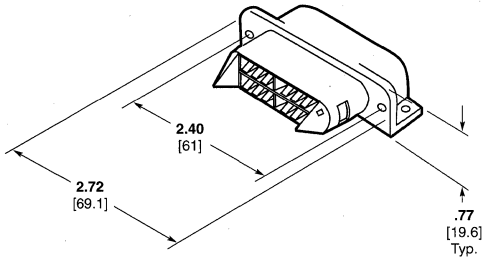
Description	Part Numbers
Housing	765241-1
Strain Relief	765242-1
Transition Assembly	765245-1

[1]Service loop suggested, when float mount strain relief used (not shown).
[2]Polarizing slots, 2 places.
[3]Self-Aligning Plug used with Signal Module Assemblies, see below.



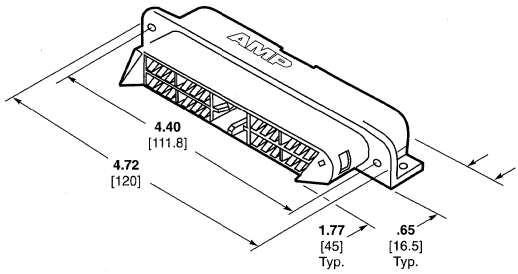
Right-Angle Self-Aligning Headers





Part No. 765608-1

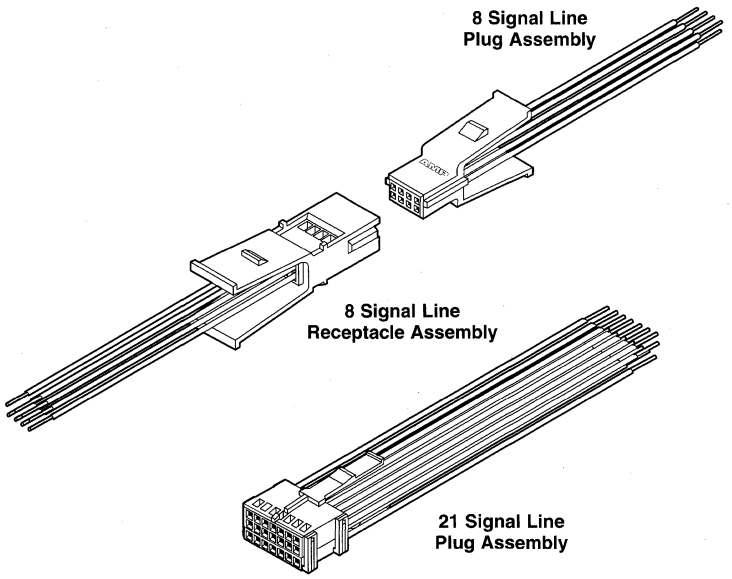
Mates with—2 Cable Self-Aligning Receptacle. See page 8127.



Part No. 765344-1

Mates with—Self-Aligning Receptacle with 8 Signal Lines. See page 8127.

Signal Module Assemblies



Assembly	Part Numbers	
	Housing	Contact
8 Signal Plug Housing	765243-1	530553-6
8 Signal Receptacle Housing	765239-1	102095-3
21 Signal Plug Housing	765258-1 + 765259-1	530553-6

Self-Aligning Plug and Receptacle Assemblies used with these Signal Module Assemblies. See page 8127 and above.
Note: Assemblies can be quoted with a variety of lengths and connector interfaces.

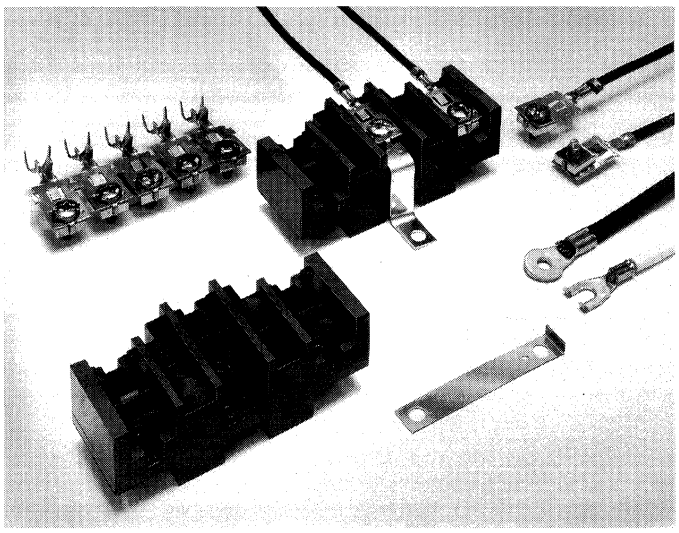
SOURCE: Catalog 82271

Power Block and Power Rings Connector System

Product Facts

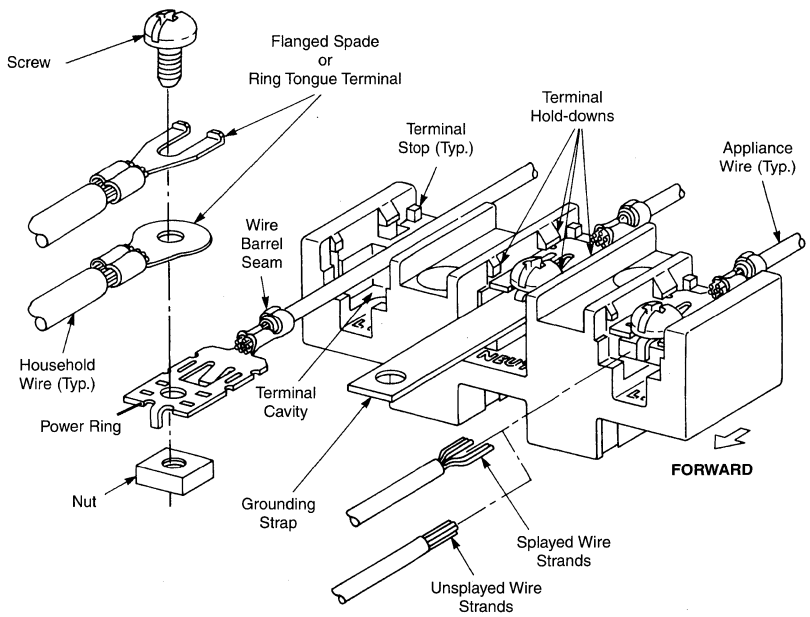
- Simplifies and facilitates power integration for washers, dryers, air conditioners and other household appliances
- Power Rings snap into 3-position phenolic Power Block, further facilitating installation
- Power Block is easily mounted in appliance using sheet metal screws
- Power Block and Power Rings allow easy attachment of power cords or direct wiring with 10 through 6 AWG [5 through 15 mm²] cable in accordance with National Electrical Code requirements

- Recognized under the Component Program of Underwriters Laboratories Inc., File No. E60677 (Power Block) File No. E13288 (Power Ring)
- Certified by Canadian Standards Association, File No. LR84713 (Power Block) File No. LR7189 (Power Ring)



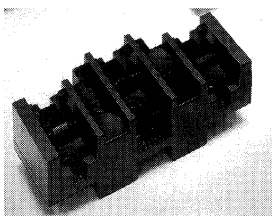
Power Block and Power Rings Connector System

Voltage Rating—250 VAC



Note: Appliance and household wire supplied by user.

Power Block



Part No. 520942-2

Note: Housing Dim. (Typ.)—3.38 [85.85] L x 1.55 [39.37] W x 1.180 [29.97] H

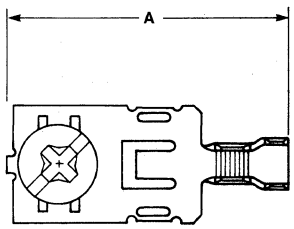
SOURCE: Catalog 82242

Specifications subject to change.

1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

Power Rings

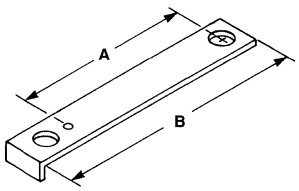


Wire Size AWG	Wire Size mm²	Insulation Diameter Range	Dim. A	Finish	Power Ring Part No.	Current Rating* (amperes)
16-12 or (2) 14s	1.25-3 or (2) 2s	**.110-.160** 2.79-4.06	**1.365** 34.67	Unplated	520943-1	30
				Pre-Tin Plated	520944-1	
16-10 or (2) 12s	1.25-6 or (2) 3s	**.220-.310** 5.59-7.87 or (2) **.170s** 4.32	**1.500** 38.10	Unplated	520936-1	50
				Pre-Tin Plated	520937-1	

*Static heating test current based on UL 486A standard of 50°C maximum temperature rise above ambient temperature

Note: Power Rings must be purchased separately.

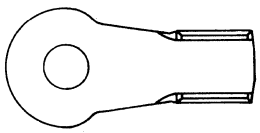
Grounding Strap

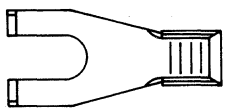


Dimensions A	Dimensions B	Part No.
1.650 41.91	**2.340** 59.44	63450-1*
2.350 59.69	**3.040** 77.22	63554-1**

*Pre-Tin
**Unplated

Optional Ring Tongue and Flanged Spade Terminals



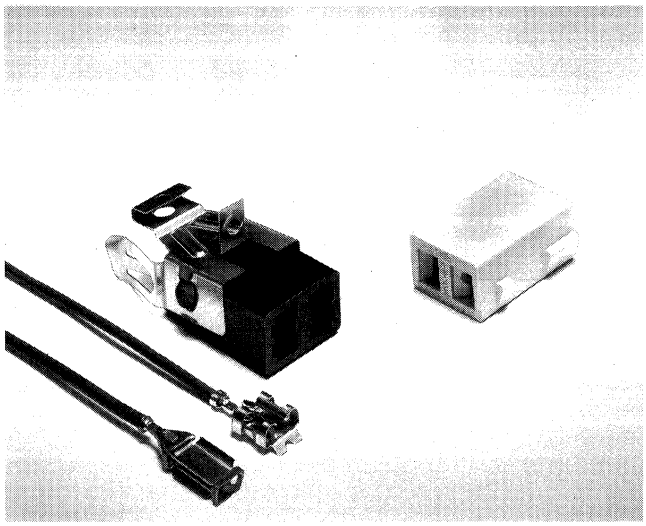


Wire Size AWG	Wire Size mm²	Type	Finish	Part No.	Standard Applicator for Standard 10-Ton Benchmaster Machine 459631-1
10-6	5-15	Ring Tongue	Pre-Tin Plated	485015-1	565947-2
			Unplated	485015-2	
12-10	3-6	Flanged Spade	Unplated	63526-1	—

Note: No hand tool available.

SOURCE: Catalog 82242

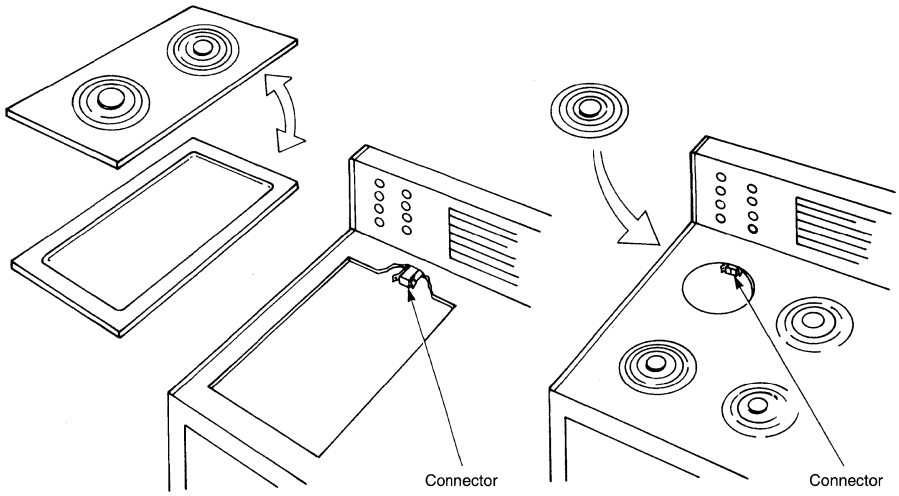
Surface Burner Connector System



Product Facts

- Accepted as the industry standard by leading kitchen-range manufacturers
- Designed for easy connection of surface burners in ranges of virtually any manufacture
- Permits a manufacturer to use high-speed equipment to terminate leads
- Permits easy interchange of cooking or burner elements
- Available with a housing of heat-resistant phenolic for temperatures up to 200°C [392°F] or with a porcelain housing for temperatures above 300°C [572°F]
- Lab tests indicate connectors still operational after 3500 mating/unmating cycles
- Housings snap into any of the six clips, which satisfy various range and burner designs
- Recognized under the Component Program of Underwriters Laboratories Inc., File No. E70200
- Certified by Canadian Standards Association, File No. LR7189

Heavy-Duty Burner Connector Housings, Clips and Receptacles



For Ranges with Interchangeable Cooking Modules (eg. grills and broilers)

For Ranges with Standard Burner Configurations

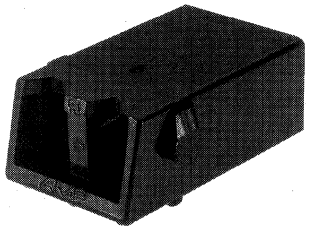
SOURCE: Catalog 82242

Specifications subject to change.

1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

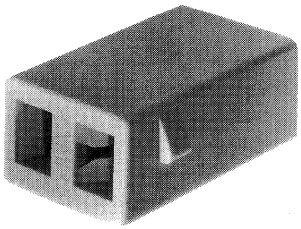
Surface Burner Connector Housings



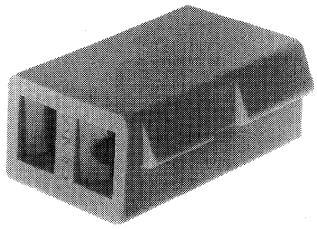
Part Number 770524-1 (Shown)
Part Number 770500-1

Material:
Phenolic, black, heat resistant grade

Note: Housing Dim. (Typ.)—1.92 [48.77] L x 1.155 [29.34] W x .730 [18.54] H



Part Number 770324-1



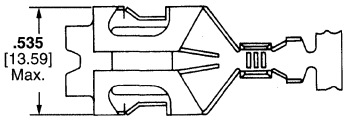
Part Number 770359-1

Material:
Porcelain, natural

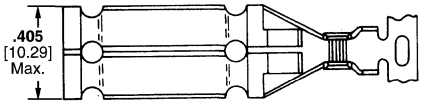
Note: 770324-1 Housing is used with an AMP Clip; Housing 770359-1 is used with a "purchased" or "user" Clip.

Receptacles

Wire Size:
18-14 AWG [0.8-2.0 mm²]



Part Number 640748-1[1]
Material: Copper-nickel-tin, Alloy 725
Insulation Dia.: .156 [3.96] Max.



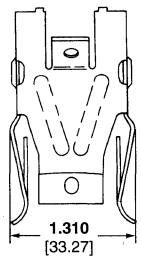
Part Number 770321-1[2]
Material: Copper Alloy 195

Part Number 770321-2[2]
Material: Beryllium copper
Insulation Dia. Range: .105-.154 [2.67-3.91]

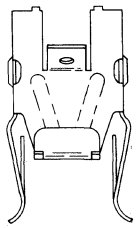
[1]Receptacle **Part Number 640748** used with standard surface burner units only.
[2]Receptacle **Part Number 770321-1** or **-2** used with interchangeable modules only.

Mounting Clips

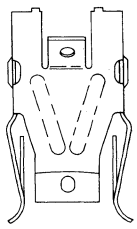
Material:
Stainless Steel



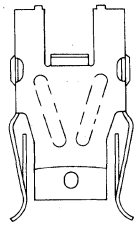
Part Number 640750-1



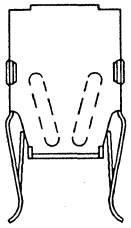
Part Number 640751-1



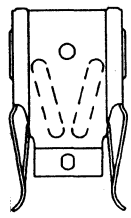
Part Number 643074-1



Part Number 643323-1



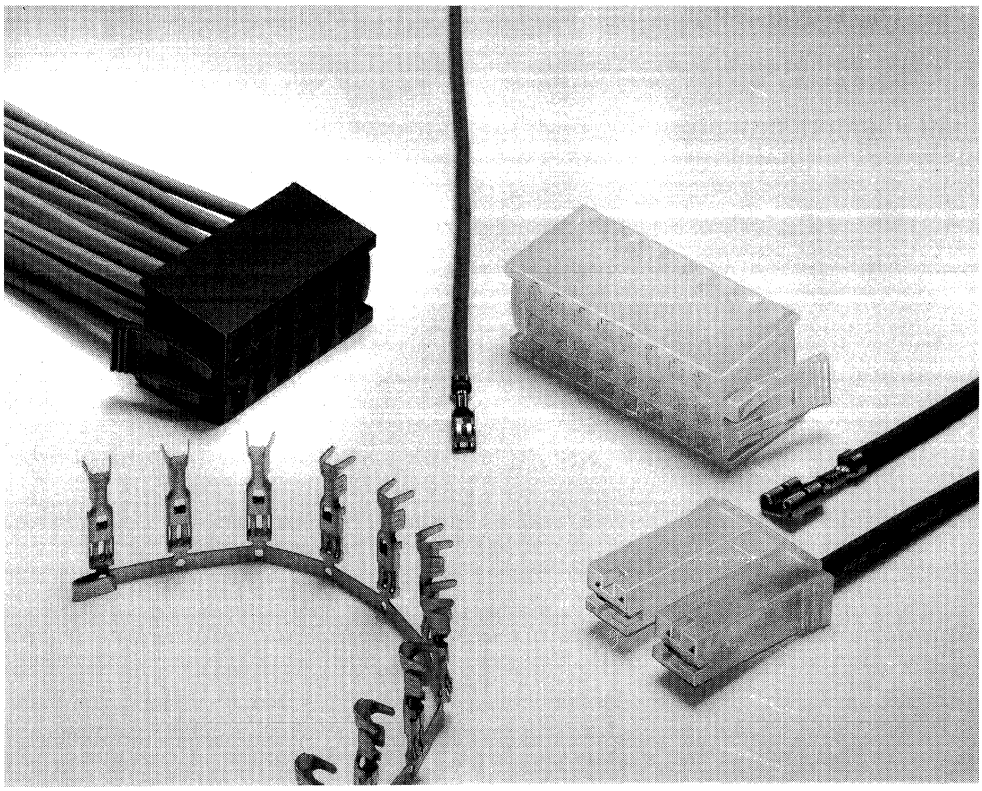
Part Number 770260-1



Part Number 63673-1

SOURCE: Catalog 82242

Timer and Water Valve Coil Connectors



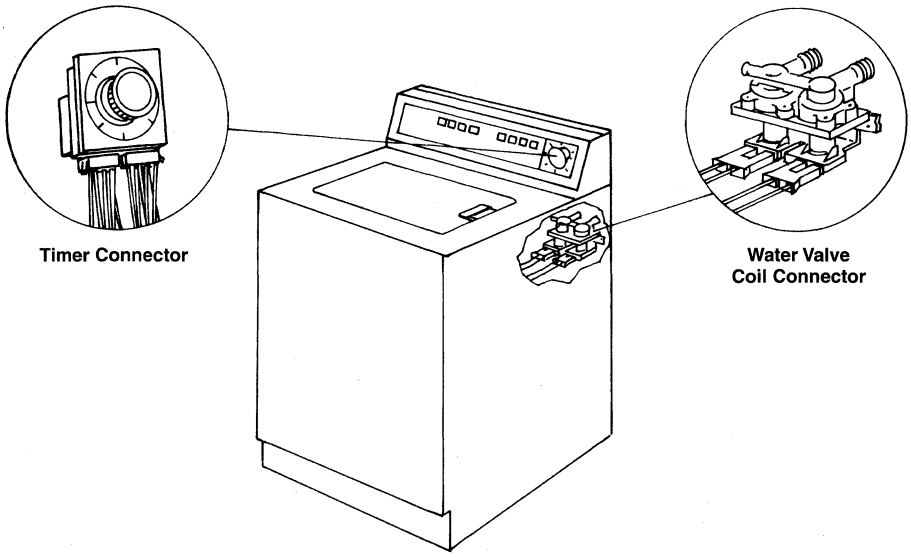
Product Facts

Timer Connector

- New internal locking mechanism eliminates lances...simplifies connections
- A "clean" contact, i.e., no lances, no lance damage during handling, no contact backout due to lance
- No tangled harnesses due to lance nesting
- Contact easily extracted without damage
- Secure and positive contact retention in housing
- No orientation of contact required
- Accommodates 14-20 AWG [2-0.5 mm²] wires; also two 18 AWG [0.8-0.9 mm²] wires or two 20 AWG [0.5-0.6 mm²] wires
- Low insertion and extraction forces
- Excellent contact mating with tabs
- Recognized under the Component Program of Underwriters Laboratories Inc., File No. E28476
- Certified by Canadian Standards Association, File No. LR7189

Water Valve Coil Connector

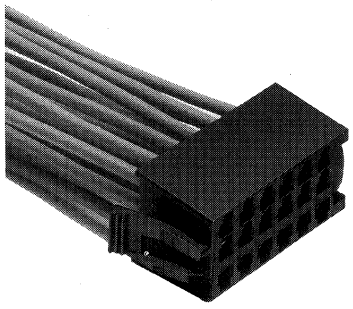
- Prevents terminal back-out of housing through plastic retention feature
- Higher disengagement forces possible with Positive Lock and Low Insertion Force (LIF) FASTON receptacles (Hole required in mating tab)
- Recognized under the Component Program of Underwriters Laboratories Inc., File No. E13288
- Certified by the Canadian Standards Association, File No. LR82852



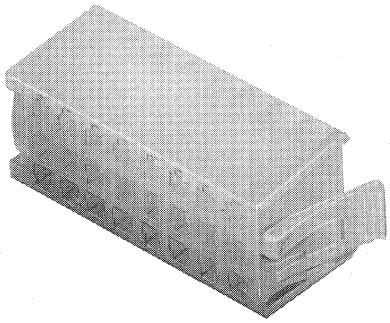
SOURCE: Catalog 82242

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

Timer Connector Housings



18 Position
(For Use in Dishwashers)

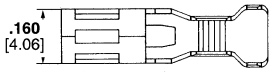


24 Position
(For Use in Automatic Washers)

No. of Positions	Part Numbers	
	Right-Hand Color: Black	Left-Hand Color: Natural
18	770199-1	770200-1
24	770197-1	770198-1

Terminal

Wire Size:
14-20 AWG [2-0.5 mm²]



Part Number 770642-1

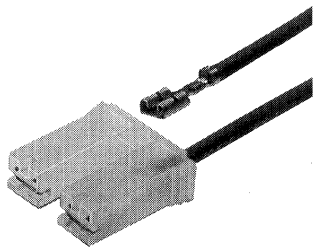
Water Valve Coil Connectors

No. of Pos.	Color	Part Numbers
2	Natural	520935-1
	Red	520935-2

Note: Housings accept AMP "250" Series FASTON Receptacles: 42400, 60635 (Standard); 63097, 63119, 63239 (Positive Lock Mark II); 63306, 63365 (Low Insertion Force). For more information on these receptacles, request Catalog 82004.

Applications

- Washing machine mixing valves
- Dishwasher fill valves
- Automatic ice makers

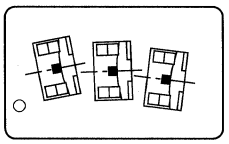


2 Position

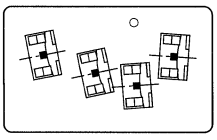
Switch Connectors

250 Series FASTON Receptacle Housings

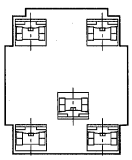
No. of Pos.	Color	Part Numbers
3	Red	521004-1
4	Red	521003-1
5	Red	521001-1
8	Red	521002-1
9	Red	521000-1



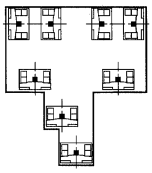
3 Position



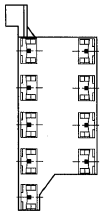
4 Position



5 Position



8 Position

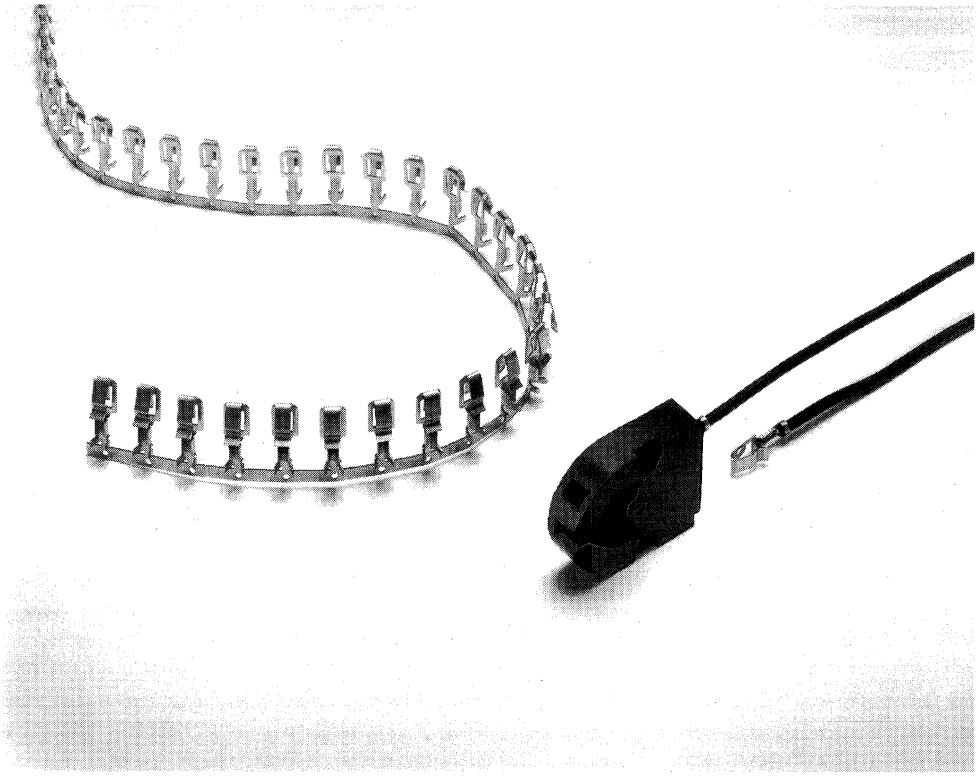


9 Position

SOURCE: Catalog 82242

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

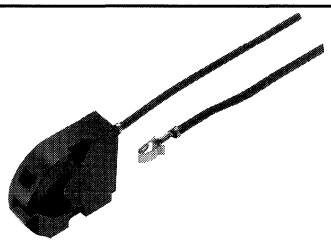
Fluorescent Tube Socket



Product Facts

- One-piece molded phenolic housing
- Snap-in contacts with patented "F" crimp
- Contacts completely encased in housing
- Accepts T-8 or T-12 fluorescent tubes
- Contacts available in strip form for AMP-O-LECTRIC automachine operation
- Choice of mounting method
- Recognized under the Component Program of Underwriters Laboratories Inc., File No. E36851
- Certified by Canadian Standards Association, File No. LR20266

Housing

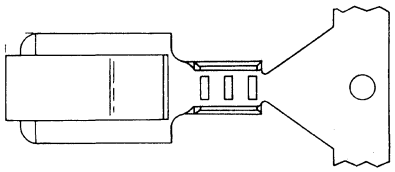


Part No. 1-480344-0

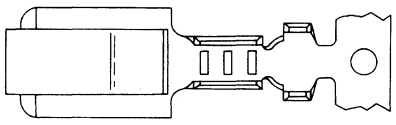
Note: Housing Dim. (Typ.)—1.495 [37.97] L x 1.250 [31.75] W x .390 [9.91] H

Tube Socket Terminals

Wire Size:
20-16 AWG [0.5-1.4 mm²]



Type A



Type B (with Insulation Crimp)

Type	Insulation Diameter Maximum	Finish	Terminal Part No. (Strip)	Quick-Change Applicator for AMP-O-LECTRIC Model "K" Termination Machine	Integral Die Hand Tool
A	—	—	640483-1	466695-2	
B	.130 3.3	—	60805-2	466390-2	47044-2

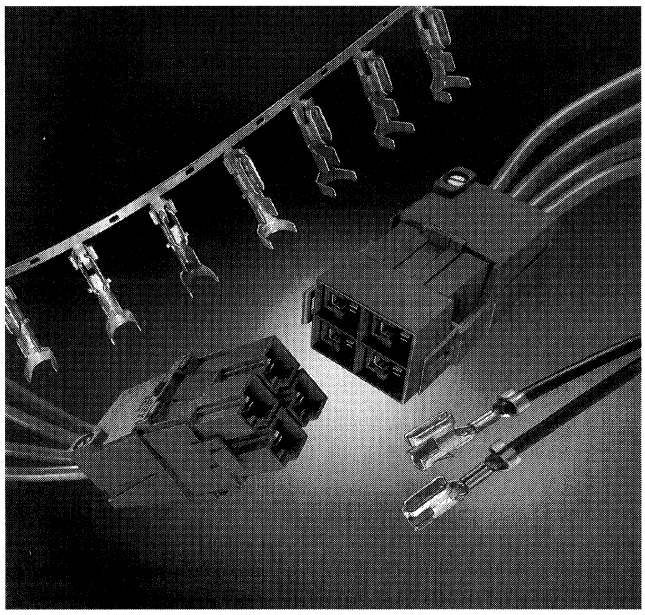
SOURCE: Catalog 82242

Specifications subject to change.

1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

High Current Commercial Connector



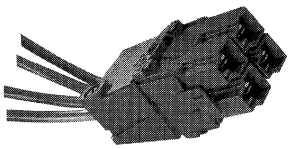
Product Facts

- Current Ratings:
  - 6 AWG [15 mm²]—40 amperes
  - 8 AWG [8 mm²]—35 amperes
  - 10 AWG [6 mm²]—30 amperes
  - 12 AWG [3 mm²]—23 amperes
  - 14 AWG [2 mm²]—20 amperes
  - 16 AWG [1.25 mm²]—15 amperes
  - 30°C T-Rise—four circuit housing fully loaded; single circuit energized
- Designed to meet the following UL requirements:
  - —Housing rating for 600 VAC
  - —+105°C material
- Positive locking housings
- Housing used in free-hanging or panel-mounted applications
- Hermaphroditic contacts used in both plug and cap halves—inventories minimized
- Contacts can be terminated by automatic machine for lowest applied cost
- Recognized under the Component Program of Underwriters Laboratories Inc., File No. E28476
- Certification by Canadian Standards Association, File No. LR 7189 Pending

4-Circuit High Current Cap Housing

Part Number 643267-1 (marked)*
Part Number 643267-2 (unmarked)

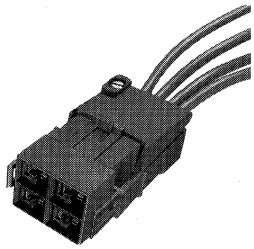
*Characters 3 and 4 marked on near surface; characters 1 and 2 marked on opposite side.



4-Circuit High Current Plug Housing

Part Number 641685-2 (marked)*
Part Number 641685-1 (unmarked)

*Characters 3 and 4 marked on near surface; characters 1 and 2 marked on opposite side.



Note: Housing Dim. (Typ.)—1.340 [34.04] L x 1.600 [40.64] W x 1.360 [34.54] H

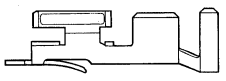
Strain Relief—2 Required (Used with either plug or cap housing)

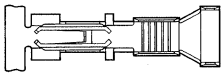
Part Number 643266-1

Strain Relief Adapter—2 Required (Used with plug housing only)

Part Number 643268-1
(attached to plug housing, providing feature to attach strain relief)

Hermaphroditic Contacts





Wire Size Range		Ins. Dia.	Part Numbers		Applicator No.	Die Set No.[1]
AWG	[mm²]	(Max.)	Strip	Loose Piece		
16-12	1.25-3	.270 6.86	350651-1	350822-1	466209-1[2]	90347-2[5]
12-8	3-8	.360 9.14	350650-1	350821-1	466173-1[2]	90349-2[4] / 90348-2[4]
6	13-15	.360 9.14	770142-1	—	566346-2[3]	—

[1] Use with Hand Tool **Part No. 69710.**
[2] Use with Terminating Machine **Part No. 467000-1.**
[3] Use with Terminating Machine **Part No. 565433-4.**
[4] Use **Part No. 90348-2** for 8 AWG [8 mm²]; Use **Part No. 90349-2** for 12-10 AWG [3-6 mm²].
[5] Use with 16-14 AWG [1.25-2 mm²] only.
Contact Extraction/Lance Reset Tool **Part No. 58413-1.**

SOURCE: Catalog 82054

Specifications subject to change.

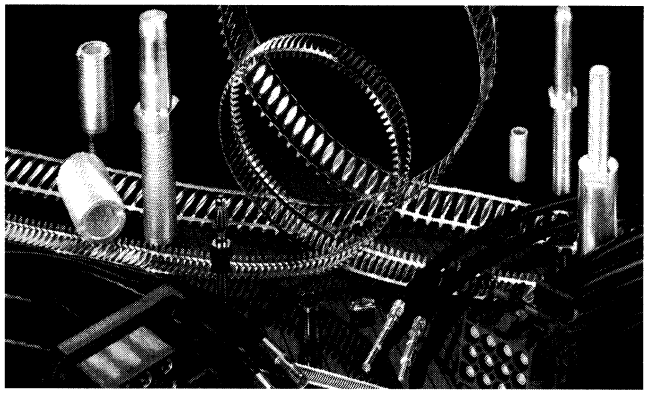
1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

High Current Pin and Socket Contacts

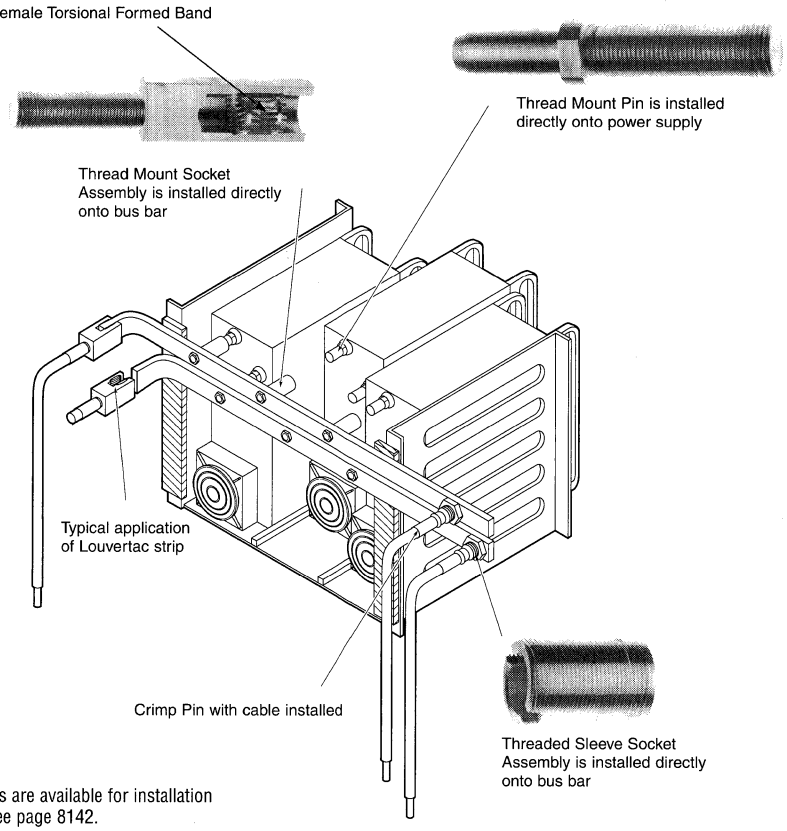
Product Facts

- Pins and sockets have low insertion force
- High current ratings with very low resistance
- All products have gold or silver plating
- Temperature range from –196°C to +200°C [-162°F to 392°F] available
- Formed bands are available for up to 1.250 [31.75] pin diameter



Interfaces

The variety of pins and sockets available provide a quick and simple solution to high current applications.

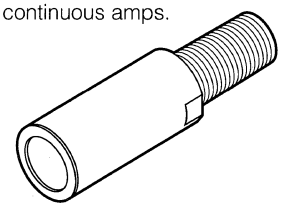


Note: Contact Bands are available for installation onto a pin. See page 8142.

Threaded Mount Socket and Pin Assemblies

Thread Mount Sockets

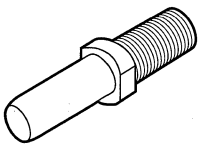
The sockets are designed for easy installation and removal. The large variety of sizes have ratings from 30 to 1400 continuous amps.



Mating Pin Dia.	Part Number	Contin. Current (amps)	Volt. Drop (mV)
2 mm	192059-1	30	12
4 mm	192129-1	60	10
6 mm	192211-1	100	11
8 mm	192271-1	185	12
12 mm	192327-1	290	13
16 mm	192444-1	365	10
20 mm	192468-1	460	11
25 mm	192342-1	770	10
30 mm	192352-1	1000	11
35 mm	192359-1	1400	11

Thread Mount Pins

The pins are designed for thread mount. The large variety of sizes have ratings from 30 to 1400 continuous amps and are designed to be mated with the sockets.

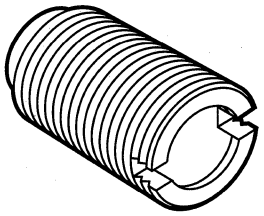


Pin Dia.	Part Number	Contin. Current (amps)
2 mm	192085-1	30
4 mm	192161-1	60
6 mm	192244-1	100
8 mm	192293-1	185
12 mm	193362-1	290
16 mm	192453-1	365
20 mm	192477-1	460
25 mm	192345-1	770
30 mm	192355-1	1000
35 mm	192363-1	1400

SOURCE: Catalog 65141

Threaded Sleeve Sockets

The Threaded Sleeve Socket is designed for high current in a restricted space. The Sleeve can be screwed directly into a threaded bus bar or it may be inserted into a drilled hole in the bus bar with tightened nuts on each side of the bus bar. A Crimp Pin or Thread Mount Pin can be attached to a cable for the completed connector.

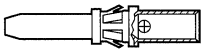


Mating Pin Dia.	Part Number	Continuous Current (amps)	Voltage Drop (mV)
2 mm	1-192447-0	30	12
4 mm	192447-8	60	10
6 mm	192447-2	100	11
8 mm	1-192447-8	185	12
12 mm	1-192447-2	290	13
16 mm	192447-1	365	10
20 mm	1-192447-3	460	11
25 mm	1-192447-4	770	10
30 mm	1-192447-5	1000	11
35 mm	1-192447-6	1400	12

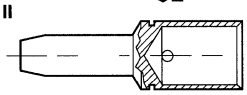
Crimp Pins

Crimp Pins feature a mechanism for locking the pin into a housing designed by the customer. The 2 mm, 4 mm, 6 mm and 8 mm pins have a retention spring that locks the pin into a housing cavity. An extraction tool is offered to remove the contact. Sizes from 12 mm to 35 mm feature a retaining ring groove designed for commercially available retaining rings. The 2 mm and 4 mm pins are crimped with a Daniels Hand Crimp Tool. Pin sizes from 6 mm to 35 mm may be crimped with the indicated tooling and an AMPOWER DYNA-CRIMP Part No. 69120-1 hydraulic power unit.

Style I



Style II

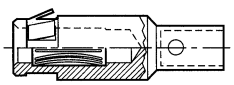


Pin Dia.	Part No.	Contin. Curr. (amps)	Use with AWG	Voltage Drop (mV)	Style	Crimp Tools		Extraction Tool
						Die	Head	
2 mm	193837-1	24	14	10	I	M310	TP1019	58095-1
		30	12	12	I	M310	TP1019	58095-1
4 mm	193837-2	44	10	8	I	M310	TP1020	679916-1
	193837-3	60	8	8	I	M310	TP1020	679916-1
6 mm	193837-4	76	6	9	I	69133-1	69099	679917-1
	193837-5	100	4	9	I	69134-2	69099	679917-1
8 mm	193837-6	135	2	10	I	46765-2	69099	679918-1
	193837-7	185	1/0	12	I	46766-2	69099	679918-1
12 mm	193836-2	215	2/0	11	II	46767-2	69099	—
	193836-4	290	4/0	11	II	46750-2	69099	—
16 mm	193836-6	290	4/0	10	II	46750-2	69099	—
	193836-8	365	300 MCM	11	II	46752-2	69099	—
20 mm	1-193836-0	325	250 MCM	11	II	46751-2	69099	—
	1-193836-2	445	400 MCM	12	II	46754-2	69082	—
25 mm	1-193836-4	585	600 MCM	11	II	46756-2	69082	—
	1-193836-6	770	900 MCM	12	II	46759-2	69082	—
30 mm	1-193836-8	650	700 MCM	10	II	46757-2	69082	—
	2-193836-0	825	1000 MCM	12	II	46760-2	69082	—
35 mm	2-193836-2	650	700 MCM	10	II	46757-2	69082	—
	2-193836-4	825	1000 MCM	12	II	46760-2	69082	—

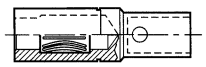
Crimp Sockets

Crimp Sockets feature a mechanism for locking the socket into a housing designed by the customer. The 2 mm, 4 mm, 6 mm and 8 mm pins have a retention spring that locks the socket into a housing cavity. An extraction tool is offered to remove the contact. Sizes from 12 mm to 35 mm feature a retaining ring groove designed for commercially available retaining rings. The 2 mm and 4 mm sockets are crimped with a Daniels Hand Crimp Tool. Socket sizes from 6 mm to 35 mm may be crimped with the indicated tooling and an AMPOWER DYNA-CRIMP Part No. 69120-1 hydraulic power unit.

Style I



Style II



SOURCE: Catalog 65141

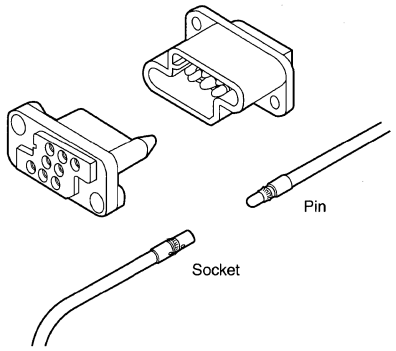
Mating Pin Dia.	Part No.	Contin. Curr. (amps)	Use with AWG	Volt. Drop (mV)	Style	Crimp Tools		Extraction Tool
						Die	Head	
2 mm	193673-1	24	14	10	I	M310	TP1021	58095-1
		30	12	12	I	M310	TP1021	58095-1
4 mm	193673-2	44	10	8	I	M310	TP1022	679916-1
	193673-3	60	8	8	I	M310	TP1022	679916-1
6 mm	193673-4	76	6	9	I	69133-1	69099	679917-1
	193673-5	100	4	9	I	69134-2	69099	679917-1
8 mm	193673-6	135	2	10	I	46765-2	69099	679918-1
	193673-7	185	1/0	12	I	46766-2	69099	679918-1
12 mm	193673-8	215	2/0	11	II	46767-2	69099	—
	193673-9	290	4/0	11	II	46750-2	69099	—
16 mm	1-193673-0	290	4/0	10	II	46750-2	69099	—
	1-193673-1	365	300 MCM	11	II	46752-2	69099	—
20 mm	1-193673-2	325	250 MCM	11	II	46751-2	69099	—
	1-193673-3	445	400 MCM	12	II	46754-2	69082	—
25 mm	1-193673-4	585	600 MCM	11	II	46756-2	69082	—
	1-193673-5	770	900 MCM	12	II	46759-2	69082	—
30 mm	1-193673-6	650	700 MCM	10	II	46757-2	69082	—
	1-193673-7	825	1000 MCM	12	II	46760-2	69082	—
35 mm	1-193673-8	650	700 MCM	10	II	46757-2	69082	—
	1-193673-9	825	1000 MCM	12	II	46760-2	69082	—

Retrofit Contacts for Cable-to-Cable and Cable-to-Board Connectors

The Louvertac bands have the versatility of being designed into contact dimensions used in existing AMP connectors.

Metrimate high current contacts have been designed to retrofit into the existing Drawer Connector housings. A fully-loaded 8-position connector can handle 33 amps per line with a 30° T-rise on either the cable-to-cable or cable-to-board.

Cable-to-Cable
Finish—Gold

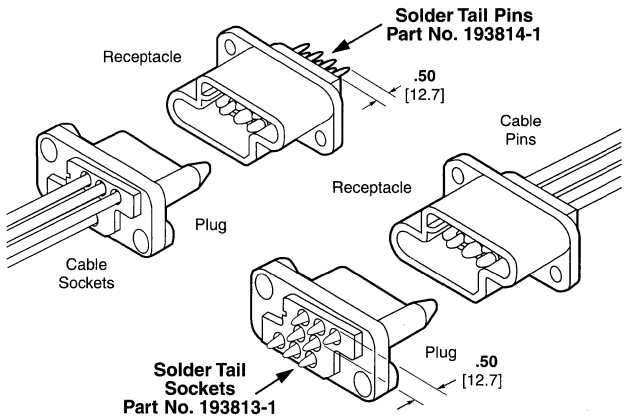


Contacts

Wire Size AWG	Contact Part Numbers		Crimp Tools
	Pin	Socket	
8	193457-1	193458-1	Daniels Hand Tool #M310 Positioner #TP944
10	193642-1	193643-1	
12-14	193534-1	193535-1	

Cable-to-Board
Finish—Gold

A typical application would have solder tail pins mounted into the receptacle, and cable sockets mounted into the plug. Both solder tail pins and sockets are available for any variation.

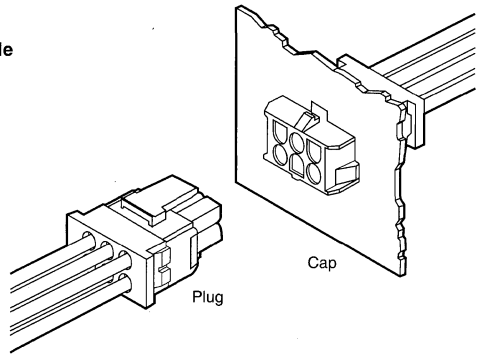


Drawer Connector Housings

Size (Configuration)	Housing Part Numbers	
	Plug	Receptacle
8 Positions (8 Size 8 Cavities)	213499-1	213500-1
15 Positions (3 Size 8 Cavities & 12 Size 16 Cavities)	213426-1	213427-1

MATE-N-LOK II High Current contacts have been designed to retrofit into existing MATE-N-LOK II housings. A fully-loaded 4-circuit connector can handle 31 amps per line with a 30° T-rise on either the cable-to-cable or cable-to-board.

Cable-to-Cable
Finish—Silver



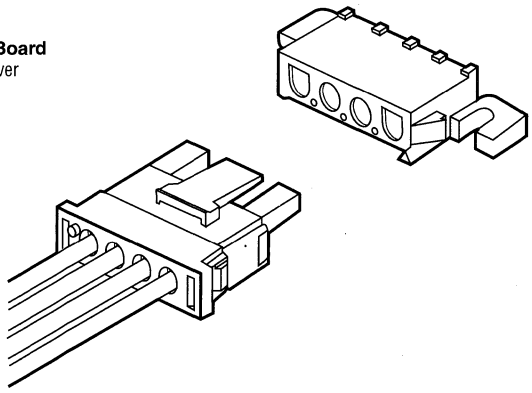
Contacts

Wire Size AWG	Contact Part Numbers		Crimp Tools
	Pin	Socket	
10	193796-1	193797-1	Daniels Hand Tool #M310 Positioner #TP1013
14	193841-1	193842-1	

Connector Housings

No. of Circuits	Part Numbers	
	Plug	Cap
2	770017-1	770024-1
3	770018-1	770025-1
4	770019-1	770026-1
6	770020-1	770027-1
9	770021-1	770028-1
12	770022-1	770029-1
15	770023-1	770030-1

Cable-to-Board
Finish—Silver



Connector Housings

No. of Circuits	Part Numbers	
	Socket Header	Mates with Plug Housing
2	193839-1	770017-1
3	193839-2	770018-1
4	193839-3	770019-1
5	193839-4	770016-1

Note: High current contacts with Louvertac bands are not intermateable with any other contact.

SOURCE: Catalog 65141

Louvertac Strip Bands

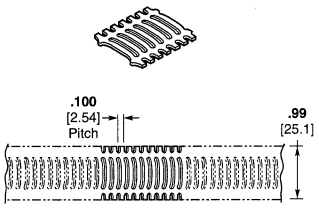
Torsional Louver Type

A strip can be sized with scissors in an on-site installation. They are available for use in flat and circular applications.

A male band is used on the outside diameter of a pin. The female band is used on the inside diameter of a socket.

LAOG
.110 [2.79] Louver Height

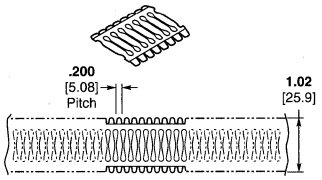
Tooth Angle—45°
Minimum Diameter—3 [76.2] male
Minimum Diameter—1 [25.4] female
Finish—Silver



Part Number	Application	Material Thickness	Current Rating per inch
192002-2	Flat or Female or Male	.006 .15	350
192002-4	Flat or Female	.010 .25	550
192005-4	Flat or Male	.010 .25	550

LAO
.090 [2.29] Louver Height

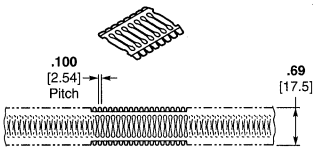
Tooth Angle—15°
Minimum Diameter—2 [50.8]
Finish—Silver



Part Number	Application	Material Thickness	Current Rating per inch
192000-2	Flat or Female	.006 .15	175
192000-9	Flat or Female	.010 .25	275
192001-4	Flat or Male	.006 .15	175
192001-6	Flat or Male	.010 .25	275

LAIA
.050 [1.27] Louver Height

Tooth Angle—15°
Minimum Diameter—1.5 [38.1]
Finish—Silver

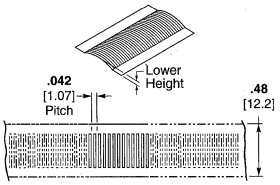


Part Number	Application	Material Thickness	Current Rating per inch
192004-4	Flat or Female	.004 .10	150
192004-8	Flat or Female	.006 .15	250
192007-4	Flat or Male	.004 .10	150
192007-7	Flat or Male	.006 .15	250

Bridge Louver Type

LAIII
.034 [.86] Louver Height

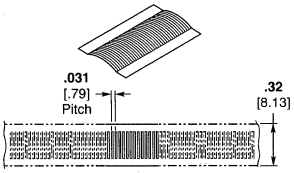
Minimum Diameter—1 [25.4]
Current Rating Per Inch—120 amps
Material Thickness—.006 [.15]



Part Number	Application	Finish
192038-6	Female	Silver
192038-7	Female	Gold
192039-5	Male	Silver
192039-6	Male	Gold

LAIV
.026 [.66] Louver Height

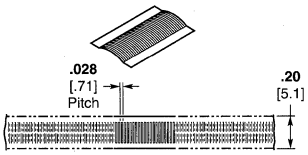
Minimum Diameter—.75 [19.1]
Current Rating Per Inch—120 amps
Material Thickness—.006 [.15]



Part Number	Application	Finish
1-192041-2	Female	Silver
192042-5	Male	Silver

LAV
.022 [.56] Louver Height

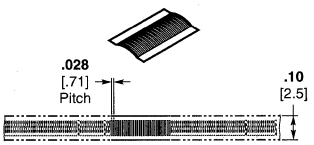
Minimum Diameter—.75 [19.1]
Current Rating Per Inch—120 amps
Material Thickness—.005 [.13]



Part Number	Application	Finish
1-192044-9	Female	Silver
192045-5	Male	Silver

LAVI
.014 [.36] Louver Height

Minimum Diameter—.75 [19.1]
Current Rating Per Inch—60 amps
Material Thickness—.004 [.10]



Part Number	Application	Finish
193128-1	Female	Gold
192048-2	Male	Gold

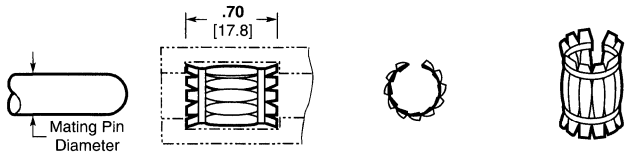
Note: Band lengths available in 1 foot [.305 m] increments.

SOURCE: Catalog 65141

Female Louvertac Bands

The Louvertac Bands can be manufactured into preformed diameters. This will allow the insertion of the band into a socket.

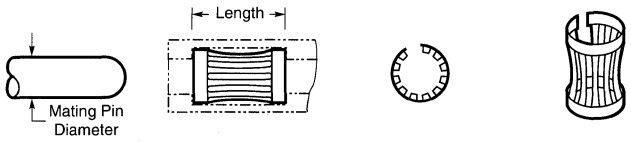
The diameter indicated is the mating pin diameter that will be inserted into the socket assembly.



Female
Torsional Formed Type

Finish—Silver

Part Number	Mating Pin Dia.	Material Thickness	Current Rating (amps)
4-192013-5	**.312** [7.92]	**.006** [.15]	185
5-192013-4	**.375** [9.53]	**.006** [.15]	220
5-192013-5	**.394** [10.00]	**.006** [.15]	240
5-192013-9	**.437** [11.10]	**.006** [.15]	260
6-192013-7	**.472** [11.99]	**.006** [.15]	290
7-192013-1	**.500** [12.70]	**.006** [.15]	300
8-192013-2	**.625** [15.88]	**.006** [.15]	365
9-192013-6	**.750** [19.05]	**.006** [.15]	440
1-192033-0	**.842** [21.39]	**.006** [.15]	500
2-192033-0	**.875** [22.22]	**.006** [.15]	520
2-192033-6	**1.000** [25.40]	**.006** [.15]	575
3-192033-4	**1.250** [31.75]	**.006** [.15]	725



Female
Bridge Formed Type

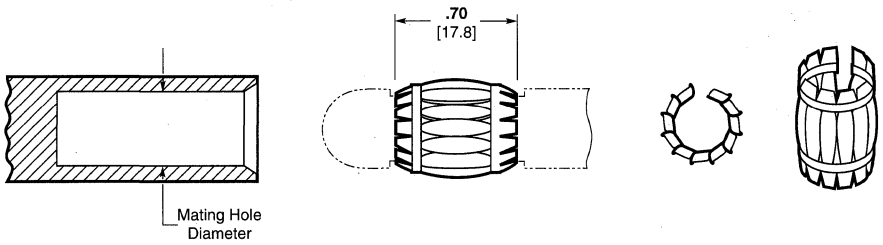
Finish—Silver or Gold

Part Number	Mating Pin Dia.	Length	Material Thickness	Finish	Current Rating (amps)
2-192041-9	**.025** [0.64]	**.32** [8.1]	**.005** [.13]	Gold	5
4-192044-1	**.030** [0.76]	**.20** [5.1]	**.005** [.13]	Gold	7
1-192047-4	**.040** [1.00]	**.10** [2.5]	**.004** [.10]	Gold	10
1-192047-8	**.062** [1.57]	**.10** [2.5]	**.004** [.10]	Gold	15
5-192044-6	**.062** [1.57]	**.20** [5.1]	**.005** [.13]	Gold	15
2-192047-5	**.080** [2.03]	**.10** [2.5]	**.004** [.10]	Gold	30
6-192044-4	**.080** [2.03]	**.20** [5.1]	**.005** [.13]	Gold	30
4-192041-4	**.080** [2.03]	**.32** [8.1]	**.006** [.15]	Gold	30
5-192041-0	**.093** [2.20]	**.32** [8.1]	**.005** [.13]	Gold	35
7-192044-0	**.093** [2.20]	**.20** [5.1]	**.005** [.13]	Silver	35
5-192041-9	**.100** [2.54]	**.32** [8.1]	**.006** [.15]	Gold	35
8-192044-4	**.125** [3.18]	**.20** [5.1]	**.005** [.13]	Gold	40
6-192041-8	**.125** [3.18]	**.32** [8.1]	**.006** [.15]	Silver	40
6-192041-9	**.125** [3.18]	**.32** [8.1]	**.006** [.15]	Gold	40
3-192047-7	**.127** [3.23]	**.10** [2.5]	**.004** [.10]	Gold	40
192046-6	**.172** [4.37]	**.20** [5.1]	**.006** [.15]	Gold	65
8-192041-9	**.173** [4.39]	**.32** [8.1]	**.006** [.15]	Gold	65
2-192038-8	**.197** [5.00]	**.48** [12.2]	**.006** [.15]	Gold	70
3-192038-9	**.236** [6.00]	**.48** [12.2]	**.008** [.20]	Silver	100
4-192038-8	**.250** [6.35]	**.48** [12.2]	**.006** [.15]	Silver	100
4-192038-9	**.250** [6.35]	**.48** [12.2]	**.006** [.15]	Gold	100
1-192046-9	**.250** [6.35]	**.20** [5.1]	**.006** [.15]	Gold	100
1-192043-6	**.254** [6.45]	**.32** [8.1]	**.006** [.15]	Gold	100
5-192047-3	**.272** [6.90]	**.10** [2.5]	**.004** [.10]	Gold	110
2-192043-0	**.280** [7.11]	**.32** [8.1]	**.006** [.15]	Gold	110
6-192038-0	**.280** [7.11]	**.48** [12.2]	**.008** [.20]	Silver	110
6-192038-5	**.315** [8.00]	**.48** [12.2]	**.008** [.20]	Silver	135
4-192043-5	**.375** [9.53]	**.32** [8.1]	**.006** [.15]	Gold	160
7-192038-7	**.394** [10.00]	**.48** [12.2]	**.008** [.20]	Silver	180
8-192038-1	**.437** [11.10]	**.48** [12.2]	**.008** [.20]	Silver	190
8-192038-6	**.472** [11.99]	**.48** [12.2]	**.008** [.20]	Silver	200
9-192038-5	**.500** [12.70]	**.48** [12.2]	**.008** [.20]	Silver	215
6-192043-7	**.602** [15.29]	**.32** [8.1]	**.006** [.15]	Gold	275

SOURCE: Catalog 65141

Male Louvertac Bands

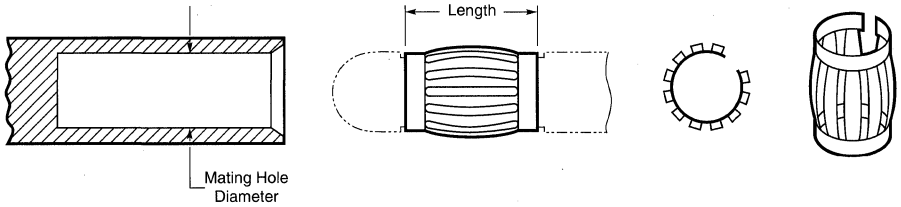
The Louvertac Bands can be formed into a "male" shape for use on a pin. Selection begins with the amperage requirement and then the mating hole diameter.



Male
Torsional Formed Type

Finish—Silver

Part Number	Mating Hole Dia.	Material Thickness	Current Rating (amps)
192007-9	**.312** [7.92]	**.006** [.15]	150
1-192007-1	**.437** [11.10]	**.006** [.15]	225
1-192007-4	**.500** [12.70]	**.006** [.15]	265
1-192007-9	**.625** [15.88]	**.006** [.15]	315
1-192008-8	**.796** [20.22]	**.008** [.20]	445
2-192008-1	**.875** [22.22]	**.008** [.20]	485
2-192008-3	**1.000** [25.40]	**.006** [.15]	535



Male
Bridge Formed Type

Finish—Gold or Silver

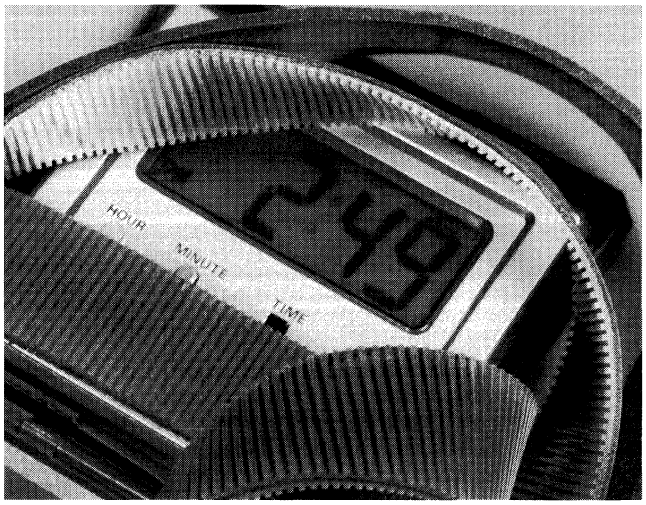
Part Number	Mating Hole Dia.	Length	Material Thickness	Finish	Current Rating (amps)
192048-6	**.051** [1.30]	**.10** [2.5]	**.004** [.10]	Gold	8
1-192048-1	**.127** [3.23]	**.10** [2.5]	**.004** [.10]	Gold	32
2-192042-8	**.157** [3.99]	**.32** [8.1]	**.006** [.15]	Gold	50
2-192039-1	**.250** [6.35]	**.48** [12.2]	**.008** [.20]	Silver	100
3-192039-0	**.311** [7.90]	**.48** [12.2]	**.008** [.20]	Gold	125

SOURCE: Catalog 65141

Conductive Carbon Fiber Connectors

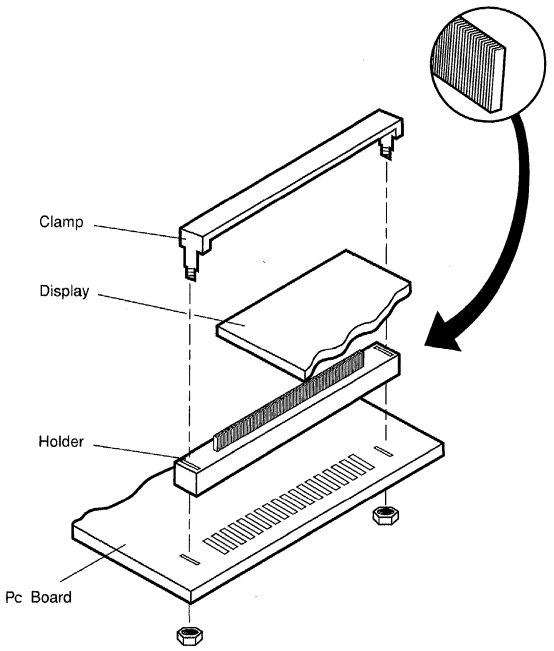
Product Facts

- Wide variety of cross-sections and lengths available
- Custom designs available
- Useable with .040 [1.02] centerline spacing
- Tolerant of misalignment
- Compensates for surface irregularities
- Fibers penetrate surface oxides
- Conforms to mating surfaces for a gas-tight seal
- Mates with gold, tin-lead, indium-tin oxide
- Resists compression set providing stable contact over a wide temperature range
- More conductive than carbon particle connectors (by a factor of 10)
- Interconnection links already established thru carbon without compression
- Nickel-plated carbon fibers are 10 times more conductive than non-plated fibers

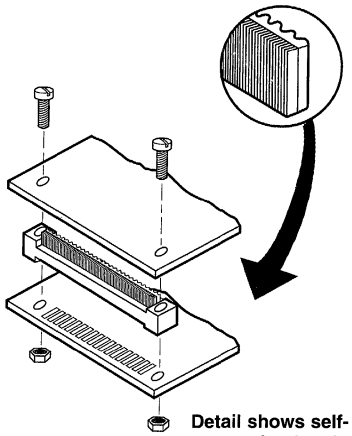


Typical Applications

Flat Display-to-Pc Board



Pc Board-to-Pc Board



Detail shows self-supporting insulation. Available on one or both sides.

This drawing shows Housing **Part Number 485655-1** with Connector **Part Number 11501-4 or 11601-4.**

Housing design parameters based on the uncompressed connector dimensions.

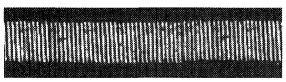
Housing Height:
85 to 95% of uncompressed height

Housing Width:
1.15 [29.21] x uncompressed width

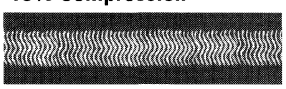
Housing Length:
Length of connector +105 [26.67] x connector length

AMP can make connectors and housings to suit customer's requirements. Contact your sales representative.

0% Compression



15% Compression



The adjacent photos show the layers before and after compression. Upon releasing the compressive force, the layers return to their original position due to the reinforcing nature of the carbon fibers.

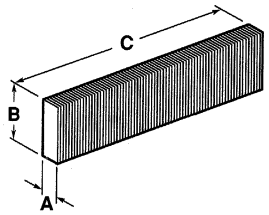
SOURCE: Catalog 82625

Specifications subject to change.

1-800-522-6752
Product Information Center/ AMP FAX Service

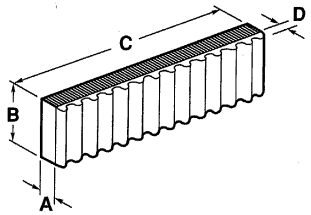
1-800-722-1111
Tooling/Technical Assistance Center

Uninsulated



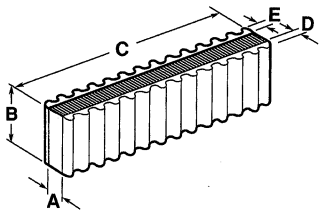
Dimensions			Part Numbers	
A	B	C	Carbon Fiber	Nickel-Plated Carbon Fiber
.03 0.76	.07 1.78	1.00 25.4	11500-1	1-11600-4
.04 1.02	.08 2.03	2.00 50.8	11500-2	1-11600-5
.05 1.27	.09 2.29	3.00 76.2	11500-3	1-11600-6

Insulated One Side



Dimensions				Part Numbers	
A	B	C	D	Carbon Fiber	Nickel-Plated Carbon Fiber
.04 1.02	.08 2.03	1.00 25.4	.06 1.52	11501-1	11601-1
.05 1.27	.10 2.54	2.00 50.8	.05 1.27	11501-2	11601-2
.06 1.52	.12 3.05	3.00 76.2	.06 1.52	11501-3	11601-3
.05 1.27	.310 7.87	2.00 50.8	.06 1.52	11501-4	11601-4

Insulated Both Sides



Dimensions					Part Numbers	
A	B	C	D	E	Carbon Fiber	Nickel-Plated Carbon Fiber
.03 0.76	.06 1.52	1.00 25.4	.05 1.27	.05 1.27	11502-1	11602-4
.04 1.02	.08 2.03	2.00 50.8	.05 1.27	.05 1.27	11502-2	1-11602-0
.05 1.27	.10 2.54	3.00 76.2	.04 1.02	.04 1.02	11502-3	1-11602-1

SOURCE: Catalog 82625

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

PCMCIA Cards—Fax/Modem 14.4 and Fax/Modem/Voice 14.4

Your AMP Fax/Modem 14.4 card makes faxing from your laptop as easy as printing a document. You can send fax documents with laser printer quality resolution and clarity directly from your laptop and eliminate the steps of printing, photocopying, and then faxing documents. You can also receive, display, and print high quality faxes from your laptop. And with its 14,400 speed, the AMP Fax/Modem card keeps up with high-speed fax machines for fast, time-saving communications.

The AMP Fax/Modem/Voice 14.4 card takes your fax/modem capabilities one step further by turning your laptop into an answering machine, a voice mailbox, and a faxback center. And all with the ease and simplicity you need in a PCMCIA card. Whether you're on the road or working at home, this handy card provides voice messaging, retrieves and plays voice messages, records notes and conversations, makes telephone calls, monitors call progress, and more.

It's so easy. Record and play sound from either a laptop with a standard telephone handset or a remote location via standard phone lines.

Note: PCMCIA Type II card thickness—only 5.5 mm [0.22]; works with any Type II or III PCMCIA slot.

Specifications

Data Communications Compatibility: Hayes AT command set; Bell 103 and 212A and ITU V.21, V.22, V.22bis, V.23, V.32, V.32bis, V.42, V.42bis

Fax Compatibility: ITU V.17, V.21 Channel 2, V.27ter, V.29, Group III, and EIA Class II

Power Consumption:
Fax/Modem: Operating: 875 mW typical Standby: 275 mW typical Sleep: 120 mW typical
Fax/Modem/Voice: Operating: 600 mW typical Standby: 50 mW typical

Operating Modes: Send and Receive Facsimile, Asynchronous, Full Duplex

Asynchronous Data Rates: 14400, 12000, 9600, 7200, 4800, 2400, 1200, 600, 300 bps

Dialing Capability: Touch tone and rotary pulse

Tones Detected: All North American telephone networks: Dial, Busy, Ringback, Modem

Note: Incompatible tones include blind dialing based on timeout periods.

Line Requirements: Public-switched telephone network, including international connections; Private, unconditioned leased lines

Diagnostics: Local analog loopback; Local digital loopback; Remote digital loopback; Local interface loopback

Voice Mode:
(Fax/Modem/Voice Card Only)
Embedded voice mode AT command set, Voice compression in three file formats:
A-Law (.CL 1)
ADPCM 3-bit (.AD3)
ADPCM 4-bit (.AD4)
Autorecognition (fax/voice) answer mode, Local and remote record/playback

OEM and Private-Label Series

Fax/Modem 14.4 Kits

Part No. 797127-8 (AMP Label), Part No. 1-797127-4 (Unlabeled)

Contents: 14.4 kbps Fax/Modem card; cable assembly; drivers and diagnostic disk; and product information tuple.

Fax/Modem/Voice 14.4 Kits

Part No. 797410-3 (AMP Label), Part No. 797410-5 (Unlabeled)

Contents: 14.4 kbps Fax/Modem/Voice card; cable assembly and two Y adapters; drivers and diagnostic disk; and product information tuple.

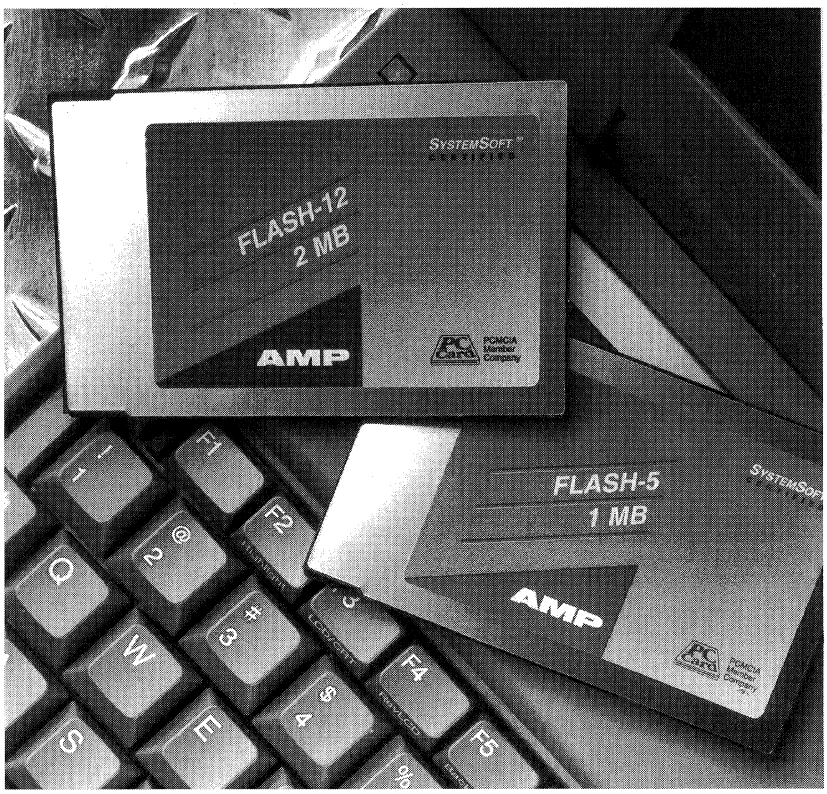
SOURCE: Catalog 124270

Specifications subject to change.

1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

PCMCIA Cards—Flash Memory Cards



Product Facts

- **Cards use latest low-power chips to minimize power draw to extend computer's battery life**
- **Cards can be inserted or removed while the computer is powered**
- **Transparent data protection helps prevent unintentional writes to the card**
- **Write protect switch protects valuable data from being overwritten**

AMP Flash cards give you durable, high-speed memory in a handy, credit-card-size package that you can carry in your pocket. Flash memory cards combine the fast access and rewritability of RAM with the nonvolatility and portability of a floppy. So if you're looking for a memory card to provide the programming and storage capacity you need for today's ever-increasing software complexity and memory requirements, we've got you covered.

Whether you have a portable HP palmtop or a PC, AMP has the memory for you.

Specifications

Card Type: PCMCIA Type 1, 3.3 mm [0.13] thick; works with any Type I, II or III PCMCIA slot.

Compliance: PCMCIA Release 2.1

Read/Write Cycles, Minimum: 10,000 (Flash-5); 100,000 (Flash-5C)

Access Time: <200 ns

Sector Size: 128 or 512 bytes (Flash-5); 64 Kbytes (Flash-5C)

Warranty: 1-year limited

OEM and Private-Label Series

Type	Memory Capacity	Part Numbers	
		With AMP Label and AMP Product Information Tuple	Unlabeled and with Blank Product Information Tuple
Flash-5	256 KB	797132-1	2-797132-5
	512 KB	797132-2	2-797132-6
	1 MB	797132-3	2-797132-7
	2 MB	797132-4	2-797132-8
Flash-5C	1 MB	797262-1	2-797262-5
	2 MB	797262-2	2-797262-6
	4 MB	797262-3	2-797262-7
	8 MB	797262-4	2-797262-8

Model and Serial Number on Bottom

Type	Memory Capacity	Part Numbers	
		AMP Top Label	No Top Label
Flash-12	512 KB	1-797078-1	3-797078-7
	1 MB	1-797078-2	3-797078-8
	2 MB	1-797078-3	3-797078-9
	4 MB	1-797078-4	4-797078-0
Flash-12 HC	2 MB	797263-1	3-797263-1
	4 MB	797263-2	3-797263-2
	8 MB	797263-3	3-797263-3
	10 MB	797263-4	3-797263-4
	12 MB	797263-5	3-797263-5

SOURCE: Catalog 124269

Specifications subject to change.

1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

PCMCIA Card—Business Audio Card

Product Facts

- **Advanced sound technology enhances MIDI sound quality**
- **Card minimizes power draw when the card is not in use to extend computer's battery life**
- **Card can be inserted or removed while the computer is powered**

Now the AMP Business Audio card brings powerful sound capabilities to your laptop. Add impact to your presentations, get the most from sound-enabled software, and capture and play back MIDI files.

The Business Audio card uses the Hurricane™ architecture from Turtle Beach Systems to speed audio throughput while minimizing CPU usage.

And we've included Intel's V-Synth virtual synthesizer to greatly improve the MIDI sound quality. The program enhances Windows™ MIDI applications for business presentations, authoring tools, games and sequencers. Using an advanced software-based wavetable synthesizer, the program produces sound comparable to hardware-based synthesizers.

The Business Audio card comes with the Traveler adapter module. This two-port device has input and output jacks to allow you to easily connect speakers, headphones, and microphones to your laptop. To increase your card's versatility, you can also add the optional Professional or Presentation sound accessories. These devices add either single or dual MIDI Input and Output capabilities so you can connect directly to MIDI instruments.

Also included is Microsoft® Windows™ Sound System to provide the widest audio compatibility with Windows software available.

Specifications

Card Type:	PCMCIA Type II, 5.5 mm [0.22] thick; works with any Type II or III PCMCIA slot.
System Requirements:	Windows 3.1 or higher; 386, 25 MHz, 4 MB RAM minimum (486sx, 25 MHz, 8 MB RAM recommended for V-Synth)
Compliance:	PCMCIA Release 2.1
Sampling Rates:	44.1 kHz; 22.05 kHz; 11.025 kHz; 8.0 kHz; 5.513 kHz
Resolution:	12 bits
Audio Channels:	Mono
MIDI Support:	2 ports MIDI In, MIDI Out
Hardware:	Programmable microphone/line level gain; 12-bit oversampling digital-to-analog converter; 16-step analog ouput level control (-1.5 dB/step); 12-bit digital volum control
Input/Output Adapters:	Traveler (standard): Input jack and output jack; Presentation (optional): Input jack, ouput jack, and MIDI In/Out; Professional (optional): Input jack, output jack, and dual MIDI In/Out
FCC Rating:	Class B
Warranty:	3-year limited

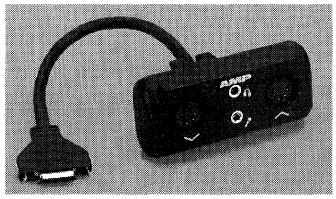
OEM and Private-Label Series

Business Audio Card Kits

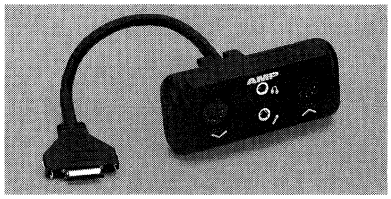
All card kits include the Traveler adapter module and CardSoft™ card and socket services.

Part No. 797413-1 Unlabeled card and blank product information tuple

Part No. 797413-6 AMP-labeled card and AMP product information tuple



Presentation Adapter
Part No. 621044-1



Professional Adapter
Part No. 621023-1

SOURCE: Catalog 124268

Specifications subject to change.

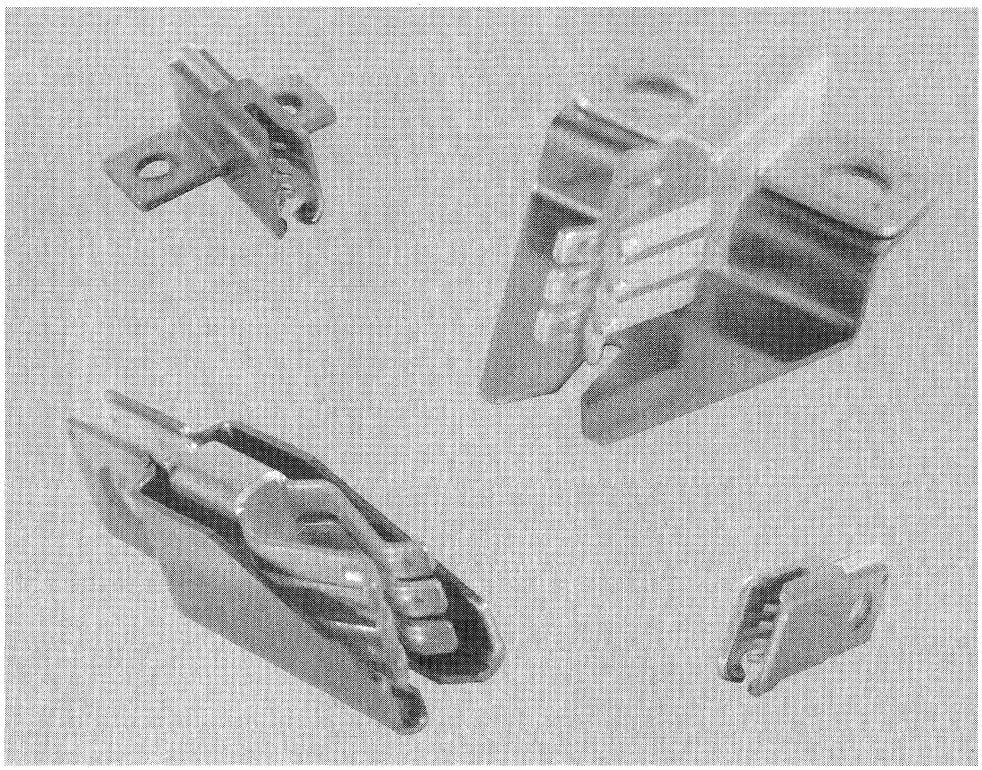
1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

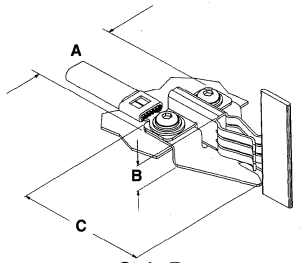
Pluggable Bus Bar Connector

Product Facts

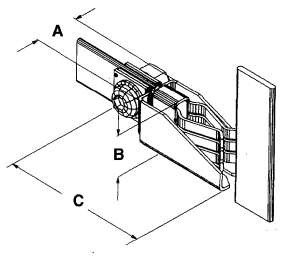
- Separable bus bar connector
- 062 series for .062 [1.57] thick, 1/2" [12.7] minimum width bus bar
- 125 series for .125 [3.18] thick, 1" [25.4] minimum width bus bar
- Mounts directly to bus bar or terminated wire
- Low resistance, low millivolt drop
- High current rating: up to 500 amps for 125 series and 250 amps for 062 series
- Blind mateable (misalignment up to ± .060 [1.52] for both series)
- Anti-overstress protected contacts
- Recognized under the Component Program of Underwriters Laboratories Inc., File No. E113407



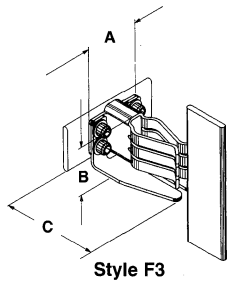
125 Series



Style F



Style F2

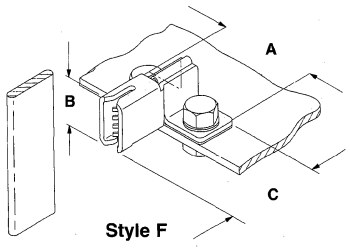


Style F3

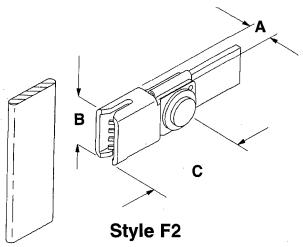
Series	Style	Dimensions			Part Numbers
		A (Width)	B (Height)	C (Length)	
125 Series Fits Bus Bar .125 [3.18] Thick	F*	**2.290** [58.17]	**1.141** [28.99]	**3.200** [81.28]	104502-1
	F2	**.850** [21.59]	**1.122** [28.5]	**3.294** [83.67]	104501-1
	F3	**1.250** [31.75]	**1.141** [28.99]	**1.993** [50.61]	213647-1

*Bus Bar or Cable Power Feed

062 Series



Style F



Style F2

Series	Style	Dimensions			Part Numbers
		A (Width)	B (Height)	C (Length)	
062 Series Fits Bus Bar .062 [1.57] Thick	F	**1.360** [34.54]	**.705** [17.91]	**1.342** [34.09]	104729-1
	F2	**.356** [9.04]	**.705** [17.91]	**1.342** [34.09]	104742-1

SOURCE: Catalog 65284

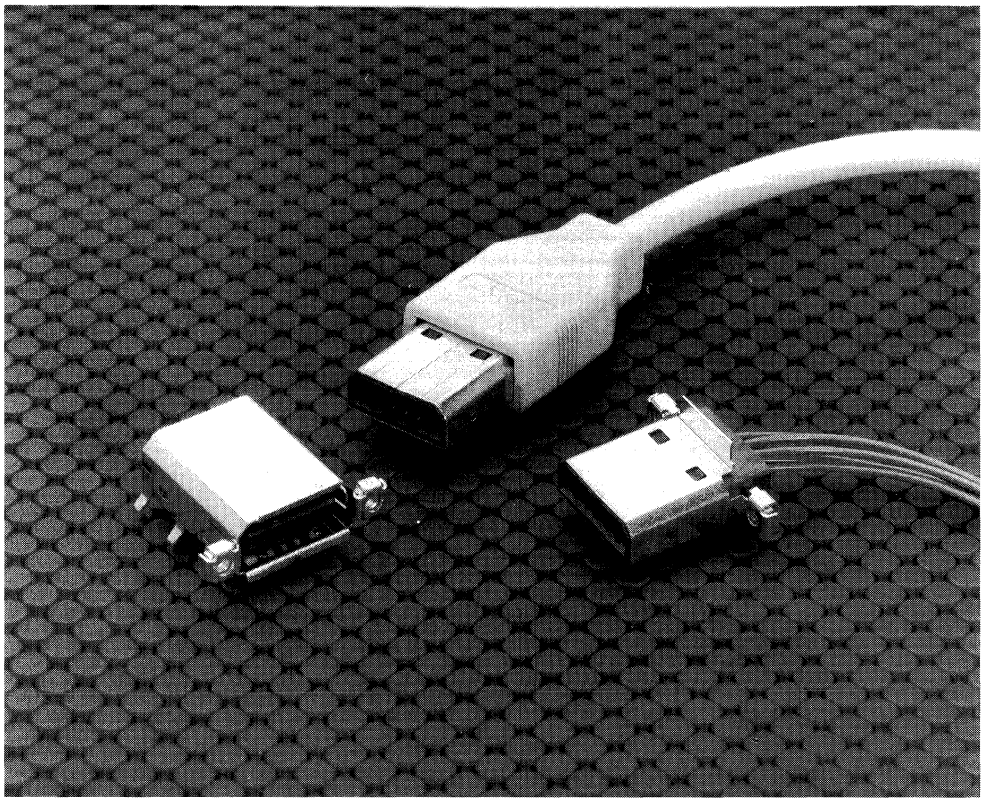
Specifications subject to change.

1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

Power Mix Connectors

METRIC



Product Facts

- **Available in right-angle pc board mount receptacle, panel mount plug, and cable plug configurations**
- **8 position connector contains 6 signal contacts and 2 power contacts**
- **Power contacts capable of handling 6 A DC continuous each**
- **Designed for high durability (tested up to 2,000 mating cycles)**
- **Contacts in both halves of the mating connectors are protected against accidental shorting**
- **Shielding provides for EMI/RFI and ESD protection**
- **Crimp, snap signal contacts terminate 0.14-0.08 mm² [26 or 28 AWG] wire; power contacts terminate 0.9 mm² [18 AWG] wires**
- **Board mount connectors are SMT compatible**
- **Latches or other mating hardware not required. Detent and engagement depth provide for reliable system retention and strength**
- **Centerline spacing is 2 [.079] between signal contacts and 2.75 [.108] between power contacts**

The AMP Power Mix Plug and Receptacle Connectors are designed for printed circuit board and cable applications. These connectors are available with a mixture of large and small contact cavities. The large contact cavities accept power contacts and the small contact cavities accept signal contacts.

The right-angle, shielded printed circuit board receptacle connectors that contain pre-installed contacts, boardlocks and threaded inserts can be placed on the board by hand or robotic equipment. These will mate with compatible shielded plug connectors.

The shielded panel mount and cable plug connectors can be used for panel mounted or free hanging applications. They accept crimp-snap type power and signal contacts. Panel mount plug connectors contain pre-installed threaded insert, shell and housing (contacts sold separately) and are NOT used with backshell kits.

Panel mount connectors provide an interface from unshielded internal wiring to shielded, printed circuit board receptacle connectors. The plug connectors will mate with compatible shielded, printed circuit board receptacle connectors. Cable plug connectors (free hanging) are to be used with backshell kits. Typical backshell kits contain plug housing, front plug shell, rear plug shell and optional boot (contacts sold separately).

SOURCE: Catalog 91119

Specifications subject to change.

1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

METRIC

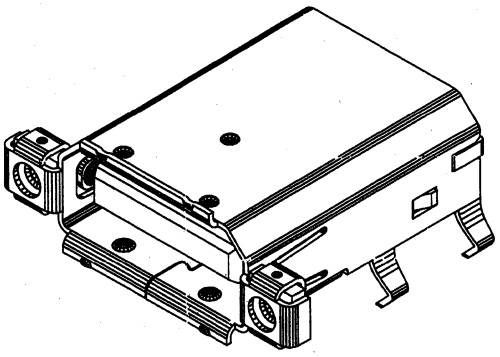
8 Position Right-Angle Pc Board Mount Receptacle Assembly

With Boardlock

Part Number 786814-1

(6 signal contacts and 2 power contacts)

Recommended Pc Board Thickness—**1.57** [.062]

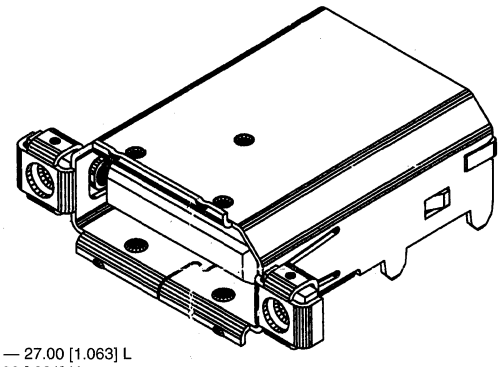


Without Boardlock

Part Number 786815-1

(6 signal contacts and 2 power contacts)

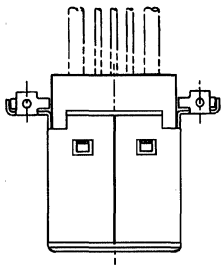
Recommended Pc Board Thickness—**0.76** [.030]



Note: Housing Dim (Typ.) — 27.00 [1.063] L x 21.6 [.850] W x 7.88 [.661] H

8 Position Shielded Panel Mount Plug Assembly

Part Number 786817-1

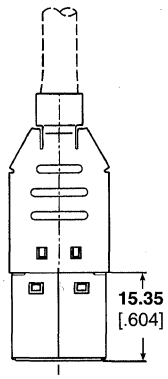


Notes:
1. Contacts must be purchased separately.
2. Connector accepts signal contact **Part No. 786794-2** and power contact **Part No. 786795-2.**

Note: Housing Dim. (Typ.) — 27.00 [1.063] L x 21.7 [.854] W x 6.83 [.269] H

8 Position Cable Plug Hardware Kit

Part Number 786802-1



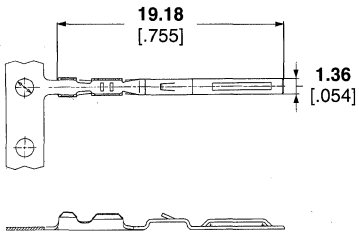
Notes:
1. Contacts must be purchased separately.
2. Connector accepts signal contact **Part No. 786794-2** and power contact **Part No. 786795-2.**

Plug Contact, Signal

Part Number 786794-2

Wire Size—0.08-0.14 mm² [28-26 AWG]

Insulation Diameter Range—0.76-1.02 [.030-.040]



CERTI-CRIMP Hand Tool
Part No. 90704-1

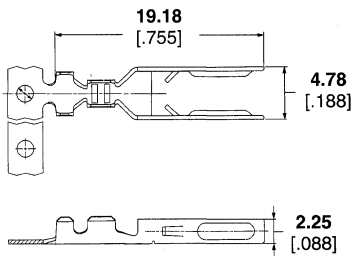
Insertion Tool
Part No. 679931-1

Plug Contact, Power

Part Number 786795-2

Wire Size—0.9 mm² [18 AWG]

Insulation Diameter Range—1.52-2.03 [.060-.080]



CERTI-CRIMP Hand Tool
Part No. 90704-1

Insertion Tool
Part No. 679932-1

Extraction Tool
Part No. 679934-1

SOURCE: Catalog 91119

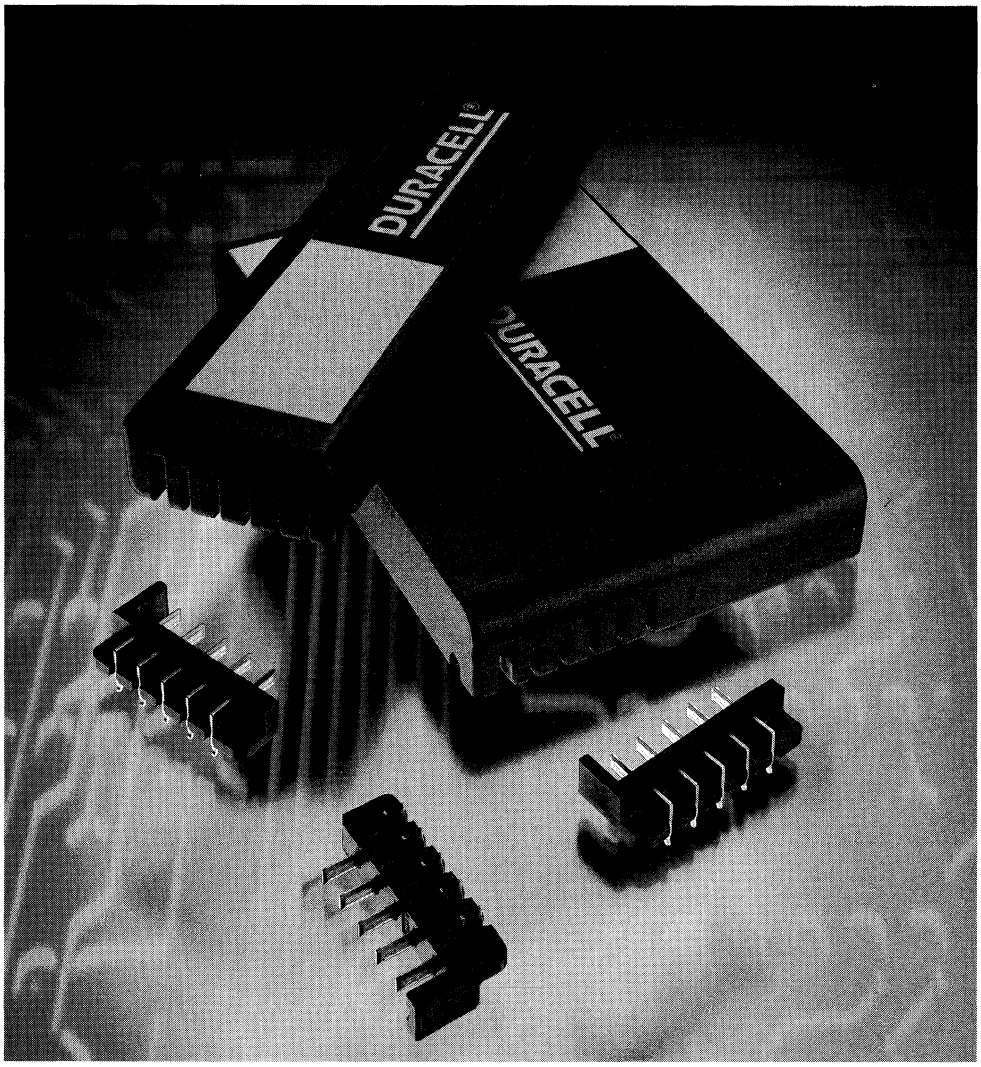
Specifications subject to change.

1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

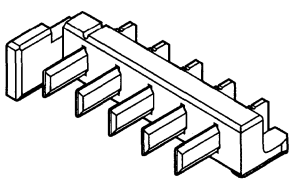
METRIC

Advanced Battery Interconnection System for Standard-Sized Rechargeable Batteries (7.2 Volts)

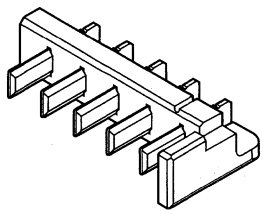


Product Facts

- Multidirectional mating—all angles between 0° and 90°
- 5-Position, right-angle headers; 5.00 [.197] centers
- Total interface solution
- High cycle mating/unmating capability
- Current capacity—7 amps per single contact at 30°C T-Rise
- Versatile header mounting
- Header housing material—Polyphthalamide
- Voltage/form factor polarization
- Consumer-friendly mating/unmating of battery
- Reduces design cycle time
- Reduces time-to-market
- Reduces overall costs
- For use with DURACELL DR17 (Size 6 x 4/5A) and DR30 (Size 6 x 4/3A) rechargeable batteries



With Left-Hand Voltage Key



With Right-Hand Voltage Key

5-Position Right-Angle Headers

Note: 5 Pos. Housing Dim. (Typ.)—29.00 [1.142] L x 14.85 [.585] W x 6.80 [.268] H

Voltage Key	Part Numbers	
	With Straight Solder Tails	With Retentive Solder Tails
Right-Hand	787142-1	787141-1
Left-Hand	787092-1	787143-1

SOURCE: Catalog 65987

Specifications subject to change.

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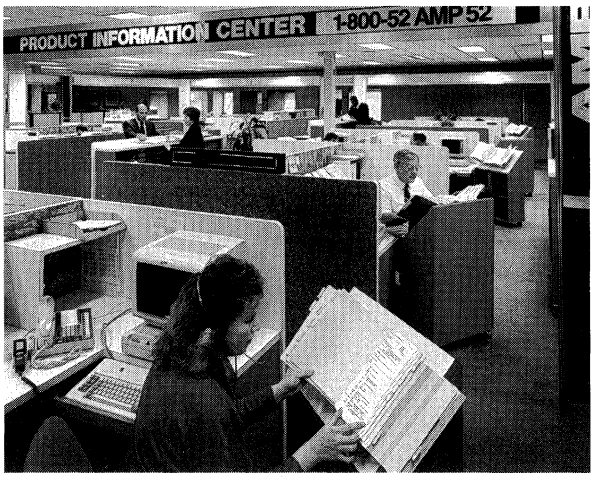
PRODUCT INFORMATION CENTER

1-800-522-6752

The Product Information Center is staffed with specialists well versed in all AMP products. The Center can provide you with:

- Catalogs
- Technical Support
- Product Samples



AMP FAX SERVICE

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- Instruction Sheets (IS#)
- Product Specifications
- Application Specifications
- Latest Revision of Catalog Pages
- AMP Authorized Distributors Locations
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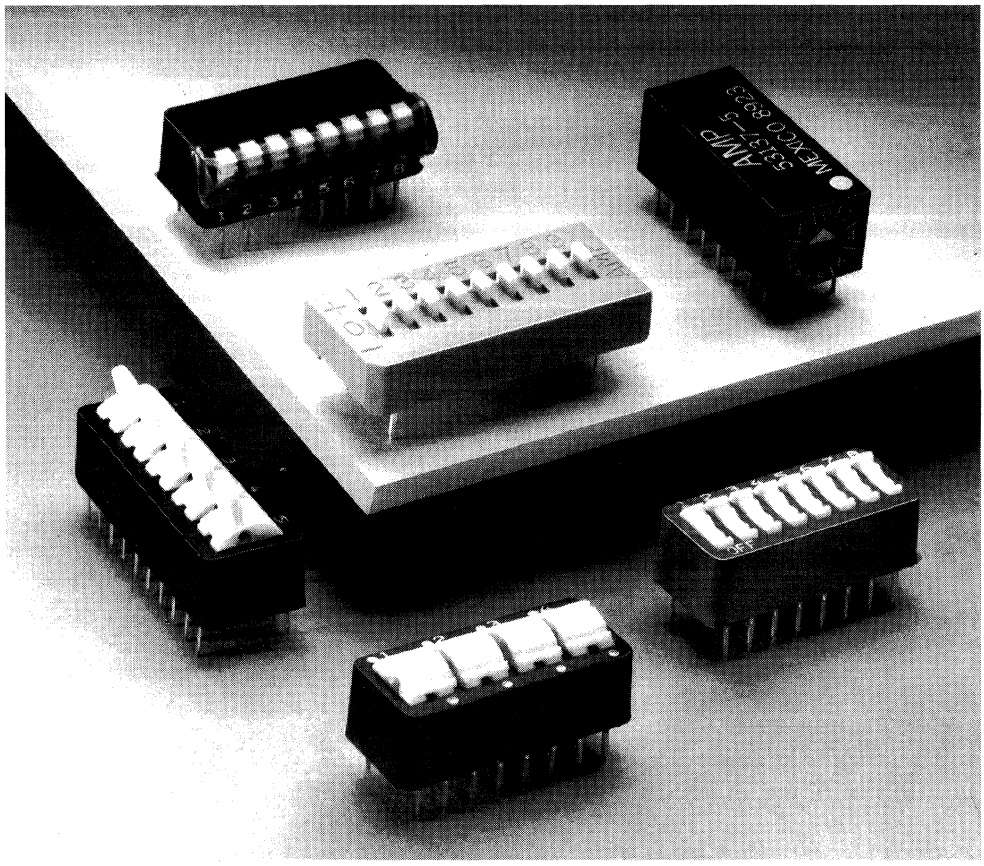
See Inside Front Cover for Instructions on "How to Access" AMP FAX SERVICE

Dual In-Line Package (DIP) Switches

Product Facts

- 7000 Series Switches
  - Available in side rocker-actuated, single pole, single throw; multiple pole, single throw; and multiple pole, double throw versions
  - Durability—Tested up to 7,000 actuation cycles
  - Housing color—black
- 7100 Series Switches
  - Single pole, single throw, standard and low profile
  - Durability—Tested up to 2,000 actuation cycles
  - Housing color—blue
- Preprogrammed PCB Switches feature four Form "C" switches operated by encoded cams and packaged in a DIP configuration
  - Durability—Tested up to 500 cam revolutions
  - Housing color—black
- 7800 Series Trinary Slide Switches are double pole devices primarily designed for logic-level switching applications
  - Durability—Tested up to 100 cycles
  - Housing color—gray, blue or red
  - Compatible with National Semiconductor encoder/decoder MM53200



Today's electronic packaging engineer automatically thinks .100 x .300 [2.54 x 7.62] centerline when designing printed circuit board layouts. This standardization led to the development of the dual in-line package (DIP) switch. DIP switches are usually suited for a multiplicity of programming functions in such diversified applications as computers, test equipment, communications equipment, process controls, ground support and instrumentation.

AMP DIP switches can be mounted directly to the pc board. They are available in a fully sealed version to provide protection against flux contamination through automated solder processing. When mounted to the pc board, these unique devices present a very low profile, completely compatible with other packaging components. Since they mount directly to the board, no mounting hardware is required. However, DIP switches can also be mounted to the pc board through a variety of AMP DIP sockets (see pages 11001-11003.) The fully enclosed design of AMP DIP switches protects the contact surfaces from contaminants.

SOURCE: Catalog 82162

Specifications subject to change.

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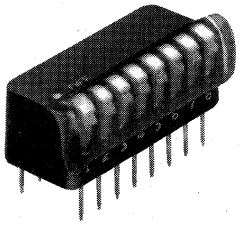
Dual In-Line Package (DIP) Switches — 7000 Series

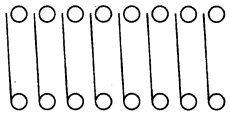
.100 x .300 [2.54 x 7.62] Contact Lead Spacing

Single Pole Single Throw (SPST) Side Actuated Low Profile



Sealed Version Shown

Typical Contact Arrangement

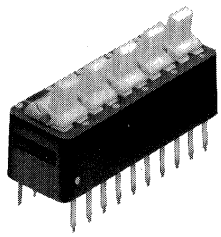


Note: 8-Switch Housing Dim. (Typ.)—.880 [22.35] L x .380 [9.65] W x .290 [7.37] H

No. of Switches	SPST Side Actuated Part Numbers		
	Unsealed[1]	Sealed	UV Sealed
2	1-435802-0	—	1-435802-3
3	435802-2	—	1-435802-4
4	435802-3	1-435802-5	1-382394-5
5	435802-4	1-435802-6	1-382394-6
6	435802-5	1-435802-7	1-382394-7
7	435802-6	1-435802-8	1-382394-8
8	435802-1	435802-9	382394-9
9	435802-7	1-435802-9	1-382394-9
10	435802-8	2-435802-0	2-382394-0
11	—	2-435802-1	—
12	—	2-435802-2	2-382394-2

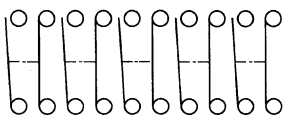
[1]All switches are bottom sealed.

Multiple Single Pole Double Throw (SPDT)



Extended Lever Actuator Shown

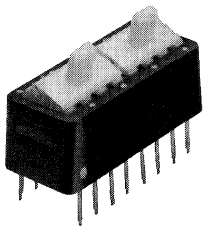
Typical Contact Arrangement



Note: 5-Switch Housing Dim. (Typ.)—1.080 [27.43] L x .380 [9.65] W x .290 [7.37] H (not including Actuator)

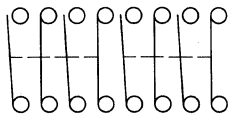
No. of Switches	SPDT Part Numbers	
	Low Profile Actuator	Extended Lever Actuator
1	435470-7	2-435470-1
2	435470-1	2-435470-2
3	435470-2	—
4	435470-3	2-435470-4
5	435470-4	2-435470-5
6	435470-8	2-435470-6

Double Pole Double Throw (DPDT)



Extended Lever Actuator Shown

Typical Contact Arrangement



Note: 2-Switch Housing Dim. (Typ.)—.880 [22.35] L x .380 [9.65] W x .380 [9.65] H (not including Actuator)

No. of Switches	DPDT Part Numbers	
	Low Profile Actuator	Extended Lever Actuator
1	435470-5	3-435470-1
2	435470-9	3-435470-2
3	—	3-435470-3

SOURCE: Catalog 82162

Specifications subject to change.
1-800-522-6752
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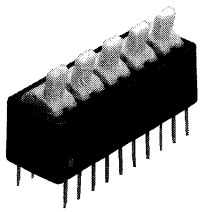
Dual In-Line Package (DIP) Switches — 7000 Series

.100 x .300 [2.54 x 7.62] Contact Lead Spacing

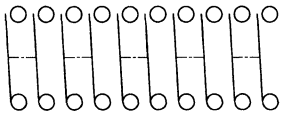
(Continued)

Multiple Double Pole Single Throw (DPST)



Extended Lever Actuator Shown

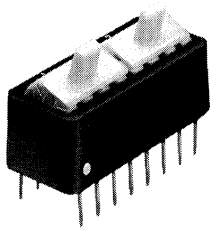
Typical Contact Arrangement



Note: 5-Switch Housing Dim. (Typ.)—1.080 [27.43] L x .380 [9.65] W x .290 [7.37] H (not including Actuator)

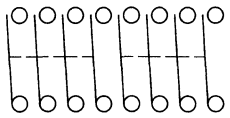
No. of Switches	DPST Part Numbers	
	Low Profile Actuator	Extended Lever Actuator
1	435469-9	2-435469-1
2	—	2-435469-2
4	435469-3	2-435469-4
5	—	2-435469-5
6	1-435469-0	2-435469-6

4-Pole Single Throw (4PST)



Extended Lever Actuator Shown

Typical Contact Arrangement



Note: 2-Switch Housing Dim. (Typ.)—.880 [22.35] L x .380 [9.65] W x .290 [7.37] H (not including Actuator)

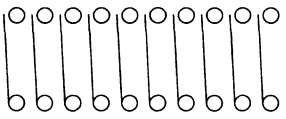
No. of Switches	4PST Part Numbers	
	Low Profile Actuator	Extended Lever Actuator
1	435469-7	3-435469-1
2	—	3-435469-2

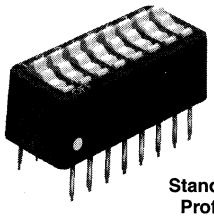
Dual In-Line Package (DIP) Switches —7100 Series

.100 x .300 [2.54 x 7.62] Contact Lead Spacing

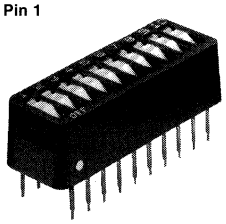
Single Pole Single Throw (SPST) Standard Profile and Low Profile

Typical Contact Arrangement





Standard Profile



Low Profile

Note: 8-Switch Housing Dim. (Typ.)—.880 [22.35] L x .380 [9.65] W x .290 [7.37] H

No. of Switches	SPST Part Numbers					
	Standard Profile			SPST Low Profile		
	Unsealed[1]	Sealed	UV Sealed	Unsealed[1]	Sealed	UV Sealed
2	2-435640-9	—	3-435640-3	435668-1	2-435668-6	2-382434-6
3	3-435640-0	—	3-435640-4	435668-2	3-435668-3	3-382434-3
4	435640-2	3-435640-5	3-382396-5	435668-3	3-435668-4	3-382434-4
5	435640-3	3-435640-6	3-382396-6	435668-4	3-435668-5	3-382434-5
6	435640-4	3-435640-7	3-382396-7	435668-5	2-435668-5	2-382434-5
7	435640-1	3-435640-8	—	435668-6	2-435668-7	2-382434-7
8	435640-5	3-435640-9	3-382396-9	435668-7	2-435668-8	2-382434-8
9	435640-6	4-435640-0	—	—	2-435668-9	2-382434-9
10	435640-7	4-435640-1	4-382396-1	435668-9	3-435668-0	3-382434-0
11	—	—	—	—	3-438668-1	—
12	3-435640-2	4-435640-3	—	1-435668-1	3-435668-2	3-382434-2

[1]All switches are bottom sealed.

SOURCE: Catalog 82162

Specifications subject to change.
1-800-522-6752
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1-800-722-1111
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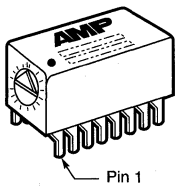
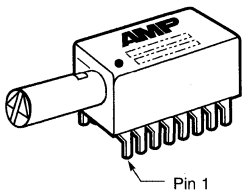
Dual In-Line Package (DIP) Switches — Preprogrammed

.100 x .300 [2.54 x 7.62] Contact Lead Spacing

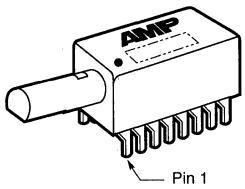
Screwdriver Slot Style



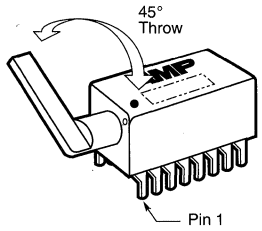
Extended Screwdriver Slot Style



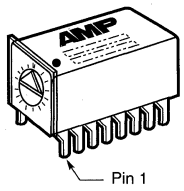
Extended D Shaft Style

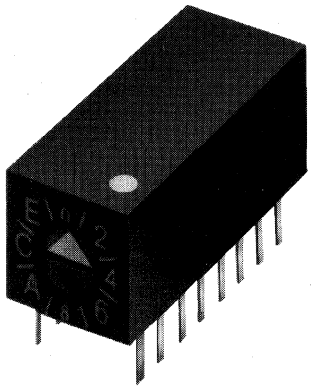


Lever Style

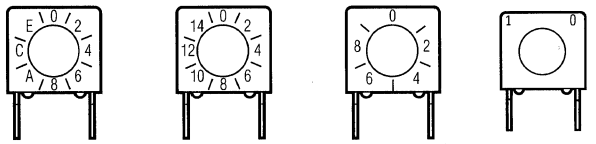


Taped Screwdriver Slot Style





Stamping Legend

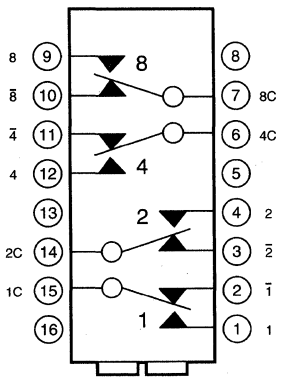


Note: 16 Pos. Housing Dim. (Typ.)—.900 [22.86] L x .373 [9.47] W x .360 [9.14] H

Switch Type	Actuator Style	Stamping Legend[1]	Bottom Sealed	Removable Tape Seal	Part Numbers
Hexadecimal w/Complement (16 Position)	Screwdriver Slot	I	Yes	No	53137-5
		II	Yes	No	53137-6
		I	Yes	Yes	54792-1
		II	Yes	Yes	54792-2
BCD w/Complement (10 Position)	Screwdriver Slot	III	Yes	No	53919-2
		III	Yes	Yes	54778-1
Hexadecimal w/Complement (16 Position)	Extended D Shaft	None	No	No	54359-1
BCD w/Complement (10 Position)	Extended D Shaft	None	No	No	54308-1
Input/Output (2 Position)	Lever	IV[2]	No	No	53921-1
	Screwdriver Slot	IV[2]	Yes	Yes	53921-3
	Extended Screwdriver Slot	IV[2]	No	No	53921-4

[1] All switches marked with epoxy ink unless otherwise noted.
[2] Switch positions 0 and 1 correspond to 0 and F, respectively in the Truth Table below.

Pin Configuration Schematic (Switch Position 0)



Truth Table (BCD and BCD Complement)

Switch Position	8	4	2	1	$\bar{8}$	$\bar{4}$	$\bar{2}$	$\bar{1}$
0					●	●	●	●
1				●	●	●	●	
2			●		●	●		●
3			●	●	●	●		
4		●			●		●	●
5		●		●	●		●	
6		●	●		●			●
7		●	●	●	●			
8	●					●	●	●
9	●			●		●	●	
10 or A	●		●			●		●
11 or B	●		●	●		●		
12 or C	●	●					●	●
13 or D	●	●		●			●	
14 or E	●	●	●					●
15 or F	●	●	●	●				

● = Connection

SOURCE: Catalog 82162

Specifications subject to change.
1-800-522-6752
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1-800-722-1111
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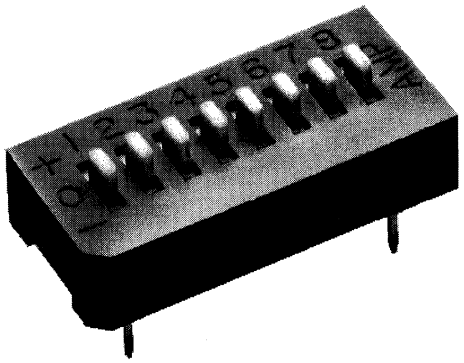
Dual In-Line Package (DIP) Switches — 7800 Series

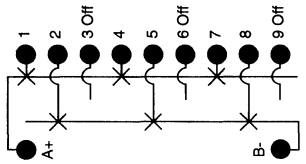
.100 x .300 [2.54 x 7.62] Contact Lead Spacing

Trinary Slide Switches

The switch may be used with two inputs and up to nine outputs or vice-versa. It is composed of eight or nine separate three-position slide switches—hence the name Trinary Slide Switch.

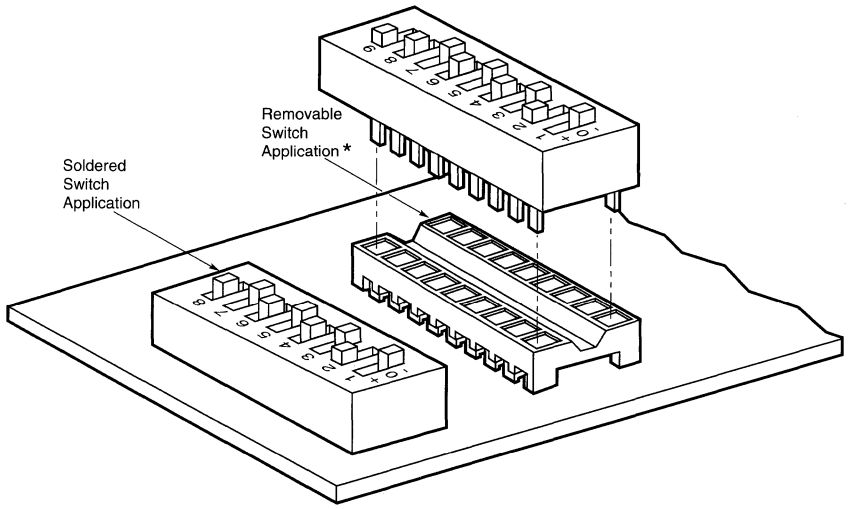


9-Switch Schematic



Note: 8-Switch Housing Dim. (Typ.)—1.00 [25.40] L x .480 [12.19] W x .230 [5.84] H

No. of Switches	Housing Color	Slide Actuator Height Above Housing	Part Numbers
8	Gray	**.060** [1.52]	436172-3
	Red	**.060** [1.52]	436891-1
9	Gray	**.060** [1.52]	436172-2
	Blue	**.060** [1.52]	1-436172-0
		.030 [0.76]	382640-1



***Note:** For a variety of **DIP** sockets, see pages 11001-11003.

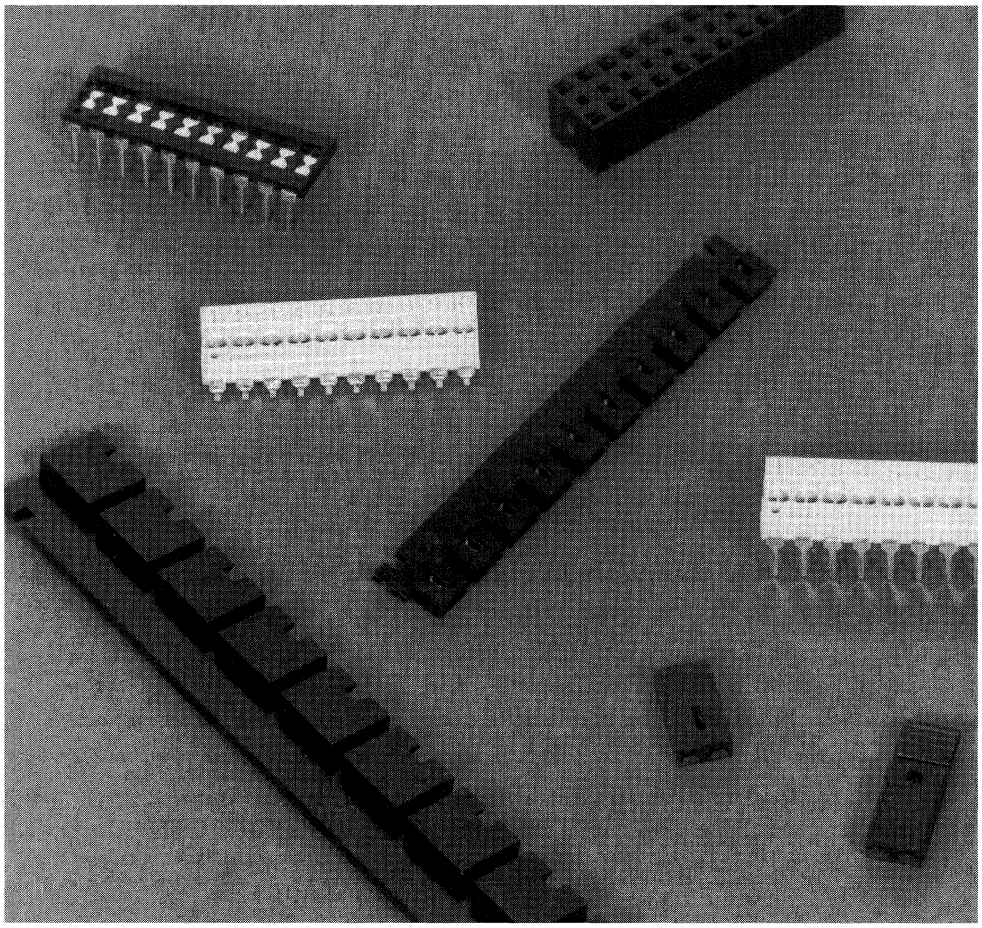
SOURCE: Catalog 82162

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

Shunts

Product Facts

- **7600 Series Programmable Shunts**
  - **Conventional .100 x .300 [2.45 x 7.62] DIP leg spacing**
  - **Available in 2 through 12 positions**
  - **Housing color—black or gray**
- **Post Shunts**
  - **Used to common pairs of .025 [0.64] square posts, .025 [0.64] diameter round posts and .022 x .026 [0.56 x 0.66] formed posts**



AMP offers a variety of high quality shunts for low cost manual programming. AMP 7600 Series Programmable Shunts are designed on the standard .100 x .300 [2.54 x 7.62] DIP centerline spacing and are supplied programmed or unprogrammed.

The DIP shunt consists of a series of conductive straps, which can be retained intact for a closed circuit or broken with a hand tool to produce an open circuit.

AMP Post Shunts mate with any common pairs of square, rectangular and round posts. Post shunts come in two-position low profile, 2 mm miniature, tandem spring, 4-position uninsulated and multiposition versions.

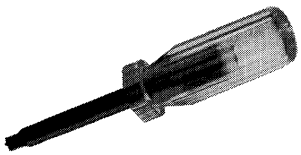
Dual In-Line Package (DIP) Shunts — 7600 Series

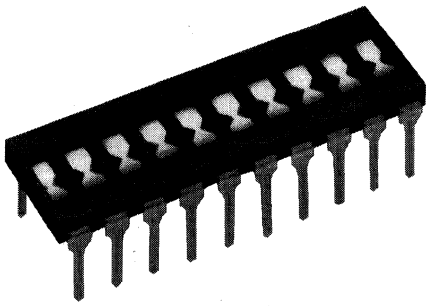
.100 x .300 [2.54 x 7.62] Contact Lead Spacing

Standard Shunt Standard Pressure and Machine Insertable Shunts

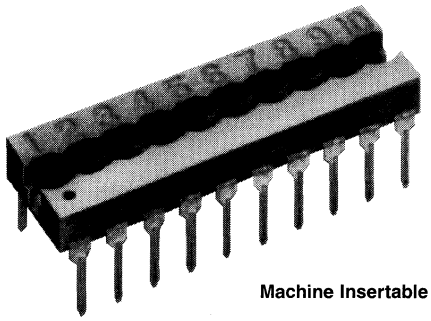
Programming Hand Tool Part No. 435862-1

For Standard Shunts only.





Standard



Machine Insertable

Note: 10 Pos. Housing Dim. (Typ.)—1.000 [25.40] L x .290 [7.37] W x .079 [2.01] H (Standard)

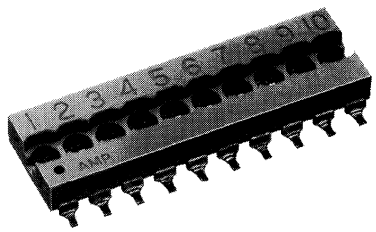
No. of Positions	Part Numbers	
	Standard Shunt Standard Pressure	Machine Insertable Shunt*
2	435704-2	—
3	435704-3	—
4	435704-4	436860-3
5	435704-5	—
6	435704-6	436860-5
7	435704-7	436860-6
8	435704-8	436860-7
9	435704-9	—
10	1-435704-0	436860-9
12	1-435704-2	1-436860-1

*Compatible with commercially available IC insertion equipment.

.100 x .350 [2.54 x 8.89] Contact Lead Spacing

Surface Mount Shunt, Machine Insertable

(Compatible with commercially available IC insertion equipment and SMT assembly practices including vapor-phase reflow and infrared soldering techniques)



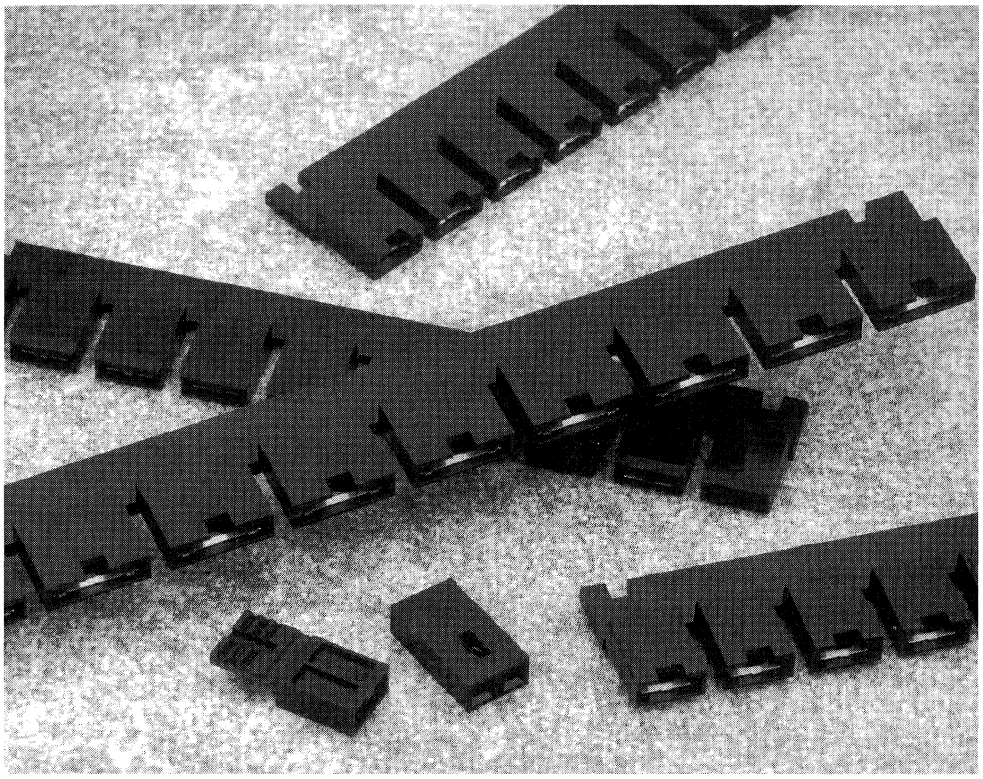
Note: 10 Pos. Housing Dim. (Typ.)—1.000 [25.40] L x .289 [7.34] W x .125 [3.18] H

No. of Positions	Part Numbers
2	382341-2
3	382341-3
4	382341-4
5	382341-5
6	382341-6
7	382341-7
8	382341-8
9	382341-9
10	1-382341-0
12	1-382341-2

SOURCE: Catalog 82162

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

Post Shunts



Product Facts

- One piece contact construction
- High normal forces
- 94V-0 rated housings
- Gold inlay, gold plate or tin plate over nickel contacts
- Stackable
- Where indicated, Recognized under the Component Program of Underwriters Laboratories Inc., File No. E28476
- Where indicated, Certified by the Canadian Standards Association, File No. LR 7189

AMP offers a variety of high quality shunts which mate with any common pairs of .025 [0.64] square posts, .025 [0.64] diameter posts, and .022 x .026 [0.56 x 0.66] formed posts.

Among the options available are choices of gold or tin plating, beryllium copper or phosphor bronze contact material and centerline spacing of .079 [2.00], .100 [2.54] and .200 [5.08]. Shunts are stackable on .100 [2.54] centers, with the low profile series requiring only .250 [6.35] clearance above the pc board. Mini Shunts are stackable on 2 mm [.079] centers.

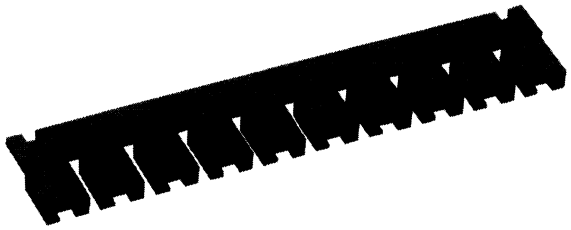
All AMP shunts feature one-piece construction for high reliability. All have high normal forces for excellent electrical continuity. For added reliability, Tandem Spring Shunts have two points of contact in each receptacle.

Post Shunts
(Continued)

2-Position, Low Profile Shunts

.100 [2.54] Centerline

Standard Housing Shunts



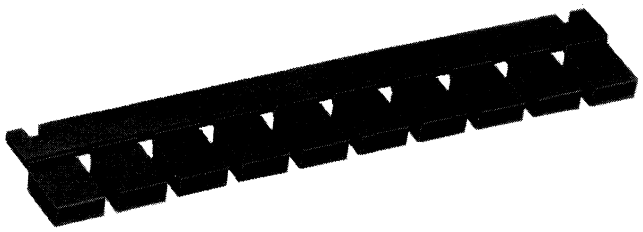
Note: Loose Piece Housing Dim. (Typ.)—.200 [5.08] L x .100 [2.54] W x .250 [6.35] H

Configuration	Housing Color	Part Numbers		
		Gold Plate[1] .000015 [0.00038]	Gold Plate[1] .000030 [0.00076]	Tin Plate .000100 [0.00254]
Strip of 10	Black	531220-2	531220-3	531220-1
Loose Piece	Black	531220-6	531220-5	531220-7
Strip of 10	Orange	—	—	382609-1
Strip of 10	Blue	382609-2	—	—
Strip of 10	Red	—	382609-3	382609-4

[1] In contact area.

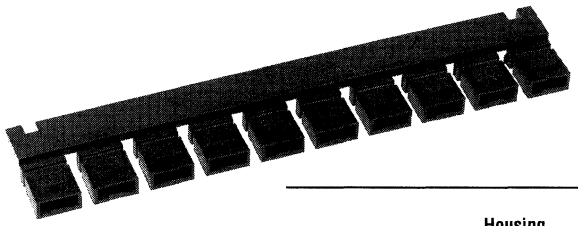
Heavy Duty Housing Shunts

Part No. 850102-1 (Strip of 10)



Closed Top Shunts

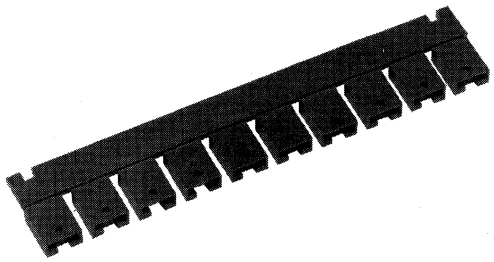
Mate with—.025 [0.64] Square Posts



Configuration	Housing Color	Part Numbers	
		Contact Material	
		Phosphor Bronze	Beryllium Copper
Strip of 10	Black	382822-2	382822-5
Loose Piece	Black	382823-2	382823-5

Economy Shunts

Mate with—.025 [0.64] Square Posts



Configuration	Housing Color	Part Numbers		
		Gold Plate[1] .000015 [0.00038]	Gold Plate[1] .000005 [0.00013]	Tin Plate .000100 [0.00254]
Strip of 10	Blue	382811-2	382811-4	382811-1
	Black	382811-6	382811-8	382811-5

[1] In contact area.

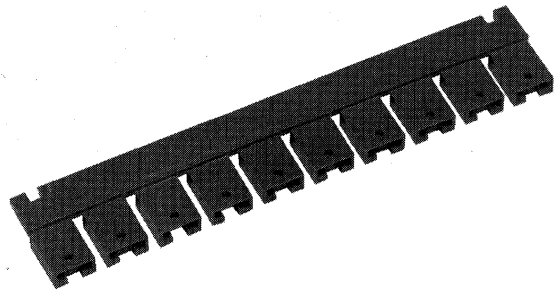
SOURCE: Catalog 82162

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

Post Shunts
(Continued)

2-Position, Low Profile Shunts (Continued)

Standard Housing Shunts .200 [5.08] Centerline

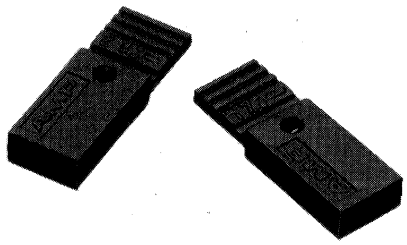


Note: Individual Housing Dim. (Typ.)—.300 [7.62] L x .100 [2.54] W x .250 [6.35] H

Configuration	Housing Color	Part Numbers		
		Gold Plate[1] .000015 [0.00038]	Gold Plate[1] .000030 [0.00076]	Tin Plate .000100 [0.00254]
Strip of 10	Black	531230-2	531230-3	531230-1
	Orange	—	—	382647-1

[1] In contact area.

Handle Shunts .100 [2.54] Centerline



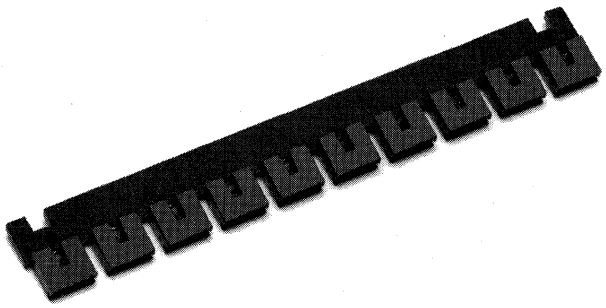
Note: Housing (incl. handle) Dim. (Typ.)—.200 [5.08] L x .098 [2.50] W x .429 [10.90] H

Type	Housing Color	Part Numbers			
		Gold Plate[1] .000015 [0.00038]	Gold Plate[1] .000030 [0.00076]	Gold Plate[1] .000050 [0.00127]	Tin Plate .000100 [0.00254]
Open Top	Black	881545-1	881545-2	881545-3	881545-4
Closed Top	Black	880584-1	880584-2	880584-3	880584-4
Open Top	Red	—	2-881545-2	—	—

[1] In contact area.

METRIC

2 mm Mini Shunts .200 [.079] Centerline



Note: Individual Housing Dim. (Typ.)—4.00 [.158] L x 2.00 [.079] W x 3.56 [.140] H

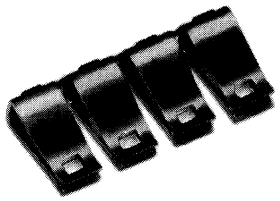
Configuration	Housing Color	Part Numbers		
		Gold Plate[1] 0.00038 [.000015]	Gold Plate[1] 0.00076 [.000030]	Tin Plate 0.00254 [.000100]
Strip of 10	Black	382575-2	382575-3	382575-1

[1] In contact area.

Post Shunts
(Continued)

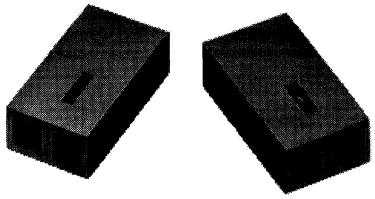
4-Position, Uninsulated Shunt .100 [2.54] Centerline

Part No. 54953-1 (Tin Plated)



Note: .380 [9.62] L x .165 [4.19] H

Tandem Spring Shunts .100 [2.54] Centerline

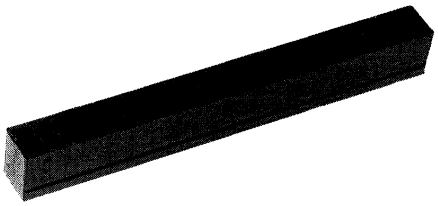


Note: Housing Dim. (Typ.)—.200 [5.08] L x .100 [2.54] W x .360 [9.14] H

Housing Color	Part Numbers			
	Gold Inlay[1] .000015 [0.00138]	Gold Inlay[1] .000030 [0.00076]	Gold Inlay[1] .000050 [0.00127]	Tin Plate .000100 [0.00254]
Natural	—	530153-1	—	2-530153-1
Black	3-530153-2	530153-2	1-530153-2	2-530153-2
Yellow	—	530153-4	—	—
Blue	—	530153-6	—	—
Red	—	1-530153-0	—	—

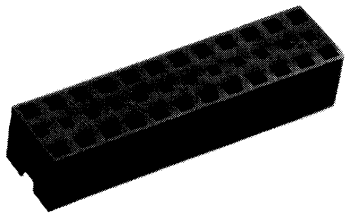
[1] In contact area.

Multiposition Shunts for .025 [0.64] Square Posts



.100 x .100 [2.54 x 2.54] Centerlines

Note: 2 x 20 Housing Dim. (Typ.)—
1.996 [50.70] L x .200 [5.08] W x .250 [6.35] H



.200 x .100 [5.08 x 2.54] Centerlines

Note: 2 x 12 Housing Dim. (Typ.)—
1.196 [30.38] L x .300 [7.62] W x .250 [6.35] H

Size	Part Numbers				
	.100 x .100 [2.54 x 2.54] Centerlines				.200 x .100 [5.08 x 2.54] Centerlines
	Gold Flash[1] .000005 [0.00013]	Gold Plate[1] .000015 [0.00038]	Gold Plate[1] .000030 [0.00076]	Tin Plate	Gold Plate[1] .000030 [0.00076]
2 x 2	382805-2	382804-2	382809-2	382808-2	645517-1
2 x 3	382805-3	382804-3	382809-3	382808-3	—
2 x 4	382805-4	382804-4	382809-4	382808-4	645517-2
2 x 5	382805-5	382804-5	382809-5	382808-5	645517-3
2 x 6	382805-6	382804-6	382809-6	382808-6	645517-4
2 x 7	382805-7	382804-7	382809-7	382808-7	645517-5
2 x 8	382805-8	382804-8	382809-8	382808-8	645517-6
2 x 9	382805-9	382804-9	382809-9	382808-9	1-645517-0
2 x 10	1-382805-0	1-382804-0	1-382809-0	1-382808-0	—
2 x 11	1-382805-1	1-382804-1	1-382809-1	1-382808-1	645517-7
2 x 12	1-382805-2	1-382804-2	1-382809-2	1-382808-2	645517-8
2 x 13	1-382805-3	1-382804-3	1-382809-3	1-382808-3	—
2 x 14	1-382805-4	1-382804-4	1-382809-4	1-382808-4	645517-9
2 x 15	1-382805-5	1-382804-5	1-382809-5	1-382808-5	—
2 x 16	1-382805-6	1-382804-6	1-382809-6	1-382808-6	—
2 x 17	1-382805-7	1-382804-7	1-382809-7	1-382808-7	—
2 x 18	1-382805-8	1-382804-8	1-382809-8	1-382808-8	—
2 x 19	1-382805-9	1-382804-9	1-382809-9	1-382808-9	—
2 x 20	2-382805-0	2-382804-0	2-382809-0	2-382808-0	—

[1] In contact area.

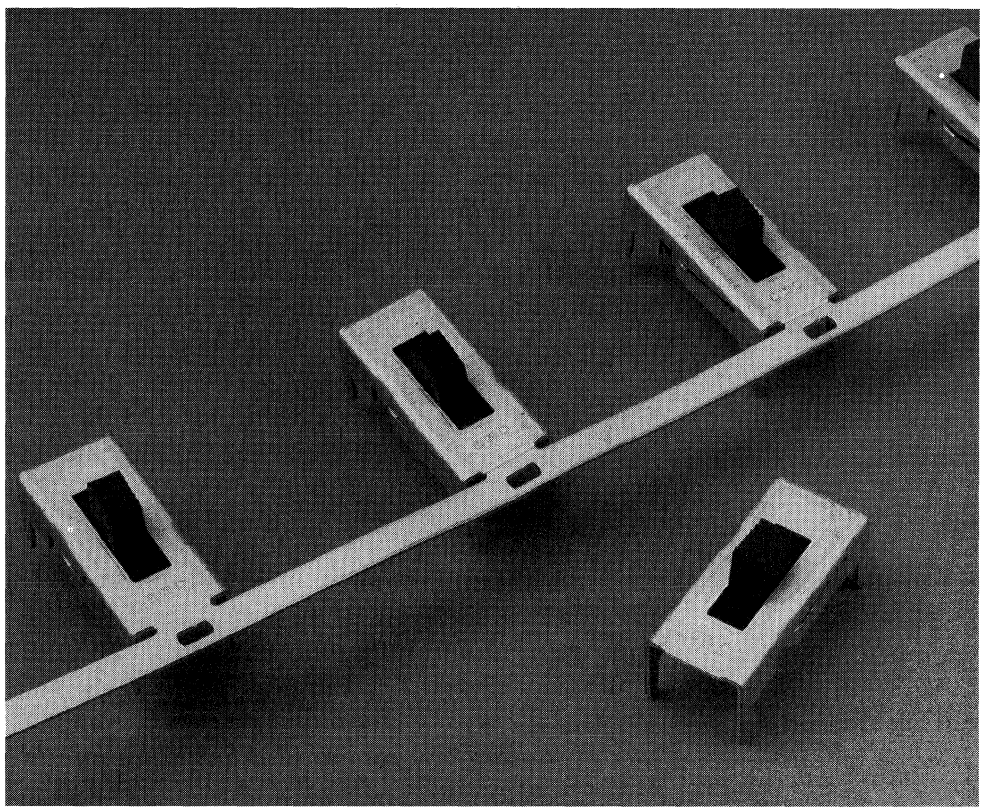
SOURCE: Catalog 82162

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

Slide Switches for Printed Circuit Boards

Product Facts

- **Open bottom design permits contacts to act directly on pc board traces when mounted on circuit side**
- **Available in 2-, 3- and 4-position switch configurations**
- **Provides high reliability and eliminates hand soldering**
- **Mounting accomplished by hand insertion applicator**
- **Supplied in strip form**
- **Capable of being installed after flow soldering and cleaning operations**



AMP Slide Switches for printed circuit boards provide a reliable, low-cost means of switching pc board traces. The open bottom design of the switch permits the contacts to act directly on the traces. The mounting of the switch on the circuit side of the board increases the flexibility of packaging. Various switching functions can be obtained by changing the trace layout of the board, thereby limiting inventories of required switches.

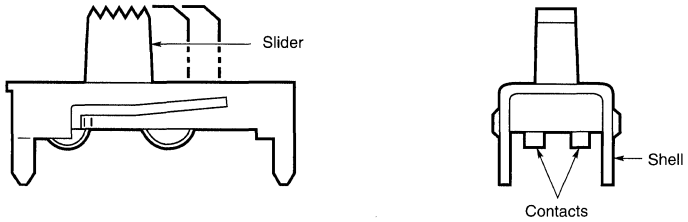
Mounting of this switch is accomplished by using a manual applicator. The applicator clinches the mounting legs to the opposite side of the board from the switching function. The switch is intended to be installed after flow soldering and cleaning operations have been completed. This procedure keeps the internal parts of the switch lubricated and free of contaminants.

For special applications, contact AMP.

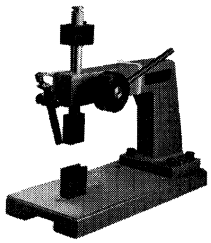
SOURCE: Catalog 82162

Slide Switches for Printed Circuit Boards
(Continued)

2-Pole Slide Switches



Application Tooling



Frame

Part No. 58072-1
(Without locating light)

Part No. 58072-2
(With locating light)

Applicators

Part Nos:
58068-1 (for 2-Position Switch)
58068-2 (for 3-Position Switch)
58068-3 (for 4-Position Switch)

Note: 4 Pos. Switch (Shell and Slider) Dim. (Typ.)—.962 [24.43] L x .370 [9.40] W x .380 [9.65] H (above pc board)

No. of Pos.	Slider Height (Above Shell Surface)	Part Numbers
2	**.250** [6.35]	520287-1
3	**.250** [6.35]	520288-1
	.200 [5.08]	1-520288-1
4	**.200** [5.08]	1-520289-1

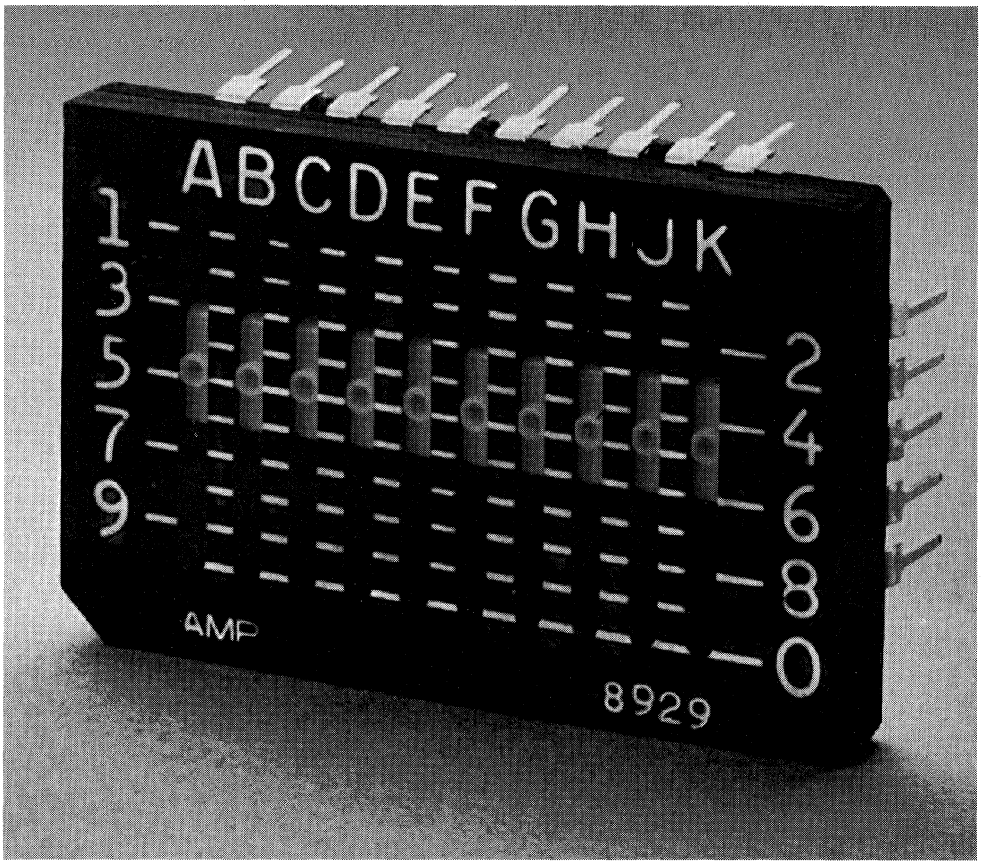
SOURCE: Catalog 82162

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

Mini-Matrix Slide Switch

Product Facts

- **Provides ten, 10-position slide switches in a very small space — requires only .900 x 1.400 [22.86 x 35.56] on pc board**
- **Very low profile — extends only .193 [4.90] above pc board**
- **Can be wave soldered to pc board with other components**



10 x 10 Switch
Part No. 436270-1

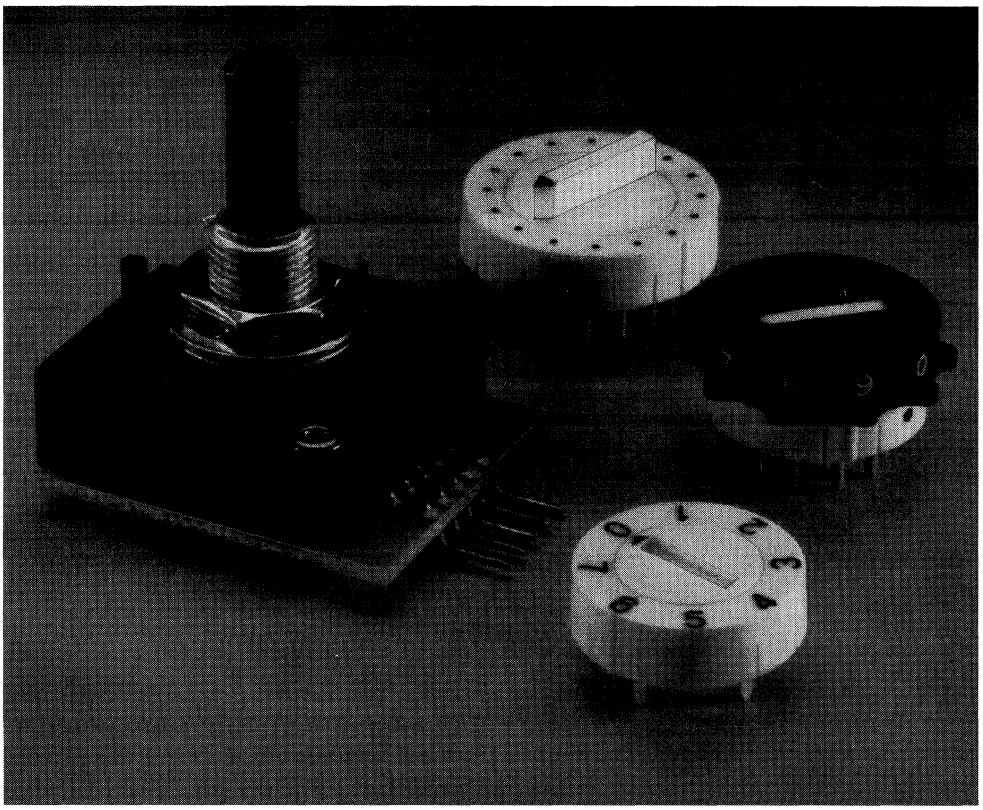
AMP Mini-Matrix Slide Switch provides a highly reliable, low cost means of manually programming electrical and electronic equipment. The switch design consists of a group of manually operated slide switches which connect circuits at cross points, forming a matrix. Compact design and very low profile make this switch compatible with modern miniaturization standards. The switch is ruggedly constructed to provide a long life of electrical and mechanical integrity. It is ideal for logic. level matrix switching.

Mini-Matrix Slide Switch has I/O legs on .100 [2.54] centers and can be wave soldered to printed circuit boards along with other components. Five of the 10 row circuits are terminated on each side of a switch, with the legs of the two sides offset .062 [1.57] from each other. Column circuits are terminated at the top and bottom of the switch; only one end of each column axis circuit requires electrical connection. Switch arrangement is 10 x 10.

Note: Housing Dim. (Typ.)— 1.380 [35.05] L x .880 [22.35] W x .170 [4.32] H

SOURCE: Catalog 82162

Rotary Switches for Printed Circuit Boards



Product Facts

6000 Series Rotary Switches

- Compact design — small diameter, low profile switches are ideal for pc board mounting
- Wide choice of outputs: 8-position binary-coded octal, 10-position binary-coded decimal, 16-position hexadecimal and 10- and 16- position single pole
- Versatile application — styles include slotted, bar-type and thumbwheel versions for hand rotation (bidirectional)
- Economical — board mounting eliminates need for input/output wiring to perform switching functions
- Positive switching — contacts have positive detent action
- All positions are easily identified by large readable characters or dots
- Optimum reliability — fully enclosed housing protects contacts against contamination

3100 Series Rotary Switches

- Code flexibility — switch output capabilities include decimal, BCD and BCD complement, plus various other codes
- Positive switching — positive detent action of stainless steel detent balls and springs provide for reliable operation
- Compact design — switches require only a minimum of front- or behind-panel mounting space
- Enclosed contacts — contact surfaces are fully protected against dirt, dust and other environmental hazards
- Designed for logic level circuitry, but capable of controlling electrical circuits that operate at current ratings of 2 A, 115 VAC (nonswitching) and up to 125 mA, 115 VAC (switching)

- Available with 10, 12, 16, 24 and 32 switching positions — all standard
- Interconnection achieved by using AMP Commercial Interconnection System (CIS) "F" posts, AMPMODU receptacles and posts, pc board edge connectors and AMP EDGE terminals, as well as soldered wire terminations
- Stops supplied with the switches may be customer installed to limit rotation to less than 360°

AMP Printed Circuit Board Rotary Switches provide a simple, reliable and low cost means of manually programming various types of electronic equipment. They are specially designed to be mounted directly on a pc board. This eliminates the need for input/output wiring to perform switching functions.

Rugged construction and positive detent action contacts establish optimum switching reliability. A fully enclosed housing protects contact surfaces from dirt, dust and other contaminants.

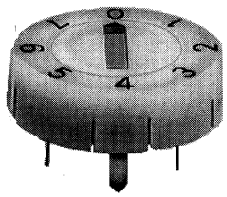
SOURCE: Catalog 82162

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

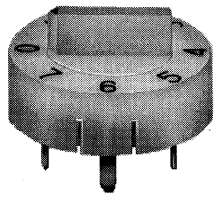
6000 Series Rotary Switches

8-Position Binary-Coded Octal (BCO)

Switch Position	Common to: 1	2	3
0			
1	●		
2		●	
3	●	●	
4			●
5	●		●
6		●	●
7	●	●	●



Screwdriver/Coin Actuated
Part No. 435174-1

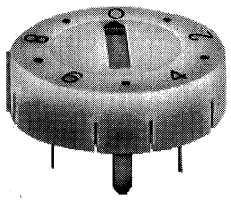


Bar-Type Knob
Part No. 1-435174-1 (Shown)
Part No. 1-435174-3 (With Dots)

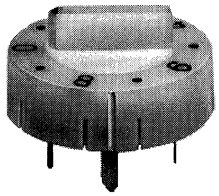
Note: Housing Dim. (Typ.)—.750 [19.05] Dia. x .370 [9.40] H (incl. bar-type knob)

10-Position Binary-Coded Decimal (BCD)

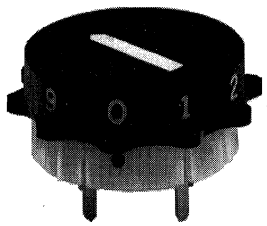
Switch Position	Common to: 1	2	4	8
0				
1	●			
2		●		
3	●	●		
4			●	
5	●		●	
6		●	●	
7	●	●	●	
8				●
9	●			●



Screwdriver/Coin Actuated
Part No. 435005-1



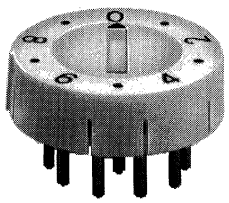
Bar-Type Knob
Part No. 435123-1



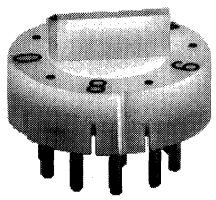
Thumbwheel
Part No. 435128-1

10-Position Single Pole

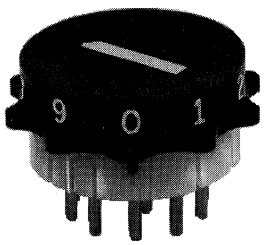
Switch Position	Common to: 0	1	2	3	4	5	6	7	8	9
0	●									
1		●								
2			●							
3				●						
4					●					
5						●				
6							●			
7								●		
8									●	
9										●



Screwdriver/Coin Actuated
Part No. 1-435097-1



Bar-Type Knob
Part No. 2-435097-1



Thumbwheel
Part No. 435097-1 (Shown)
Part No. 435097-2 (With Numbers 0 - 9)

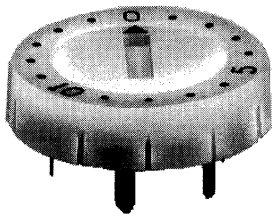
SOURCE: Catalog 82162

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

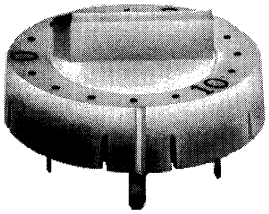
6000 Series Rotary Switches
(Continued)

16-Position Hexadecimal

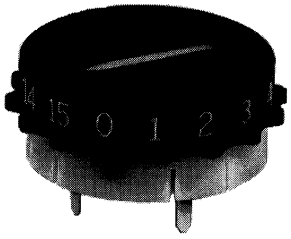
Switch Position	Common to: 1	2	4	8
0				
1	●			
2		●		
3	●	●		
4			●	
5	●		●	
6		●	●	
7	●	●	●	
8				●
9	●			●
10		●		●
11	●	●		●
12			●	●
13	●		●	●
14		●	●	●
15	●	●	●	●



Screwdriver/Coin Actuated
Part No. 435167-1



Bar-Type Knob
Part No. 1-435167-1



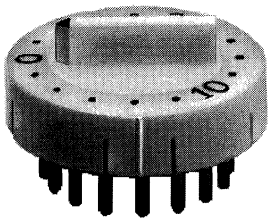
Thumbwheel
Part No. 2-435167-1 (Shown)
Part No. 3-435167-1 (With Numbers and Letters)

Note: Housing Dim. (Typ.)—.920 [23.37] Dia. x .360 [9.14] H (incl. bar-type knob)

16-Position Single Pole

Switch Position	Common to: 0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
0	●															
1		●														
2			●													
3				●												
4					●											
5						●										
6							●									
7								●								
8									●							
9										●						
10											●					
11												●				
12													●			
13														●		
14															●	
15																●

Note: Housing Dim. (Typ.)—.920 [23.37] Dia. x .370 [9.40] H
(incl. bar-type knob)

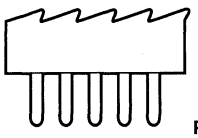


Bar-Type Knob
Part No. 1-435304-1 (Shown)
Part No. 1-435304-3 (With Dots)

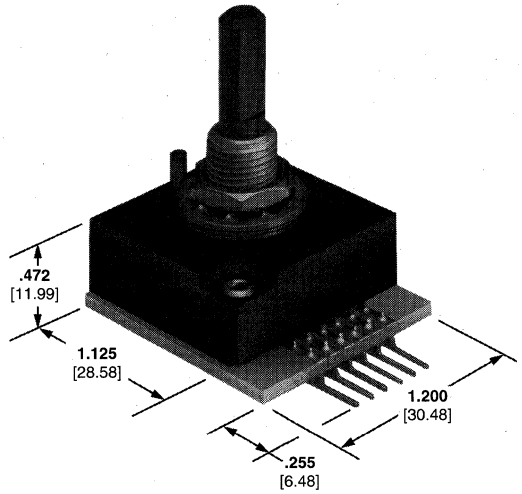
3100 Series Rotary Switches

10, 12, and 16-Position Switches

Coding



					Part No.
2	1	C	8	4	435984-1, 7
8	2	4	1	C	436037-1
1	2	C	8	4	435986-1
$\overline{2}$	C	$\overline{1}$	$\overline{8}$	$\overline{4}$	436022-1
C	$\overline{4}$	$\overline{8}$	$\overline{1}$	$\overline{2}$	436024-1
$\overline{8}$	$\overline{2}$	$\overline{4}$	C	$\overline{1}$	435987-1



10-Position 36° Throw BCD

Part No. 435984-1 (Shown)
Part No. 435984-7 (Right-Angle)

Switch Position	Common to: 1	2	4	8
0				
1	●			
2		●		
3	●	●		
4			●	
5	●		●	
6		●	●	
7	●	●	●	
8				●
9	●			●

12-Position 30° Throw BCD

Part No. 436037-1

Switch Position	Common to: 1	2	4	8
0				
1	●			
2		●		
3	●	●		
4			●	
5	●		●	
6		●	●	
7	●	●	●	
8				●
9	●			●
10		●		●
11	●	●		●

16-Position 22½° Throw BCD Hexadecimal

Part No. 435986-1

Switch Position	Common to: 1	2	4	8
0				
1	●			
2		●		
3	●	●		
4			●	
5	●		●	
6		●	●	
7	●	●	●	
8				●
9	●			●
10		●		●
11	●	●		●
12			●	●
13	●		●	●
14		●	●	●
15	●	●	●	●

10-Position 36° Throw BCD Complement

Part No. 436022-1

Switch Position	Common to: $\overline{1}$	$\overline{2}$	$\overline{4}$	$\overline{8}$
0	●	●	●	●
1		●	●	●
2	●		●	●
3			●	●
4	●	●		●
5		●		●
6	●			●
7				●
8	●	●	●	
9		●	●	

12-Position 30° Throw BCD Complement

Part No. 436024-1

Switch Position	Common to: $\overline{1}$	$\overline{2}$	$\overline{4}$	$\overline{8}$
0	●	●	●	●
1		●	●	●
2	●		●	●
3			●	●
4	●	●		●
5		●		●
6	●			●
7				●
8	●	●	●	
9		●	●	
10	●		●	
11			●	

16-Position 22½° Throw Hex Complement

Part No. 435987-1

Switch Position	Common to: $\overline{1}$	$\overline{2}$	$\overline{4}$	$\overline{8}$
0	●	●	●	●
1		●	●	●
2	●		●	●
3			●	●
4	●	●		●
5		●		●
6	●			●
7				●
8	●	●	●	
9		●	●	
10	●		●	
11			●	
12	●	●		
13			●	
14	●			
15				

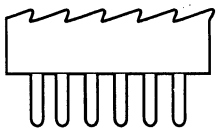
SOURCE: Catalog 82162

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

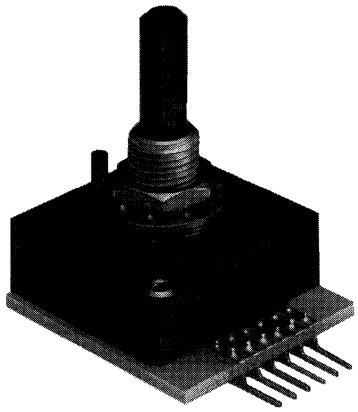
3100 Series Rotary Switches
(Continued)

24-Position 15° Throw BCD
Part No. 436028-1

Coding

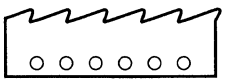


Switch Position	Common to: 1	2	4	8	16
0					
1	●				
2		●			
3	●	●			
4			●		
5	●		●		
6		●	●		
7	●	●	●		
8				●	
9	●			●	
10		●		●	
11	●	●		●	
12			●	●	
13	●		●	●	
14		●	●	●	
15	●	●	●	●	
16					●
17	●				●
18		●			●
19	●	●			●
20			●		●
21	●		●		●
22		●	●		●
23	●	●	●		●

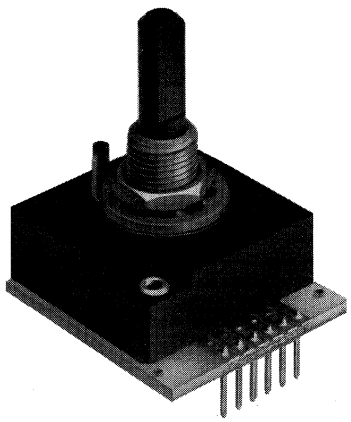


32-Position 11¼° Throw BCD
Part No. 436287-1

Coding



Switch Position	Common to: 1	2	4	8	16
0					
1	●				
2		●			
3	●	●			
4			●		
5	●	●			
6		●	●		
7	●	●	●		
8				●	
9	●			●	
10		●		●	
11	●	●		●	
12			●	●	
13	●		●	●	
14		●	●	●	
15	●	●	●	●	
16					●
17	●				●
18		●			●
19	●	●			●
20			●		●
21	●		●		●
22		●	●		●
23	●	●	●		●
24				●	●
25	●			●	●
26		●		●	●
27	●	●		●	●
28			●	●	●
29	●		●	●	●
30		●	●	●	●
31	●	●	●	●	●



SOURCE: Catalog 82162

Specifications subject to change.

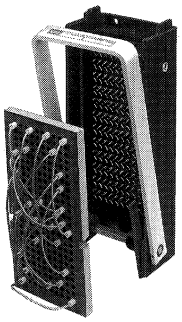
1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

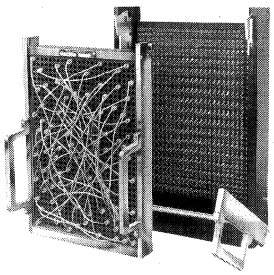
AMP Standard Patchcord Programming Systems

Product Facts

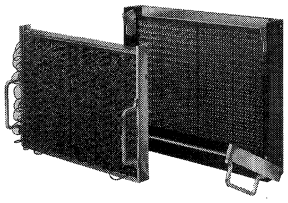
- **Versatile wiring capabilities—LANCELOK or Taper Pin Terminals, TERMI-POINT Clip or Wrap-type Point-to-Point Wiring, AMPMODU Post and Receptacle Interconnection Systems**
- **Choice of sizes: 240, 480, 612, 816, 1224, 1632, 1768, 3264, 4896**
- **Post patching capability**
- **Front boards available for twin detent or nylon sleeve patchcords**
- **Exclusive contact double wiping action**
- **.250 x .250 [6.35 x 6.35] spacing**
- **Molded boards of diallyl phthalate per MIL-M-14F**
- **Variety of patchcords and accessories available**



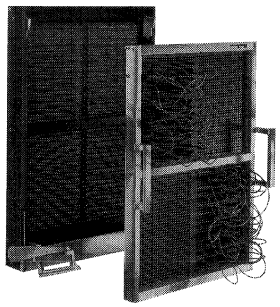
240 & 480



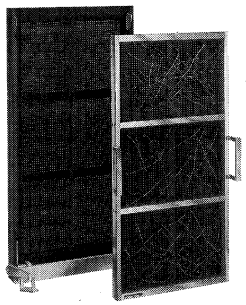
612 & 816



1224, 1632 (shown) & 1768



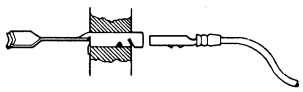
3264



4896

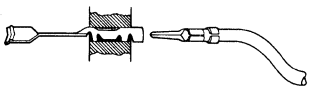
Versatility in Rear Bay Wiring

LANCELOK Terminals



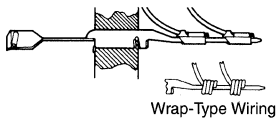
LANCELOK Terminals are recommended for patchcord programming systems subjected to excessive shock and vibration. The design of these terminals and their matching LANCELOK spring receptacles provide multiple areas of contact resulting in excellent electrical performance.

AMP Taper Pins



AMP Taper Pins for rear bay contact provide a low-resistance, noise-free wire termination. They incorporate a 3-1/2° taper which results in a .001 [0.03] change in diameter for every .016 [0.41] of length. This precisely calculated wedge provides uniform retention and excellent electrical stability.

TERMI-POINT Clip Terminations

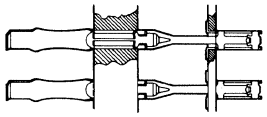


Wrap-Type Wiring

TERMI-POINT Clip Terminations of rear bay point-to-point wiring provide industry with the answer for greater flexibility, density, serviceability and reliability.

The TERMI-POINT Clip technique is a compression termination which applies the wire to a metal post. The clip acts as a holding device that precisely positions and then firmly grips the wire as it is affixed to the post by hand or automatic tooling. This method provides excellent mechanical and electrical characteristics, yet can be easily disconnected.

The AMPMODU Interconnection System



The AMPMODU Interconnection System is ideally suited for back bay wiring technology which calls for a substantial reduction in conductor length between components and the programming system, thus it provides the much desired plug-in, maintainable module approach.

SOURCE: Catalog 82018

Specifications subject to change.

1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

Rear Bay Assemblies (Panel Mount)

Note: 1224 System Dim. (Typ.)—11.40 [289.6] L x 11.28 [286.5] W x 3.63 [92.2] Depth

System	Hole Arrangement	Part Numbers						
		Taper Pins	LANCELOK Terminals	AMPMODU Receptacles* .031 x .062 [0.78 x 1.57] Posts	TERMI-POINT Clips* .031 x .062 [0.78 x 1.57] Posts	Wrap-Type Wiring .045 x .045 [1.14 x 1.14] Posts	Wrap-Type Wiring and AMPMODU Receptacles .025 x .025 [0.64 x 0.64] Posts	Mates with Front Board Assembly
240	10 x 24	425413-1	425413-2	—	425413-4	425413-5	—	425930-1, 2, 5 & 6
480	20 x 24	425414-1	425414-2	425414-3	425414-4	—	—	425930-3, 4, 7 & 8
612	18 x 24	435067-1	435067-2	—	435067-4	—	435067-5	435068-1, 2, 3 & 4
816	24 x 34	425566-1	425566-2	425566-3	425566-4	425566-5	425566-7	425567-2, 3 & 4
1224	36 x 34	425568-1	425568-2	—	425568-4	425568-5	425568-7	425569-1, 2, 3 & 4
1632	48 x 34	425570-1	425570-2	—	425570-4	425570-5	425570-8	425571-1, 2, 3 & 4
1768	52 x 34	425572-1	425572-2	425572-3	425572-4	425572-5	—	425573-1, 2, 3 & 4
3264	48 x 68	425574-1	425574-2	425574-3	425574-4	—	—	425575-1, 2, 3, & 4
4896	48 x 102	425576-1	425576-2	—	—	—	—	425577-1, 2, 3, & 4

*Can be used for wrap-type wiring.
Note: Rear face of all boards silk-screened with 2 x 2 checkerboard and alphanumeric legend.

Front Board Assemblies

Note: 1224 System Dim. (Typ.)—10.05 [255.3] L x 9.90 [251.5] W x 2.69 [68.3] Depth

System	Hole Arrangement	Part Numbers				
		"D" Holes for Nylon Sleeve Patchcord		Round Holes for Twin Detent Patchcord		Dust Cover
		Screened	Unscreened	Screened	Unscreened	
240	10 x 24	425930-2	425930-1	425930-6	425930-5	—
480	20 x 24	425930-4	425930-3	425930-8	425930-7	—
612	18 x 34	435068-2	—	435068-4	435068-3	2-425647-1
816	24 x 34	425567-2	425567-1	425567-4	425567-3	1-425647-1
1224	36 x 34	425569-2	425569-1	425569-4	425569-3	1-425648-1
1632	48 x 34	425571-2	425571-1	425571-4	425571-3	1-425649-1
1768	52 x 34	425573-2	425573-1	425573-4	425573-3	1-425650-1
3264	48 x 68	425575-2	425575-1	425575-4	425575-3	425660-1
4896	48 x 102	425577-2	425577-1	425577-4	425577-3	425661-1

SOURCE: Catalog 82018

Specifications subject to change.

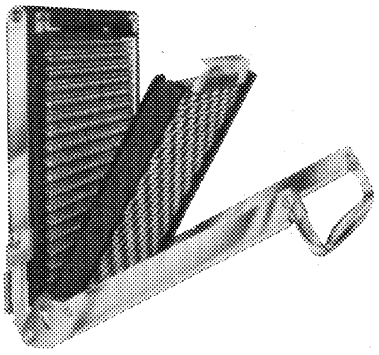
1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

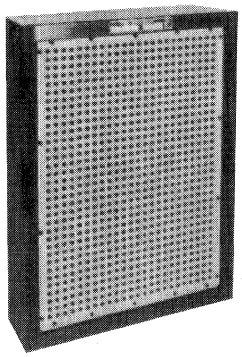
AMP Universal Patchcord Programming Products

Product Facts

- Line includes panel mount systems and fixed panels
- Capable of almost infinite switching combinations
- Simplified design permits rapid post-patching of front boards while equipment remains in operating position
- Double wiping action cleans contacts of contaminants
- Contact gold plating exceeds the requirements of MIL-G-45204 for excellent conductivity



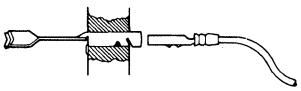
Panel Mount System



Fixed Panels

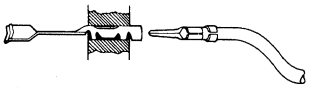
Rear-Bay Wiring

LANCELOK Terminals



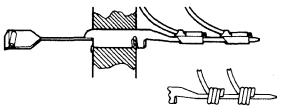
LANCELOK Terminals and Receptacles provide a multiple contact area which results in excellent electrical performance. A locking lance seats the terminal firmly in the spring receptacle. Terminals are available in uninsulated and pre-insulated types, both with insulation support.

AMP Taper Pins



AMP Taper Pins for rear bay contact provide a low-resistance, noise-free wire termination. They incorporate a 3-1/2° taper which results in a .001 [0.03] change in diameter for every .016 [0.41] of length. This precisely calculated wedge provides uniform retention and excellent electrical stability.

TERMI-POINT Clip Terminations

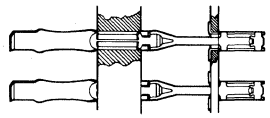


Wrap-Type Wiring

TERMI-POINT Clip Terminations of rear bay point-to-point wiring provide industry with the answer for greater flexibility, density, serviceability and reliability.

The TERMI-POINT Clip technique is a compression termination which applies the wire to a metal post. The clip acts as a holding device that precisely positions and then firmly grips the wire as it is affixed to the post by hand or automatic tooling. This method provides excellent mechanical and electrical characteristics, yet can be easily dis-connected. Wrap-type posts are also available.

The AMPMODU Interconnection System



The AMPMODU Interconnection System is ideally suited for back bay wiring technology which calls for a substantial reduction in conductor length between components and the programming system, thus it provides the much desired plug-in, maintainable module approach.

SOURCE: Catalog 82027

Specifications subject to change.

1-800-522-6752
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1-800-722-1111
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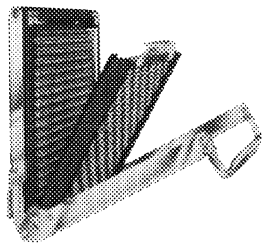
Panel Mount Systems



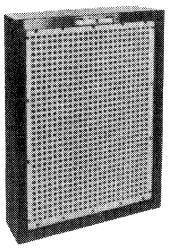
816 System

Note: 1224 System Outside Dim. (Typ.)—12.062 [306.38] L x 11.219 [284.96] W x 3.5 [88.9] Depth

System	Hole Arrangement	Part Numbers						
		Rear Frame and Spring Assembly		Removable Patchboards				
				"D" Holes for Nylon Sleeve Patchcords		Round Holes for Twin Detent Patchcords		Dust Cover
		for Taper Pins	for LANCELOK Terminals	Unscreened	Standard Screen*	Unscreened	Standard Screen*	
240	10 x 24	595069-4	695672-4	395056-2	595368-2	695670-2	695670-4	595100-2
480	24 x 20	695305-3	695675-4	595350-2	595534-2	695673-2	695673-4	595757-1
816	24 x 34	695081-3	695678-4	595005-2	595369-2	595902-2	595902-4	595298-1
1224	36 x 34	695070-1	695681-4	595109-2	695315-2	695679-2	695679-4	695265-1
1632	48 x 34	695010-4	695684-4	695009-2	695316-2	695682-2	695682-4	695210-1
3264	48 x 68	695020-4	695657-4	695415-2†	695415-4†	695466-2†	695466-4†	695173-1
4896	48 x 102	695021-4	695689-4	695019-2 695416-2†	695416-4†	695451-2†	695451-4†	—

†Aluminum Alloy Frame
*Front face of patchboard is silk screened with alphanumeric 2 x 2 checkerboard legend.

Fixed Panels



816 Panel

Note: 480 Panel Dim. (Typ.)—7.5 [190.5] L x 6.5 [165.1] W x 2 [50.8] Depth

System	Hole Arrangement	Contact Spring Finish	Part Numbers for Taper Pins*
120	10 x 12	Gold Plated	495255-4
240	10 x 24	Gold Plated	595035-4
480	24 x 20	Gold Plated	595126-4
816	24 x 34	Gold Plated	595051-4
1632	48 x 34	Gold Plated	695142-4

*Also available with TERMI-POINT, wrap-type, LANCELOK and AMPMODU posts. Contact AMP for additional information.
Note: Front face of fixed panels are not silk screened. Special screening or standard AMP alphanumeric 2 x 2 checkerboard legend available upon request.

SOURCE: Catalog 82027

Specifications subject to change.

1-800-522-6752
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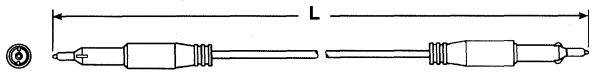
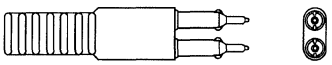
1-800-722-1111
Tooling/Technical Assistance Center

Twin Detent Patchcords (for use with round hole front boards only)



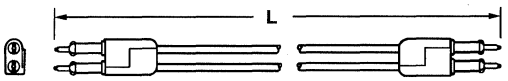
Single Conductor Patchcords

Length (L)	Pin Finish	Insulation Color	Part Numbers	
			Manual Type	Semi-Permanent Type
5 127.0	Gold	Red	695640-9	595903-9
7 177.8	Gold	Gray	695640-1	595903-1
9 228.6	Gold	Blue	695640-2	595903-2
11 279.4	Gold	Green	695640-3	595903-3
13 330.2	Gold	Yellow	695640-4	595903-4
15 381.0	Gold	Orange	695640-5	595903-5
19 482.6	Gold	Black	695640-6	595903-6
27 685.8	Gold	Brown	695640-7	595903-7
35 889.0	Gold	Red	695640-8	595903-8



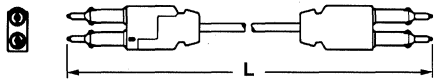
Fully Molded Shunt

Pin Finish	Part Numbers	
	Manual Type	Semi-Permanent Type
Gold	397347-1 (Gray)	397348-1 (Red)



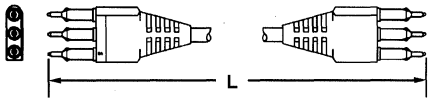
Dual Conductor Patchcords

Length (L)	Pin Finish	Insulation Color	Part Numbers
			Manual Type
7 177.8	Gold	Gray & Black	421100-1
9 228.6	Gold	Blue & Black	421100-2
15 381.0	Gold	Orange & Black	421100-5
19 482.6	Gold	White & Black	421100-6
27 685.8	Gold	Brown & Black	421100-7
35 889.0	Gold	Red & Black	421100-8



Single Conductor Plus Shield Patchcords

Length (L)	Pin Finish	Insulation Color	Part Numbers
			Manual Type
7 177.8	Gold	Gray	695644-1
9 228.6	Gold	Blue	695644-2
11 279.4	Gold	Green	695644-3
15 381.0	Gold	Orange	695644-5
19 482.6	Gold	Black	695644-6
27 685.8	Gold	Brown	695644-7



Two Conductor Plus Shield Patchcords

Length (L)	Pin Finish	Insulation Color	Part Numbers	
			Manual Type	Semi-Permanent Type
7 177.8	Gold	Black	397351-1	—
9 228.6	Gold	Black	397351-2	—
11 279.4	Gold	Black	397351-3	397353-3
15 381.0	Gold	Black	397351-5	—
19 482.6	Gold	Black	397351-6	397353-6
27 685.8	Gold	Black	397351-7	—
35 889.0	Gold	Black	397351-8	—
45 1143.0	Gold	Black	397351-9	—

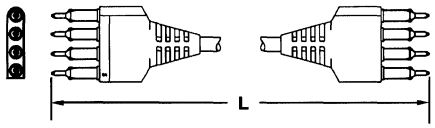
SOURCE: Catalog 82018, 82027

Specifications subject to change.

1-800-522-6752
Product Information Center/ AMP FAX Service

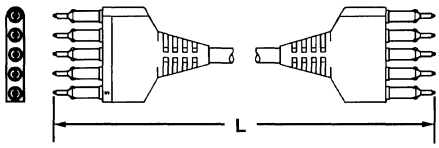
1-800-722-1111
Tooling/Technical Assistance Center

Twin Detent Patchcords (for use with round hole front boards only)
(Continued)



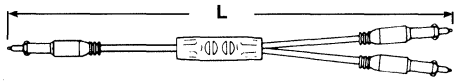
Three Conductor Plus Shield Patchcords

Length (L)	Pin Finish	Insulation Color	Part Numbers
			Manual Type
15 381.0	Gold	Black	695641-4
24 609.6	Gold	Black	695641-6
27 685.8	Gold	Black	695641-7



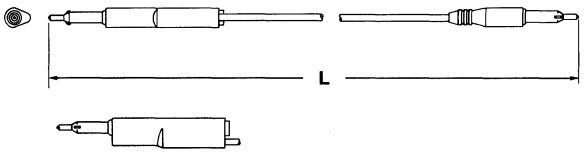
Four Conductor Plus Shield Patchcords

Length (L)	Pin Finish	Insulation Color	Part Numbers
			Manual Type
24 609.6	Gold	Black	397357-6
40 1016.0	Gold	Black	397357-8



"Y" Patchcords—3 Pin Common (Semi-Permanent)

Length (L)	Pin Finish	Insulation Color	Part Number
9 228.6	Gold	Blue	397728-1
15 381.0	Gold	Orange	397728-2



Patchcord Receptacles (Manual)

Length (L)	Pin Finish	Insulation Color	Part Number
5 127.0	Gold	Red	424248-1
7 177.8	Gold	Gray	424248-2
9 228.6	Gold	Blue	424248-3
11 279.4	Gold	Green	424248-4
13 330.2	Gold	Yellow	424248-5
15 381.0	Gold	Orange	424248-6
19 482.6	Gold	Black	424248-7

SOURCE: Catalog 82018, 82027

Specifications subject to change.

1-800-522-6752
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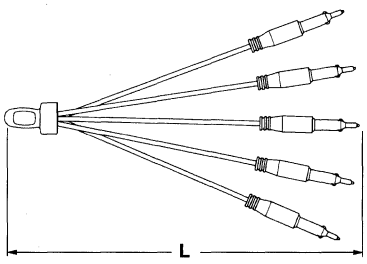
1-800-722-1111
Tooling/Technical Assistance Center

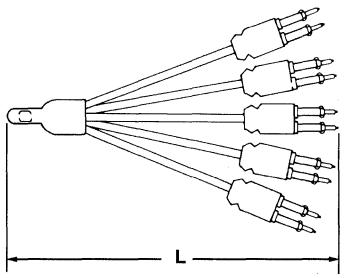
Twin Detent Patchcords (for use with round hole front boards only)
(Continued)



Squid Patchcord

Squid Patchcords

Length (L)	Pin Finish	Pin Type	Insulation Color	Part Numbers 3 Pin	4 Pin	8 Pin
7 177.8	Gold	Manual	Gray	—	397361-3	—
		Semi-Perm.		695472-3	—	397368-3
9 228.6	Gold	Manual	Blue	695650-4	—	—



Single Conductor & Shield Squid

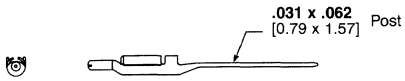
Single Conductor & Shield Squids

Length (L)	Pin Finish	Pin Type	Insulation Color	Part Numbers 3 Legs	4 Legs	5 Legs
15 381.0	Gold	Manual	Orange	420929-5	421102-5	421103-5

SOURCE: Catalog 82018, 82027

Accessories for Twin Detent Patchcords

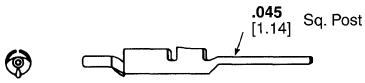
TERMI-POINT Post Adapter



Finish	Part Number
Gold Plated	425257-2

Note: Insertion Tool **Part No. 402709**

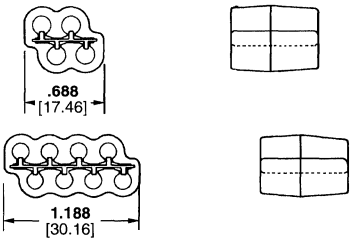
Wrap-Type Post Adapter (for wrap-type connections)



Finish	Part Number
Gold Plated	497474-3

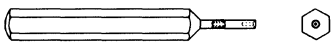
Note: Insertion Tool **Part No. 695880-1**

Commoning Block (for electrical commoning of two or more patchtips)



No. of Holes	Finish	Part Number
4	Gold Plated	397805-1
8	Gold Plated	397806-1

Extraction Tool and Spare Tips (for Semi-Permanent twin detent patchtips; tip included)



Tip Length	Tool Part Number	Tip Part Number
.625 15.9	695880-1	695879-1
4 101.6	695880-2	420878

SOURCE: Catalog 82018, 82027

Specifications subject to change.

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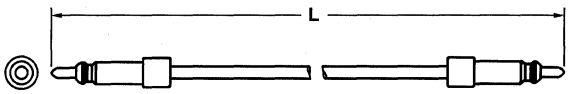
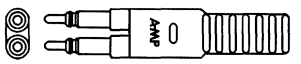
Tooling/Technical Assistance Center

Nylon Sleeve Patchcords (for use with "D" hole front boards only)

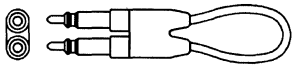


Single Conductor Patchcords

Length (L)	Tip Finish	Insulation Color	Part Number
3 76.2	Gold	Orange	395633-1
5 127.0	Gold	Red	395223-2
7 177.8	Gold	Gray	395223-3
9 228.6	Gold	Blue	395223-1
11 279.4	Gold	Green	395223-4
13 330.2	Gold	Yellow	395223-5
15 381.0	Gold	Orange	395223-6
19 482.6	Gold	Black	395223-7
27 685.8	Gold	Black	395223-8
35 889.0	Gold	Red	395223-9



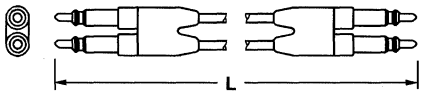
Fully Molded



Loop Type

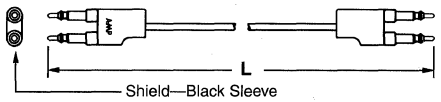
Shunts

Shunts	Tip Finish	Insulation Color	Part Number
Fully Molded	Nickel	Black	395481-1
	Gold		395481-2
Loop Type	Gold	Red	397298-1



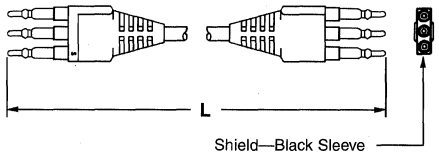
Dual Conductor Patchcords

Length (L)	Tip Finish	Insulation Color	Part Number
5 [127.0]	Gold	Red	495753-1
7 [177.8]	Gold	Gray	495753-2
9 [228.6]	Gold	Blue	495753-3
11 [279.4]	Gold	Green	495753-4
13 [330.2]	Gold	Yellow	495753-5
15 [381.0]	Gold	Orange	495753-6
19 [482.6]	Gold	Black	495753-7
27 [685.8]	Gold	Black	495753-8



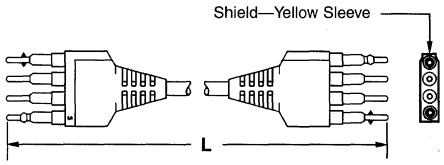
Patchcords (1/4 [6.35]) Single Conductor—Coaxial

Length (L)	Tip Finish	Insulation Color	Part Number
9 [228.6]	Gold	Red	395575-6
12 [304.8]	Gold	Orange	395575-2
15 [381.0]	Gold	Yellow	395575-7
18 [457.2]	Gold	Green	395575-3
21 [533.4]	Gold	Blue	395575-8
24 [609.6]	Gold	Violet	395575-4
36 [914.4]	Gold	Gray	395575-5
45 [1143.0]	Gold	White	395575-9



Two Conductor Plus Shield Patchcords

Length (L)	Tip Finish	Insulation Color	Part Number
7 [177.8]	Gold	Black	497598-1
9 [228.6]	Gold	Black	497598-2
11 [279.4]	Gold	Black	497598-3
13 [330.2]	Gold	Black	497598-4
15 [381.0]	Gold	Black	497598-5
19 [482.6]	Gold	Black	497598-6
24 [609.6]	Gold	Black	497598-8
27 [685.8]	Gold	Black	497598-7
45 [1143.0]	Gold	Black	497598-9



Three Conductor Plus Shield Patchcords

Length (L)	Tip Finish	Insulation Color	Part Number
7 [177.8]	Gold	Black	495547-1
9 [228.6]	Gold	Black	495547-2
13 [330.2]	Gold	Black	495547-4
15 [381.0]	Gold	Black	495547-5
19 [482.6]	Gold	Black	495547-6
24 [609.6]	Gold	Black	495547-8
27 [685.8]	Gold	Black	495547-7

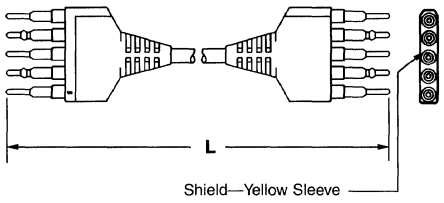
SOURCE: Catalog 82018, 82027

Specifications subject to change.

1-800-522-6752
Product Information Center/ AMP FAX Service

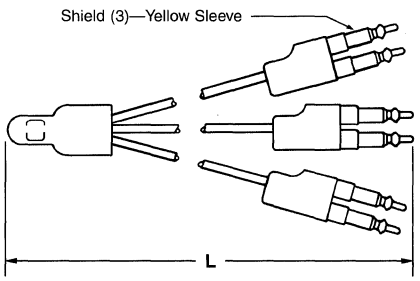
1-800-722-1111
Tooling/Technical Assistance Center

Nylon Sleeve Patchcords
(Continued)



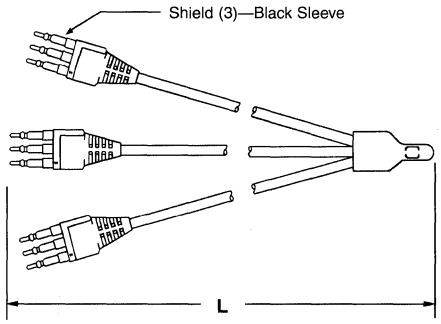
Four Conductor Plus Shield Patchcords

Length (L)	Tip Finish	Insulation Color	Part Number
9 [228.6]	Gold	Black	397751-2
15 [381.0]	Gold	Black	397751-5
19 [482.6]	Gold	Black	397751-6
24 [609.6]	Gold	Black	397751-7
27 [685.8]	Gold	Black	397751-8



Squid Patchcord—Single Conductor Plus Shield (3 Legs)

Length (L)	Tip Finish	Insulation Color	Part Number
11 [279.4]	Gold	Orange	695786-1
16 [406.4]	Gold	Yellow	695786-2



Squid Patchcord—Two Conductor Plus Shield (3 Legs)

Length (L)	Tip Finish	Insulation Color	Part Number
7 [177.8]	Gold	Black	695793-1
9 [228.6]	Gold	Black	695793-2
11 [279.4]	Gold	Black	695793-3
13 [330.2]	Gold	Black	695793-4
16 [406.4]	Gold	Black	695793-5
19 [482.6]	Gold	Black	695793-6
24 [609.6]	Gold	Black	695793-8

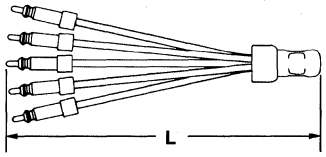
SOURCE: Catalog 82018, 82027

Specifications subject to change.

1-800-522-6752
Product Information Center/ AMP FAX Service

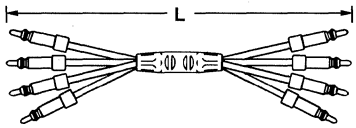
1-800-722-1111
Tooling/Technical Assistance Center

Nylon Sleeve Patchcords
(Continued)



Squid Patchcord

Length (L)	Tip Finish	Insulation Color	Part Numbers							
			3 Pin Common	4 Pin Common	5 Pin Common	6 Pin Common	7 Pin Common	8 Pin Common	9 Pin Common	10 Pin Common
3 76.2	Gold	Orange	495296-1	495297-1	495298-1	—	495300-4	495301-4	—	495303-4
5 127.0	Gold	Red	495296-6	495297-3	495298-3	495299-3	495300-5	—	495302-4	495303-5
7 177.8	Gold	Gray	495296-5	495297-4	495298-4	495299-5	495300-1	495301-1	495302-1	495303-1
9 228.6	Gold	Blue	495296-3	495297-2	495298-5	495299-4	—	495301-2	—	495303-2
11 279.4	Gold	Green	495296-2	495297-5	495298-2	495299-6	—	495301-3	495302-3	495303-3



"Y" Patchcords

Length (L)	Tip Finish	Insulation Color	Part Numbers				
			3 Pin Common	4 Pin Common	5 Pin Common	6 Pin Common	8 Pin Common
9 228.6	Gold	Blue	495396-2	—	—	—	—
11 279.4	Gold	Green	495396-3	—	—	—	—
13 330.2	Gold	Yellow	—	—	495398-4	495399-4	—
15 381.0	Gold	Orange	495396-5	495397-5	495398-5	—	495401-5
19 482.6	Gold	Black	495396-6	—	—	—	495401-6
27 685.8	Gold	Black	495396-7	—	—	—	—

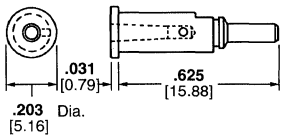
SOURCE: Catalog 82018, 82027

Specifications subject to change.

1-800-522-6752
Product Information Center/ AMP FAX Service

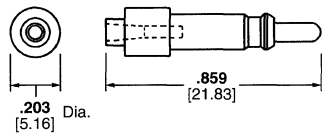
1-800-722-1111
Tooling/Technical Assistance Center

Accessories for Nylon Sleeve Patchcords



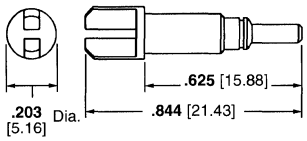
Uninsulated Taper Pin Adapter
(Non-Rotating "C" Washer Retention)
Accepts Series 53 Taper Pin

Finish	Part Number
Gold Plated	395552-2



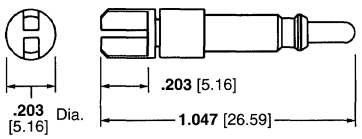
Insulated Taper Pin Adapter
Accepts Series 53 Taper Pin
(Can be post-patched)

Finish	Part Number
Gold Plated	395187-2



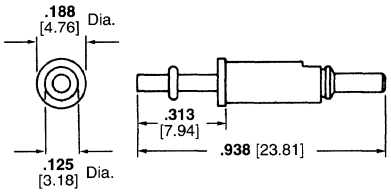
Uninsulated Edge Connector Adapter
("C" Washer Retention) For Soldered Connections Where Wrapping the Conductor is Impractical

Finish	Part Number
Gold Plated	395516-2



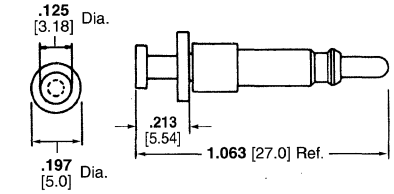
Insulated Edge Connector Adapter
For Soldered Connections Where Wrapping the Conductor is Impractical
(Can be post-patched)

Finish	Part Number
Gold Plated	395647-2



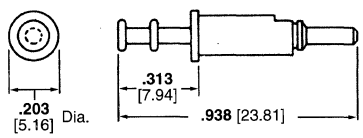
Uninsulated Turret Lug Adapter, Single Turret
(Non-Rotating "C" Washer Retention)
For Soldered Connections

Finish	Part Number
Gold Plated	395938-2



Insulated Turret Lug Adapter, Single Turret
(Can be post-patched)
For Soldered Connections

Finish	Part Number
Gold Plated	421111-2



Uninsulated Turret Lug Adapter, Double Turret
(Non-Rotating "C" Washer Retention)
For Soldered Connections

Finish	Part Number
Gold Plated	395645-2

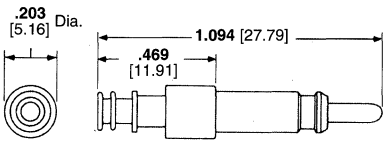
SOURCE: Catalog 82018, 82027

Specifications subject to change.

1-800-522-6752
Product Information Center/ AMP FAX Service

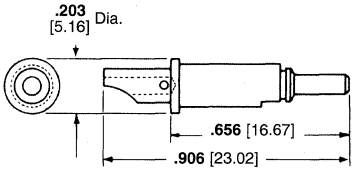
1-800-722-1111
Tooling/Technical Assistance Center

Accessories for Nylon Sleeve Patchcords
(Continued)



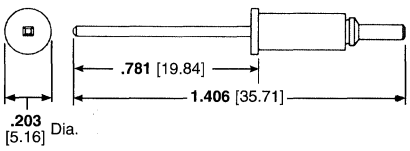
Insulated Taper Pin Turret Lug Adapter
(Can be post-patched)
For Soldered Connections or Series 53 Taper Pin, or Combination of Both

Finish	Part Number
Gold Plated	495839-2



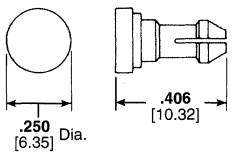
Uninsulated Solder Tube Adapter
(Non-Rotating "C" Washer Retention)
For Soldered Connection with Larger Conductors

Finish	Part Number
Gold Plated	395809-2



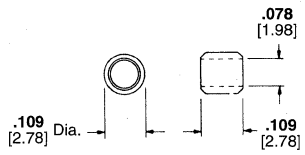
Wrap-Type Post Adapter
(Non-Rotating "C" Washer Retention)
For wrap-type connections

Finish	Part Number
Gold Plated	397550-2



Marker Plug
For temporary marking of patchcord hole, aluminum marker plug is inserted in contact hole in front board assembly

Finish	Part Number
Clear Anodized	395348-1



Bushing for Permanent Patching

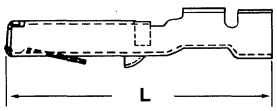
Material	Part Number
Red Nylon	395149-1

SOURCE: Catalog 82018, 82027

Rear Bay Wiring

LANCELOK Terminals

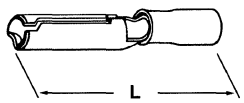
Uninsulated—Formed



Wire Size AWG	Wire Size mm²	Insulation Dia. Range	Overall Length (L)	Finish	Loose Piece Part Number	Hand Tool Part No.
24-20	0.2-0.6	**.065-.080** 1.65-2.03	**.781** 19.84	Gold	2-328969-1	69323-1
		.040-.065 1.02-1.65	**.781** 19.84	Gold	330371	69323-1
18-16	0.8-1.4	**.100-.130** 2.54-3.30	**.812** 20.62	Gold	329321	69323-1
		.100-.130 2.54-3.30	**.812** 20.62	Tin	2-329321-1	69323-1
		.075-.100 1.91-2.54	**.812** 20.62	Gold	330370	69323-1

Insertion Tool—**Part No. 69421**; Extraction Tool—**Part No. 69261-3**

Pre-Insulated—Formed



Wire Size AWG	Wire Size mm²	Insulation Dia. Range	Overall Length (L)	Finish	Loose Piece Part Number	Hand Tool Part No.
24-22	0.2-0.4	**.040-.080** 1.02-2.03	**.875** 22.23	Gold	329317	69256
20-18	0.5-0.9	**.060-.090** 1.52-2.29	**.875** 22.23	Gold	329334	69257
16	1.25-1.4	**.080-.110** 2.03-2.79	**.937** 23.80	Gold	329335	69258

Insertion Tool—**Part Number 69421**; Extraction Tool—**Part Number 69261-3**

SOURCE: Catalog 82018, 82027

Specifications subject to change.

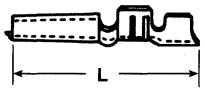
1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

Rear Bay Wiring
(Continued)

Taper Pins

Insulation Support—Formed Pins



Wire Size		Insulation Dia. Range	Overall Length (L)	Finish (a)	Part Number	Tooling Part Numbers		
AWG	mm²					Double Action Hand Tool	Straight Action Hand Tool	Pull Test Insertion Tool†
24-22	0.2-0.4	**.040-.055** 1.02-1.40	**.490** 12.45	Tin[1]	41278	48698	–	497652-1
				Silver[2]	41640	48698	–	497652-1
				Gold[3]	41646	48698	–	497652-1
		.040-.060 1.02-1.52	**.540** 13.72	Tin[1]	66113-3	48698	–	497652-1
		.065-.080 1.65-2.03	**.550** 13.97	Tin[1]	41647	47042	–	497652-2
				Silver[2]	41648	47042	–	497652-2
				Gold[3]	41649	47042	–	497652-2
20-18	0.5-0.9	**.080-.100** 2.03-2.54	**.617** 15.67	Tin[1]	41650	47043-LH*	–	497652-2
				Silver[2]	41651	47043-LH*	–	497652-2
				Gold[3]	41652	47043-LH*	–	497652-2
18-16	0.8-1.4	**.100-.140** 2.54-3.56	**.617** 15.67	Tin[1]	41656	90024-LH* 47044-SH*	90007-1	497652-2
				Silver[2]	41657	90024-LH* 47044-SH*	90007-1	497652-2
				Gold[3]	41658	90024-LH* 47044-SH*	90007-1	497652-2

*LH = Long handle tool. SH = Short handle tool.
(a) Finish Code: [1].0002 [0.005] Tin, [2].0002 [0.005] Silver, [3].00003 [0.0008] Gold over .00005 [0.0013] Nickel.
† Extension for Pull Test Insertion Tool—**Part No. 397989-1**.
Extraction Tool **Part No. 380305-1**.

SOURCE: Catalog 82018, 82027

Specifications subject to change.

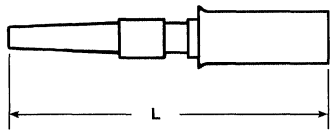
1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

Rear Bay Wiring
(Continued)

Taper Pins
(Continued)

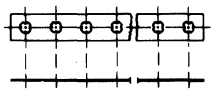
Pre-Insulated—Solid Long Shoulder Pins



Wire Size AWG	Wire Size mm²	Insulation Dia. Range	Nylon Insulation Color Code	Overall Length (L)	Finish (a)	Part Number	Tooling Part Numbers Double Action Hand Tool*
26	0.12-0.15	**.040-.080** 1.02-2.03	Blue	**.830** 21.08	Gold[3]	66059-3	90015
		.080-.115 2.03-2.92	Black	**.850** 21.59	Gold[3]	66129-3	90016
24-22	0.2-0.4	**.040-.080** 1.02-2.03	Yellow	**.830** 21.08	Gold[3]	42633-3	90015
20-18	0.5-0.9	**.060-.100** 1.52-2.54	Natural	**.850** 21.59	Gold[3]	42634-3	90016

*LH = Long handle tool.
(a) Finish Code: [3] .00003 [0.0008] Gold over .00005 [0.0013] Nickel.
Pull Test Insertion Tool—**Part No. 497652-3**. Extension for Pull Test Insertion Tool—**Part No. 397989**.
Extraction Tool—**Part No. 380305-1**.

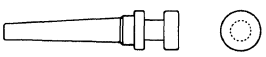
Accessories for Taper Pins
(use as a set)



Commoning Strips
For Electrical Commoning of Contact Springs (Use with **Part No. 397589**)

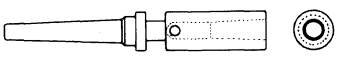
No. of Pos.	Finish	Part Number
34	Gold Plated	3-397576-6

Note: Can be cut to size by customer.



Commoning Pin
(Use with **Part No. 397576**)

Finish	Part Number
Gold Plated	397589-3



Commoning Pin
For Series "53" Taper Receptacle
(Use with **Part No. 397576**)

Finish	Part Number
Gold Plated	397589-2

SOURCE: Catalog 82018, 82027

Specifications subject to change.

1-800-522-6752
Product Information Center/ AMP FAX Service

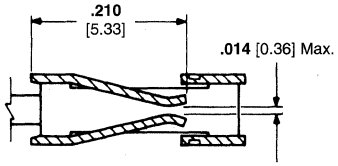
1-800-722-1111
Tooling/Technical Assistance Center

Rear Bay Wiring
(Continued)

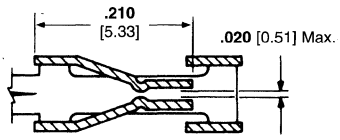
AMPMODU Mod. I — .031 x .062 [0.79 x 1.57] Board Mount Receptacles
(female)

Material: Phosphor Bronze

Mod. I — Receptacle Contact Styles

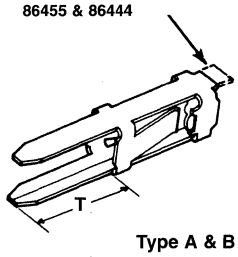


Standard Pressure

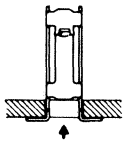


High Pressure

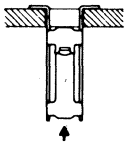
Vertical



Type A & B



Post Entry Type A

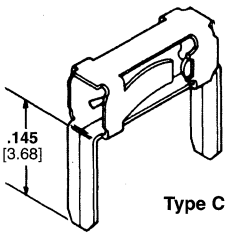


Post Entry Type B

Board Thickness	Dim. T	Finish	Part Numbers (Strip Form)*					
			Standard Pressure				High Pressure	
			Rectangular Hole		Round Hole		Rectangular Hole	
			Type A	Type B	Type A	Type B	Type A	Type B
.094 2.38 Max.	**.145** 3.68	.000030 [0.0008] Gold[1] over .000050 [0.0013] Nickel	85485-7	85486-7	—	—	—	—
.063 1.59 Max.	**.112** 2.84	Tin Plate	—	—	86477-3	87003-2	86442-1	86448-1
		.000030 [0.0008] Gold over .000050 [0.0013] Nickel	85488-7	85489-7	86477-2	87003-1	—	—
.063 1.59 Max.	**.120** 3.05	Tin Plate	—	—	—	—	86444-1	—

*Part numbers shown are reeled for miniature applicator. For loose piece part numbers, contact AMP.
[1]Specified gold thickness on contact area only; remainder of terminal is gold flashed. Other platings are available; contact AMP.

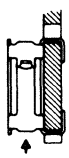
Horizontal



Type C

Board Thickness	Finish	Part Numbers (Strip Form)*	
		Type C (Round Holes)	
		Standard Pressure	High Pressure
.094 2.38 Max.	.000030 [0.0008] Gold over .000050 [0.0013] Nickel	85487-2	—
	Tin Plate	85487-3	86432-1
	.000030 [0.0008] Gold[1] over .000050 [0.0013] Nickel	85487-4	—
	.000015 [0.0004] Gold over .000050 [0.0013] Nickel	85487-5	—

*Part numbers shown are reeled for miniature applicator. For loose piece part numbers, contact AMP.
[1]Specified gold thickness on contact area only; remainder of terminal is gold flashed. Other platings are available; contact AMP.



Post Entry Type C

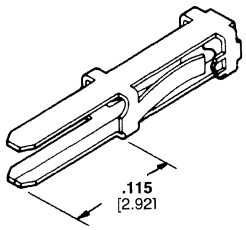
SOURCE: Catalog 82018, 82027

Rear Bay Wiring
(Continued)

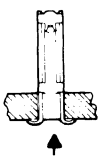
AMPMODU Mod. II — .025 x .025 [0.64 x 0.64] Board Mount Receptacles
(female)

Material: Phosphor Bronze

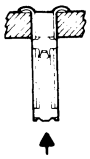
Vertical



Type A & B



Post Entry
Type A

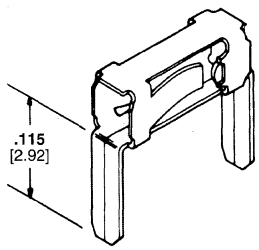


Post Entry
Type B

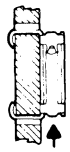
Board Thickness	Finish	Part Number (Strip Form)*		
		Type A	Type B	Type C
.063 1.59 Max.	.000030 [0.0008] Gold over .000050 [0.0013] Nickel	85861-2	85862-2	85863-2
	Tin Plate	85861-3	85862-3	85863-3
	.000030 [0.0008] Gold[1] over .000050 [0.0013] Nickel	85861-4	85862-4	85863-4

*Part Numbers shown are reeled for miniature applicator. For loose piece part numbers, contact AMP.
[1]Specified gold thickness on contact area only; remainder of terminal is gold flashed. Other platings are available; contact AMP.

Horizontal



Type C



Post Entry
Type C

SOURCE: Catalog 82018, 82027

Specifications subject to change.

1-800-522-6752
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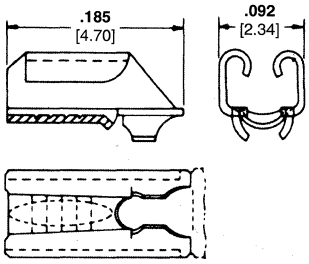
Tooling/Technical Assistance Center

Rear Bay Wiring
(Continued)

TERMI-POINT Tools and Clips For .031 x .062 [0.79 x 1.57] Posts



Pneumatic Tool Part No. 59928-2 (2800 clips per reel)

Wire Size Solid or Stranded (7 Strand) AWG	Wire Size Solid or Stranded (7 Strand) mm²	Insulation Dia. Range	Mandrel and Clip Color Code	Mandrel Part Number	Clip Part Numbers Electro-Tin Plated	Clip Part Numbers Gold Plated
22	0.3-0.4	**.036-.045** 0.91-1.14	Orange	265070-1	4-330495-2	4-330495-9
		.046-.055 1.17-1.40	Orange	265070-2		
		.056-.065 1.42-1.65	Orange	265070-3		
24	0.2	**.034-.045** 0.86-1.14	Red	265070-4	2-330495-1	2-330495-2
		.046-.055 1.17-1.40	Red	265070-5		
26	0.12-0.15	**.030-.045** 0.76-1.14	Brown	265070-7	1-330495-3	1-330495-8
28	0.08-0.09	**.034-.045** 0.86-1.14	Black	1-265070-0	3-330495-5	9-330495-6

Reel Fed Manual Service Tool Part Number 69526-2 (1000 clips per reel)

Wire Size Solid or Stranded (7 Strand) AWG	Wire Size Solid or Stranded (7 Strand) mm²	Insulation Dia. Range	Mandrel and Clip Color Code	Mandrel Part Number	Clip Part Numbers Electro-Tin Plated	Clip Part Numbers Gold Plated
22	0.3-0.4	**.036-.045** 0.91-1.14	Orange	69551-8	6-330495-1	6-330495-2
		.046-.065 1.17-1.65	Orange	1-69411-4		
24	0.2	**.034-.045** 0.86-1.14	Red	69551-9	5-330495-3	1-330495-9
		.046-.065 1.17-01.65	Red	1-69411-3		
26	0.12-0.15	**.022-.045** 0.56-1.14	Brown	69551-6	5-330495-5	9-330495-8
		.046-.055 1.17-1.40	Brown	1-69411-9		
28	0.08-0.09	**.022-.045** 0.56-1.14	Black	69551-5	5-330495-9	—

For .022 x .036 [0.56 x 0.92] Posts

Pneumatic Hand Tool Part No. 59865-1 and Manual Service Tool Part Number 69535

Wire Size Solid or Stranded (7 Strand) AWG	Wire Size Solid or Stranded (7 Strand) mm²	Insulation Dia. Range	Mandrel and Clip Color Code	Mandrel Part Number	Clip Part Numbers Gold Plated	Clip Part Numbers Tin-Nickel Plated
28	0.08-0.09	**.018-.029** 0.46-0.74	Black	69545-1	67042-2	3-67042-4
30	0.05	**.018-.029** 0.46-0.74	White	69545-3		
32	0.03	**.018-.029** 0.46-0.74	Gray	69545-2		

SOURCE: Catalog 82018, 82027

Specifications subject to change.

1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

AMP Modular Interface Connector Device

Patchcord programming systems have proved to be an important part of the computer industry for over two decades. More recently, these versatile systems have been successfully adapted to the automatic test equipment (ATE) field. Used to test everything from pc boards to aircraft electronics, these systems are referred to as interface connector devices (ICD).

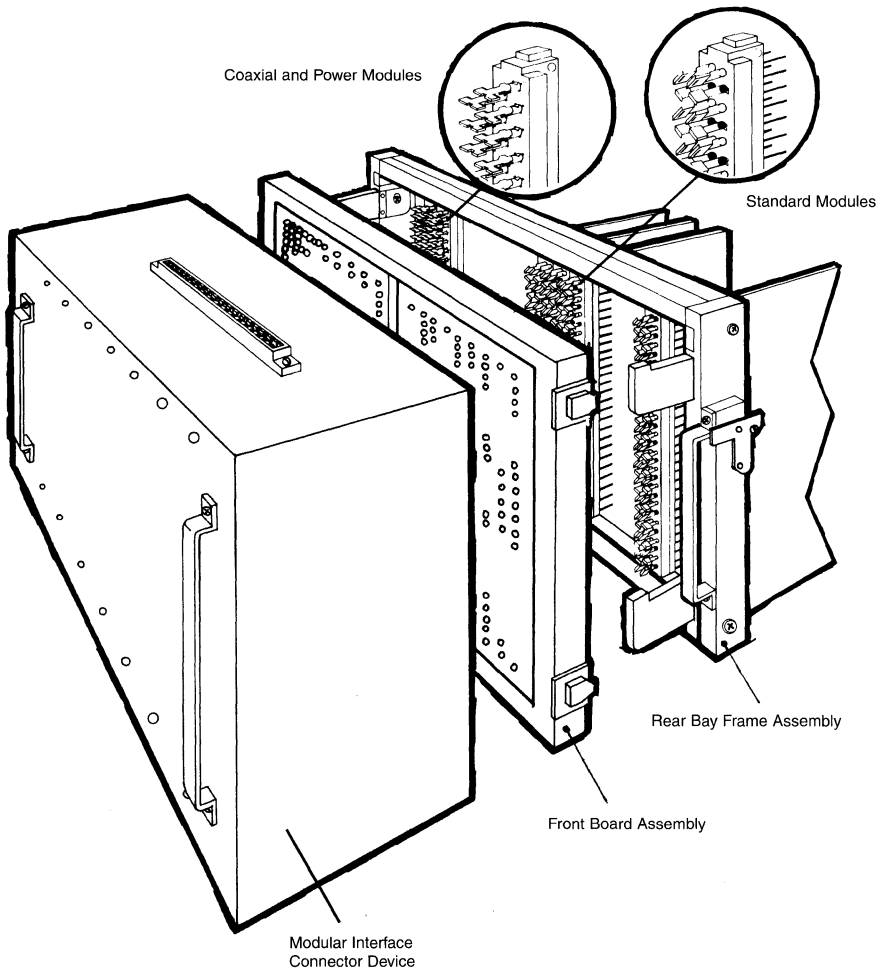
The AMP Modular Interface Connector Device offers a unique concept to the ATE industry. This is achieved through total serviceability from the front of the rear bay, providing reduced equipment costs and improved performance.

The rear bay is designed to fit a standard 19 in. [482.6 mm] cabinet rack and is mounted to the rack from the outside with bolts. The rear section accepts the pc card cage and a conventional camming device is employed to increase the overall distance of contact wiping action. In addition, a latching mechanism has been included to provide the straight-in engagement required for coaxial contacts as well as improved front board to rear bay alignment and positive lifting action.

The rear bay has been designed to accept both standard and coax modules. Each module is .750 [19.05] wide by 8 [203.2] high and offers .750 [19.05] spacing between pc boards.

Standard modules use the .031 x .062 [0.79 x 1.57] posted contact as required for pc board packaging. Contacts are located on a .250 [6.35] grid with 60 per module.

The coax modules feature contacts on a .250 [6.35] staggered grid pattern with 30 per module and accept individual coaxial leads that can be installed and serviced from the front. Also, a power contact is available for use in the coax module.



All modules are interchangeable and can be placed in any position within the rear bay.

The AMP Modular ICD lends itself to the AMPMODU connector termination system. A specially designed AMPMODU pc board receptacle housing mates with the .031 x.062 [0.79 x 1.57] posted contacts in the standard rear bay modules for effective printed circuit board packaging.

The mating half of the Modular ICD, the front board assembly, contains solid boards held in place by a metal frame. Boards can be loaded with any number of twin detent and coaxial patchcords, and accessory items. The design of the front board assembly allows for the attachment of a protective cover.

The AMP Modular ICD family is comprised of two basic sizes based on a building block technique. Available in 11 module and 22 module configurations, the AMP Modular Interface Connector Device provides a whole level of versatility and performance.

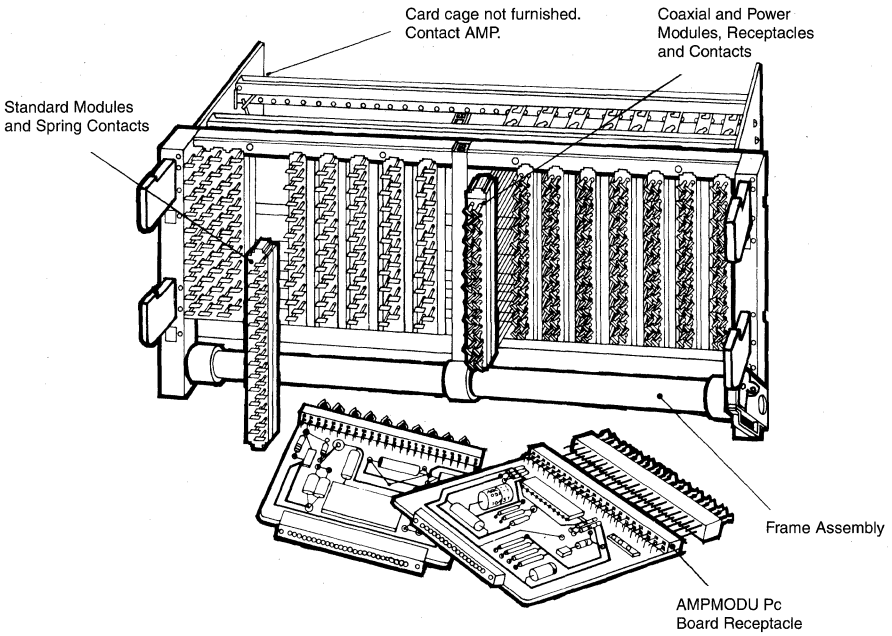
SOURCE: Catalog 82062

Specifications subject to change.

1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

Rear Bay Assemblies



Frame Assembly—Accommodates 11 Modules

Part No. 1-436157-1

Frame Assembly—Accommodates 22 Modules

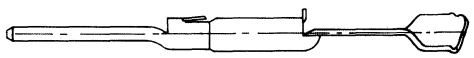
Part No. 1-436065-1

Total No. of Modules	Description	Part Numbers		
		Rear Bay Frame Assembly Only	Rear Bay Frame and Module Assembly	Mates with Loaded Front Board Assembly
11	All Standard Modules	1-436157-1	—	436156-1
	All Coaxial Modules	1-436157-1	—	—
22	All Standard Modules	1-436065-1	436065-1	436064-1
	All Coaxial Modules	1-436065-1	436065-2	436064-2
	1/2 Standard, 1/2 Coaxial Modules	1-436065-1	—	436064-3

Standard Modules—60 Contacts

Part Numbers	
Unloaded Module	Loaded Module*
435991-5	436063-2
435991-1	436063-1

*Loaded modules furnished with **Part No. 1-424155-2** and **Part No. 1-424156-2**, right- and left-hand contacts.
For additional information request Instruction Sheet 408-7959.



Right-Hand (Shown)

Standard Spring Contacts

Description	Part Numbers	
	Right-Hand	Left-Hand
Gold over nickel; locking tab depressed	1-424155-2	1-424156-2

Coaxial Modules and Power Modules—30 Contacts

Part Numbers			
Coaxial		Power	
Unloaded Module	Loaded Module	Unloaded Module	Loaded Module
2-436063-2	1-436063-2	—	—
2-436063-1	1-436063-1	2-436063-1	5-436063-1

Note: Coaxial receptacles and power contacts may be intermixed in the same shield loaded module or unloaded module. In addition, other preloaded module mixes are available. Contact AMP for further information.

Coaxial Receptacle

Part No. 1-422972-3

Power Contact

Part No. 436159-1

AMPMODU Mod. I Printed Circuit Board Receptacle Assembly (Standard Modules)

Part No. 436083-1
Note: Housing Dim. (Typ.)—7.550 [191.77] L x .625 [15.88] W x .500 [12.7] H

AMPMODU Mod. I Receptacles

Right-Angle Receptacle

Part No. 436110-1

Straight Receptacle

Part No. 436110-2

SOURCE: Catalog 82062

Specifications subject to change.

1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

Rear Bay Assemblies
(Continued)

Rear Bay Terminals (Coaxial Modules)

Terminal | Ferrule | Shield Clip Part No. 421260-2

Selection Chart for Coaxial Cable

RG/U Cable	Inner Conductor AWG	Inner Conductor mm²	Inner Conductor Max Dia.	Jacket O.D.	Dielectric O.D. Max.	Part Numbers Kit*	Terminal	Ferrule	Hand Tool	Dies for Pneumatic Tool No. 69365-2 or Hand Tool No. 69710-1
223	20	0.5	**.0375** 0.95	**.216** 5.49	**.119** 3.02	422395-4	422397-1	330478	403083	—
58, 58A 58B, 58C	22-20	0.3-0.6	**.0375** 0.95	**.187-.199** 4.75-5.05	**.119** 3.02	422395-3	422397-1	328663	402658	402951
174, 188	26-22	0.12-0.4	**.029** 0.74	**.095-.110** 2.41-2.79	**.063** 1.60	422392-2	422388-1	421427-1	402659	402952
178, 178A 196	32-26	0.03-0.15	**.018** 0.46	**.072-.085** 1.83-2.16	**.063** 1.60	422390-1	422386-1	328666	402039	402953
179A, 187	32-26	0.03-0.15	**.018** 0.46	**.095-.110** 2.41-2.79	**.063** 1.60	422392-1	422386-1	328666	402660	402954
180, 180A 195	32-26	0.03-0.15	**.018** 0.46	**.137-.155** 3.48-3.94	**.119** 3.02	422394-1	422396-1	328664	402661	402955

*Kit includes terminal, ferrule and shield clip.

Selection Chart for Various Manufacturers' Cables

Inner Conductor AWG	Inner Conductor mm²	Inner Conductor Max Dia.	Jacket O.D.	Dielectric O.D. Max	Part Numbers Kit*	Terminal	Ferrule	Hand Tool	Dies for Pneumatic Tool No. 69365-2 or Hand Tool No. 69710-1
22-20	0.30-0.6	**.0375** 0.95	**.095-.110** 2.41-2.79	**.063** 1.60	422392-3	422389-1	328666	402660	402954
26-22	0.12-0.40	**.029** 0.74	**.072-.085** 1.83-2.16	**.063** 1.60	422391-1	422387-1	328666	402039	402953
			.137-.155 3.48-3.94	**.119** 3.02	422394-2	422398-1	328664	402661	402955
			.187-.199 4.75-5.05	**.119** 3.02	422395-2	422398-1	328663	402658	402951

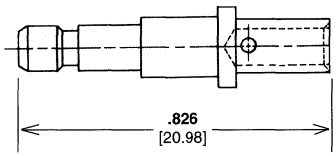
*Kit includes terminal, ferrule and shield clip.

Power Pin Contact (Power Modules)

Part No. 436160-1

(Use CERTI-CRIMP Hand Tool Part No. 90121)

For 12 AWG Wire only



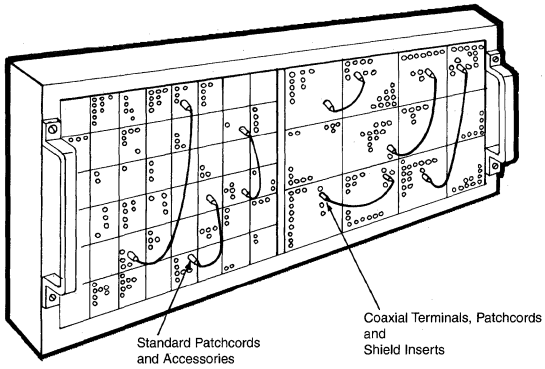
SOURCE: Catalog 82062

Specifications subject to change.

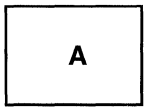
1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

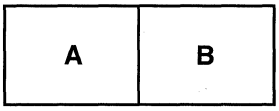
Front Board Assemblies



Single Panel Assembly



Two Panel Assembly



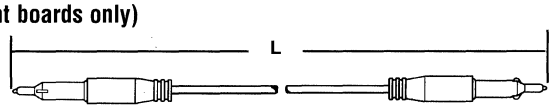
Fully Loaded Assemblies

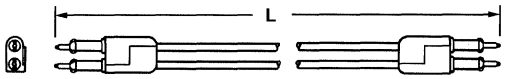
Description	Panel A	Panel B	Part Numbers: Front Board Assembly	Part Numbers: Mates with Rear Bay Loaded Assembly
Single Panel	All Standard 660 Contacts	—	436156-1	1-436157-1*
	All Coaxial 330 Contacts	—	436156-2	1-436157-1*
Two Panels	All Standard 660 Contacts	All Standard 660 Contacts	436064-1	436065-1
	All Coaxial 330 Contacts	All Coaxial 330 Contacts	436064-2	436065-2
	All Standard 660 Contacts	All Coaxial 330 Contacts	436064-3	1-436065-1*

Unless otherwise specified, Front Board Assemblies are supplied with semi-permanent coaxial shields.
All Front Board Assemblies are furnished with standard AMP silk screened pattern.
*Assemblies do not contain contact modules.

Twin Detent Patchcords

(for use with round hole front boards only)





Single Conductor Patchcords

Length L	Pin Finish	Insulation Color	Part Numbers: Manual Type	Part Numbers: Semi-Permanent Type
5 127	Gold	Red	695640-9	595903-9
7 177.8	Gold	Gray	695640-1	595903-1
9 228.6	Gold	Blue	695640-2	595903-2
11 279.4	Gold	Green	695640-3	595903-3
13 330.2	Gold	Yellow	695640-4	595903-4
15 381	Gold	Orange	695640-5	595903-5
19 482.6	Gold	Black	695640-6	595903-6
27 685.8	Gold	Brown	695640-7	595903-7
35 889	Gold	Red	695640-8	595903-8

Dual Conductor Patchcords

Length L	Pin Finish	Insulation Color	Part Numbers: Manual Type
7 177.8	Gold	Gray & Black	421100-1
9 228.6	Gold	Blue & Black	421100-2
15 381	Gold	Orange & Black	421100-5
19 482.6	Gold	White & Black	421100-6
27 685.8	Gold	Brown & Black	421100-7
35 889	Gold	Red & Black	421100-8

SOURCE: Catalog 82062

Specifications subject to change.

1-800-522-6752
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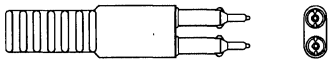
1-800-722-1111
Tooling/Technical Assistance Center

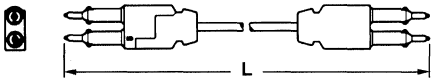
Front Board Assemblies
(Continued)

Twin Detent Patchcords
(for use with round hole front boards only)
(Continued)



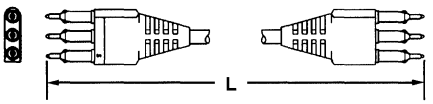
Fully Molded Shunt

Pin Finish	Part Numbers	
	Manual Type	Semi-Permanent Type
Gold	397347-1 (Gray)	397348-1 (Red)



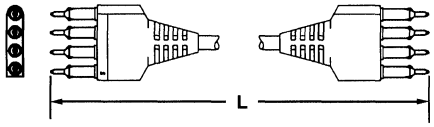
Single Conductor Plus Shield Patchcords

Length L	Pin Finish	Insulation Color	Part Numbers
			Manual Type
7 177.8	Gold	Gray	695644-1
11 279.4	Gold	Green	695644-3
15 381	Gold	Orange	695644-5
19 482.6	Gold	Black	695644-6
27 685.8	Gold	Brown	695644-7



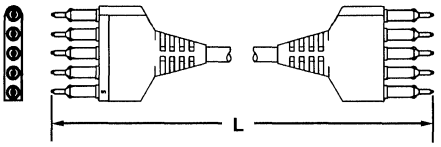
Two Conductor Plus Shield Patchcords

Length L	Pin Finish	Insulation Color	Part Numbers	
			Manual Type	Semi-Permanent Type
7 177.8	Gold	Black	397351-1	—
9 228.6	Gold	Black	397351-2	—
11 279.4	Gold	Black	397351-3	397353-3
15 381	Gold	Black	397351-5	—
19 482.6	Gold	Black	397351-6	397353-6
27 685.8	Gold	Black	397351-7	—
35 889	Gold	Black	397351-8	—
45 1143	Gold	Black	397351-9	—



Three Conductor Plus Shield Patchcords

Length L	Pin Finish	Insulation Color	Part Numbers
			Manual Type
15 381	Gold	Black	695641-4
24 609.6	Gold	Black	695641-6
27 685.8	Gold	Black	695641-7



Four Conductor Plus Shield Patchcords

Length (L)	Pin Finish	Insulation Color	Part Numbers
			Manual Type
24 609.6	Gold	Black	397357-6
40 1016	Gold	Black	397357-8

SOURCE: Catalog 82062

Specifications subject to change.

1-800-522-6752
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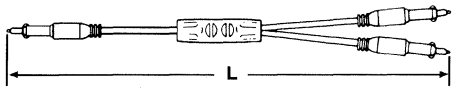
Tooling/Technical Assistance Center

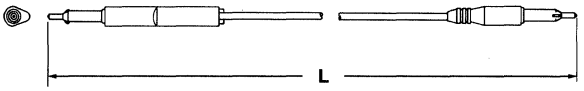
Front Board Assemblies
(Continued)

Twin Detent Patchcords
(for use with round hole front boards only)
(Continued)



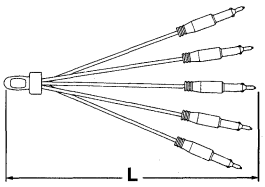
"Y" Patchcords—3 Pin Common (Semi-Permanent)

Length (L)	Pin Finish	Insulation Color	Part Number
9 228.6	Gold	Blue	397728-1
15 381	Gold	Orange	397728-2



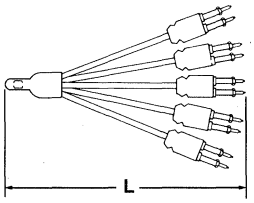
Patchcord Receptacles (Manual)

Length (L)	Pin Finish	Insulation Color	Part Number
7 177.8	Gold	Gray	424248-2
9 228.6	Gold	Blue	424248-3
11 279.4	Gold	Green	424248-4
13 330.2	Gold	Yellow	424248-5
15 381	Gold	Orange	424248-6
19 482.6	Gold	Black	424248-7



Squid Patchcords

Length (L)	Pin Finish	Pin Type	Insulation Color	Part Numbers 3 Pin	4 Pin	8 Pin
7 177.8	Gold	Manual	Gray	—	397361-3	—
		Semi-Perm.		695472-3	—	397368-3
9 228.6	Gold	Manual	Blue	695650-4	—	—



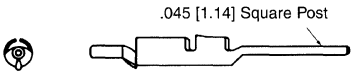
Single Conductor & Shield Squids

Length L	Pin Finish	Pin Type	Insulation Color	Part Numbers 3 Legs	4 Legs	5 Legs
15 381	Gold	Manual	Orange	420929-5	421102-5	421103-5

SOURCE: Catalog 82062

Front Board Assemblies
(Continued)

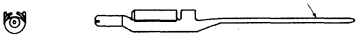
Accessories for Twin Detent Patchcords



Finish	Part Number
Gold Plated	497474-3

Insertion Tool **Part No. 695880-1**

Wrap-Type Post Adapter (for wrap-type connections)

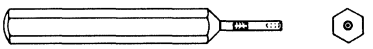


Finish	Part Number
Gold Plated	425257-2

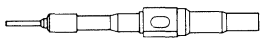
Insertion Tool **Part No. 402709**

TERMI-POINT Post Adapter

Extraction Tool and Spare Tips (for semi-permanent twin detent patchtips; tip included)



Tip Length	Tool Part Number	Tip Part Number
.625 15.90	695880-1	695879-1
4 101.6	695880-2	420878



Terminal

Ferrule

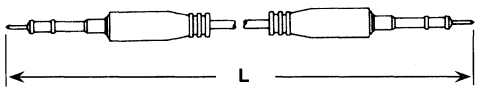
Shield Clip Part No. 421260-2

Coaxial Terminals (semi-permanent)

RG/U Cable	Inner Conductor AWG	Inner Conductor mm²	Inner Conductor Max. Dia.	Jacket O.D.	Dielectric O.D. Max.	Part Numbers Kit*	Terminal	Ferrule	Hand Tool	Dies for Pneumatic Tool No. 69365-2 or Hand Tool No. 69710-1
188, 174, 316 #24 Shielded	26-22	0.12-0.4	**.025** .064	**.095-.110** 2.41-2.79	**.063** 1.60	424635-1	425442-1	328666	402660	402954
195	32-26	0.03-0.15	**.018** 0.46	**.137-.155** 3.48-3.94	**.119** 3.02	424635-2	425442-5	328664	402661	402955
58	22-20	0.3-0.6	**.0375** 0.95	**.187-.199** 4.75-5.05	**.119** 3.02	424635-3	425442-6	328663	402658	402951
#24 Unshielded	26-22	0.12-0.4	**.025** 0.64	**.050** 1.27	—	425867-1	1-425442-6	328666	402660	402954
#22 Unshielded	22-20	0.3-0.6	**.0375** 0.95	**.050** 1.27	—	425867-2	1-425442-7	328666	402660	402954
#24 Twisted Pair	26-22	0.12-0.4	**.025** 0.64	**.050** 1.27	—	425867-3	1-425442-8	328666	402660	402954
#22 Twisted Pair	22-20	0.3-0.6	**.0375** 0.95	**.050** 1.27	—	425867-4	1-425442-9	328666	402660	402954
#22 Shielded	22-20	0.3-0.6	**.0375** 0.95	**.050** 1.27	—	425888-1	425442-4	328666	402660	402954

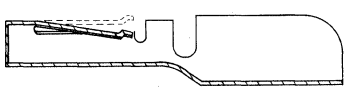
*Kit includes terminal, ferrule and shield clip, **Part Number 421260-2**.

Coaxial Patchcords

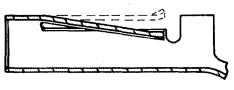


Length L	Insulation Color	Part Numbers Manual
6.0 152.4	Brown	422410-1
9.0 228.6	Red	422410-2
12.0 304.8	Orange	422410-3
15.0 381.0	Yellow	422410-4
18.0 457.2	Green	422410-5
21.0 533.4	Blue	422410-6
24.0 609.6	Violet	422410-7
36.0 914.4	Gray	422410-8

Shield Inserts



Manual Part No. 422356-8



Semi-Permanent Part No. 1-422356-1

SOURCE: Catalog 82062

Specifications subject to change.

1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

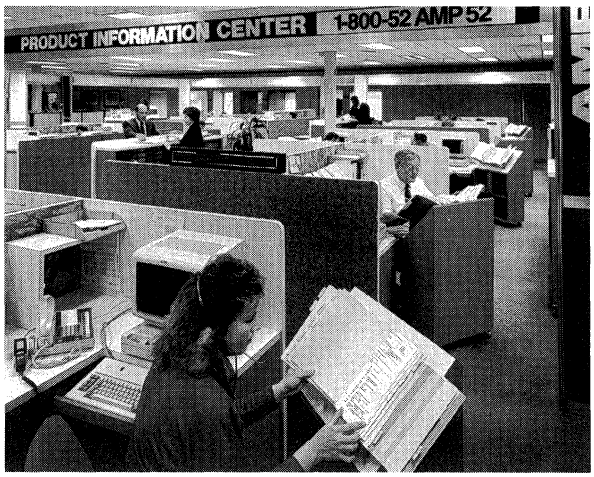
Need Information?
Call the AMP

PRODUCT INFORMATION CENTER

1-800-522-6752

The Product Information Center is staffed with specialists well versed in all AMP products. The Center can provide you with:

- Catalogs
- Technical Support
- Product Samples



AMP FAX SERVICE

Instant information by FAX 24-hours a day.

- Drawings
- Instruction Sheets (IS#)
- Product Specifications
- Application Specifications
- Latest Revision of Catalog Pages
- AMP Authorized Distributors Locations
- Instructions for AMP FAX Service

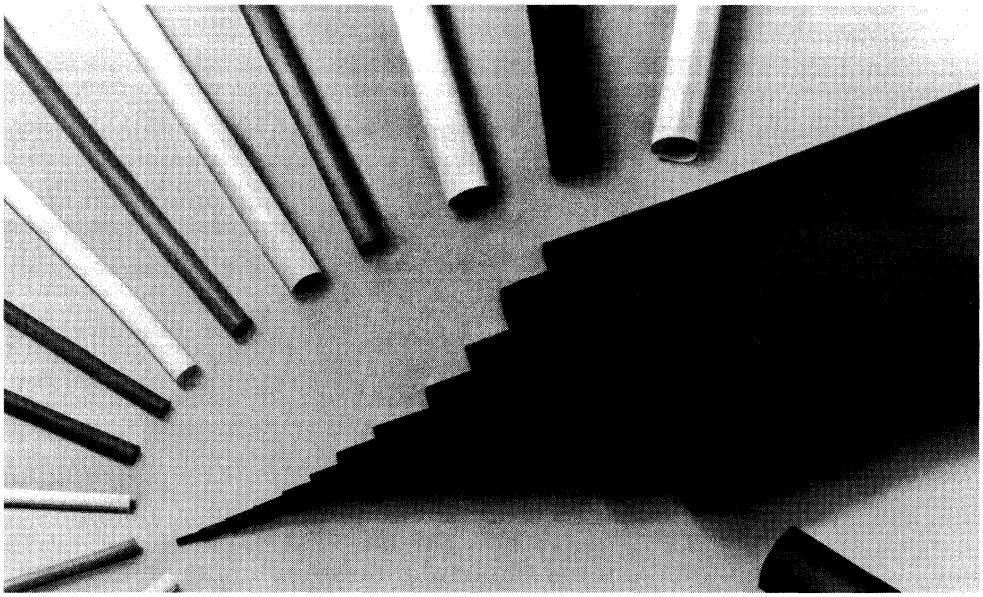
See Inside Front Cover for Instructions on "How to Access" AMP FAX SERVICE

Heat Shrinkable Products

Type FP21 Thin-Wall Heat Shrinkable Tubing (AMPSULATION)

Flexible Polyolefin

2 to 1 Shrink Ratio



Product Facts

- Highly flexible, radiation crosslinked, flame-retarded
- Meets the requirements of MIL-I-23053/5 Class 1 and Class 2
- Available in three standard colors: black, white and clear
- Black and white meet the requirements for Class 1 flame retardancy
- Clear tubing is available per Class 2
- Other colors are available upon request
- Rated for continuous operation from -67°F [-55°C] to +275°F [135°C] and up to 508°F [265°C] for short durations

Typical Applications

- Wire marking
- Color coding
- Insulation or lightweight harness jacketing
- Abrasion resistance

FP21 Tubing per MIL-I-23053/5 (Unmarked)

M23053/5 Military Part Number	Size	Tubing Diameter		Fully Recovered Nominal Wall Thickness	Weight per Linear Foot		Color	Part Numbers		Reel Length ft/m
		Expanded ID	Recovered ID		lb.	g		Length 4 ft. [1.22 m]	Reel	
-101-0	3/64	.046	.023	.016	.0009	.409	Black	1-603456-1	603456-1	1000
-101-9	1.19	1.19	.58	.41			White	603360-3	603360-4	304.80
-201-C					.0006	.286	Clear	603340-1	603340-2	
-102-0	1/16	.063	.031	.017	.0011	.513	Black	1-603322-1	1-603322-2	1000
-102-9	1.59	1.59	.79	.43			White	603361-4	603361-3	304.80
-202-C					.0008	.381	Clear	603341-1	603341-2	
-103-0	3/32	.093	.046	.020	.0019	.862	Black	1-603323-6	603323-6	500
-103-9	2.38	2.38	1.19	.51			White	603362-9	1-603362-0	152.40
-203-C					.0014	.640	Clear	603342-1	603342-5	
-104-0	1/8	.125	.062	.020	.0024	1.089	Black	1-603324-1	2-603324-2	500
-104-9	3.18	3.18	1.57	.51			White	603363-3	603363-4	152.40
-204-C					.0018	.803	Clear	603343-1	603343-5	
-105-0	3/16	.187	.093	.020	.0032	1.442	Black	1-603325-1	2-603325-5	250
-105-9	4.76	4.76	2.38	.51			White	1-603364-1	603364-3	76.20
-205-C					.0025	1.116	Clear	603344-1	603344-2	
-106-0	1/4	.250	.125	.025	.0056	2.540	Black	1-603326-1	2-603326-7	200
-106-9	6.35	6.35	3.18	.64			White	603365-2	603365-3	60.96
-206-C					.0042	1.896	Clear	603345-1	603345-7	
-107-0	3/8	.375	.187	.025	.0075	3.402	Black	603327-3	1-603327-1	200
-107-9	9.53	9.53	4.76	.64			White	603415-2	603415-4	60.96
-207-C					.0056	2.522	Clear	603346-1	603346-2	
-108-0	1/2	.500	.250	.025	.0103	4.649	Black	1-603328-0	3-603328-2	200
-108-9	12.70	12.70	6.35	.64			White	603367-3	603367-4	60.96
-208-C					.0076	3.456	Clear	603347-1	603347-2	
-109-0	3/4	.750	.375	.030	.0185	8.392	Black	1-603329-1	1-603329-3	200
-109-9	19.05	19.05	9.53	.76			White	603368-3	603368-8	60.96
-209-C					.0137	6.228	Clear	603348-1	603348-2	
-110-0	1	1.000	.500	.035	.0275	12.474	Black	1-603338-0	1-603338-1	200
-110-9	25.40	25.40	12.70	.89			White	603369-3	603369-5	60.96
-210-C					.0204	9.253	Clear	603349-1	603349-3	
-111-0	1-1/2	1.500	.750	.040	.0468	21.228	Black	603603-2	603603-1	100
-111-9	38.10	38.10	19.05	1.02			White	603370-4	603370-3	30.48
-211-C					.0328	14.869	Clear	603350-3	603350-4	
-112-0	2	2.000	1.000	.045	.0701	31.801	Black	603332-5	1-603332-2	100
-112-9	50.80	50.80	25.40	1.14			White	603371-4	603371-5	30.48
-212-C					.0541	24.539	Clear	603351-1	603351-4	

Note: Other lengths and colors may be available. Consult your local AMP sales representative.

SOURCE: Catalog 124132

Specifications subject to change.

1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

Type FP21 Thin-Wall Heat Shrinkable Tubing (AMPSULATION)
(Continued)

Flexible Polyolefin Disk Packs

2 to 1 Shrink Ratio

Product Facts

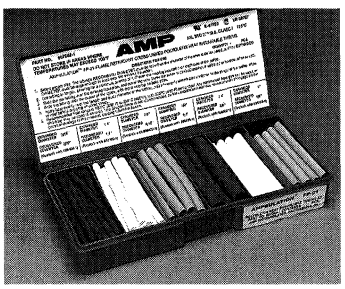
- Rigid reels protect tubing from crushing in storage
- Meets or exceeds requirements of MIL-I-23053/5 Class 1 and 2
- This tubing does not carry the UL or CSA logo and is not flame rated VW-1 (vertical wire test) or OFT (optional flame test) which is required for home appliances
- Recognized under the Component Program of Underwriters Laboratories Inc., File No. E45580
- Certified by Canadian Standards Association, File No. LR38227

Individual Reels of FP21 Tubing (Unmarked)
Length—4 ft. [1.22 m], Color—Black

Size	Tubing Diameter		Fully Recovered Nominal Wall Thickness	Weight per Linear Foot		Part Number
	Expanded ID	Recovered ID		lb.	g	4 ft. [1.22 m]
3/64 1.19	.046 1.19	.023 .58	.016 .41	.04	17.0	608400-1
1/16 1.59	.063 1.59	.031 .79	.017 .43	.04	17.0	608401-1
3/32 2.38	.093 2.38	.046 1.19	.020 .51	.04	17.0	608402-1
1/8 3.18	.125 3.18	.062 1.57	.020 .51	.04	19.8	608403-1
3/16 4.76	.187 4.76	.093 2.38	.020 .51	.04	19.8	608404-1
1/4 6.35	.250 6.35	.125 3.18	.025 .64	.05	22.7	608405-1
5/16 7.94	.312 7.94	.156 3.96	.025 .64	.07	31.2	608406-1
3/8 9.53	.375 9.53	.187 4.76	.025 .64	.08	36.9	608407-1
1/2 12.70	.500 12.70	.250 6.35	.025 .64	.11	51.0	608408-1
3/4 19.05	.750 19.05	.375 9.53	.030 .76	.13	59.5	608409-1
1 25.40	1.000 25.40	.500 12.70	.035 .89	.20	90.7	608410-1

Thin-Wall Heat Shrinkable Tubing Kit

Part No. 607243-1



Kit contains 116 pieces of FP21 tubing in various sizes, 3/16 [4.76] to 1 [25.4] dia. x 4 [101.60] length. Packaged in a sturdy plastic, hinged lip case.

SOURCE: Catalog 124132

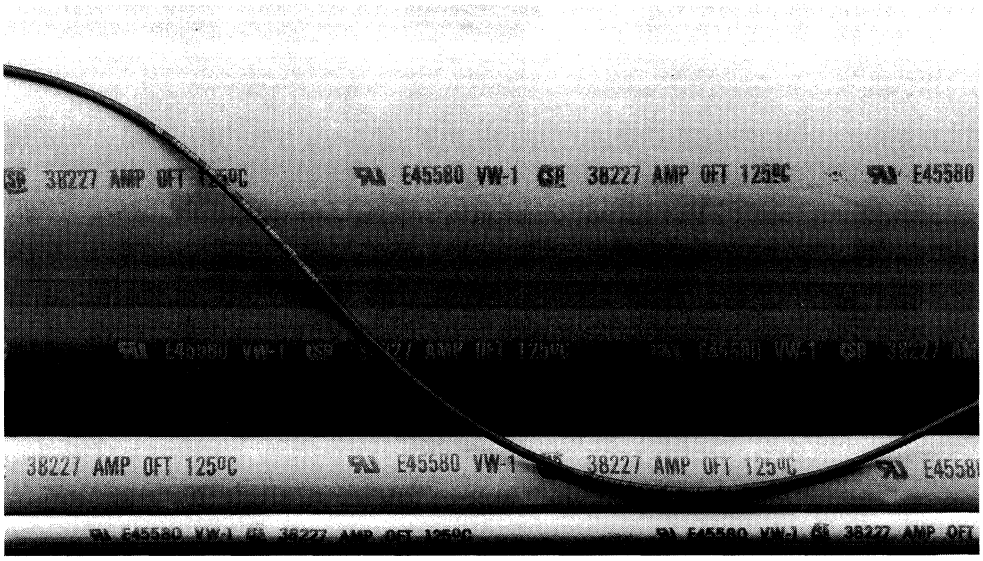
Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

Type VFP21 Thin-Wall Heat Shrinkable Tubing (AMPSULATION)

UL Recognized
Flexible Polyolefin
2 to 1 Shrink Ratio

Product Facts

- Highly flame retarded, flexible, radiation crosslinked
- Rated for continuous operation from -22°F [-30°C] to +257°F [125°C]
- For applications requiring UL Recognition or CSA Certification with the industry's most stringent flame tests (VW-1 in USA, OFT in Canada), which are suggested for production use in home appliances
- Minimum application shrink temperature is 194°F [90°C]
- Recognized under the Component Program of Underwriters Laboratories Inc., File No. E45580
- Certified by Canadian Standards Association, File No. LR38227



VFP21 Tubing (Marked)

Size	Tubing Diameter		Fully Recovered Nominal Wall Thickness	Weight per Linear Foot		Part Numbers			Reel Length ft/m
	Expanded ID	Recovered ID		lb.	g	Length 4 ft. [1.22 m] Black	Length 4 ft. [1.22 m] White	Reel Black	
3/64 1.19	**.046** 1.19	**.023** .58	**.016** .41	**.0009**	.409	603321-1	603360-1	603321-2	**1000** 304.80
1/16 1.59	**.063** 1.59	**.031** .79	**.017** .43	**.0011**	.513	603322-1	603361-1	603322-3	**1000** 304.80
3/32 2.38	**.093** 2.38	**.046** 1.19	**.020** .51	**.0019**	.862	603323-1	603362-1	603323-5	**500** 152.40
1/8 3.18	**.125** 3.18	**.062** 1.57	**.020** .51	**.0024**	1.089	603324-1	603363-1	603324-5	**500** 152.40
3/16 4.76	**.187** 4.76	**.093** 2.38	**.020** .51	**.0032**	1.442	603325-1	603364-1	2-603325-4	**250** 76.20
1/4 6.35	**.250** 6.35	**.125** 3.18	**.025** .64	**.0056**	2.540	603326-1	603365-1	2-603326-6	**200** 60.96
3/8 9.53	**.375** 9.53	**.187** 4.76	**.025** .64	**.0075**	3.402	603327-1	603366-1	603327-2	**200** 60.96
1/2 12.70	**.500** 12.70	**.250** 6.35	**.025** .64	**.0103**	4.649	603328-1	603367-1	603328-2	**200** 60.96
3/4 19.05	**.750** 19.05	**.375** 9.53	**.030** .76	**.0185**	8.392	603329-1	603368-1	603329-2	**200** 60.96
1 25.40	**1.000** 25.40	**.500** 12.70	**.035** .89	**.0275**	12.474	603330-1	603369-1	603330-2	**200** 60.96
1-1/2 38.10	**1.500** 38.10	**.750** 19.05	**.040** 1.02	**.0468**	21.228	603331-1	603370-1	603331-2	**100** 30.48
2 50.80	**2.000** 50.80	**1.000** 25.40	**.045** 1.14	**.0701**	31.801	603332-1	603371-1	603332-2	**100** 30.48
3 76.20	**3.000** 76.20	**1.500** 38.10	**.050** 1.27	**.1110**	50.358	603333-1	603372-1	603333-2	**100** 30.48
4 101.60	**4.000** 101.60	**2.000** 50.80	**.055** 1.40	**.1660**	75.296	603334-1	603567-3	603334-2	**75** 22.86

SOURCE: Catalog 124132

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

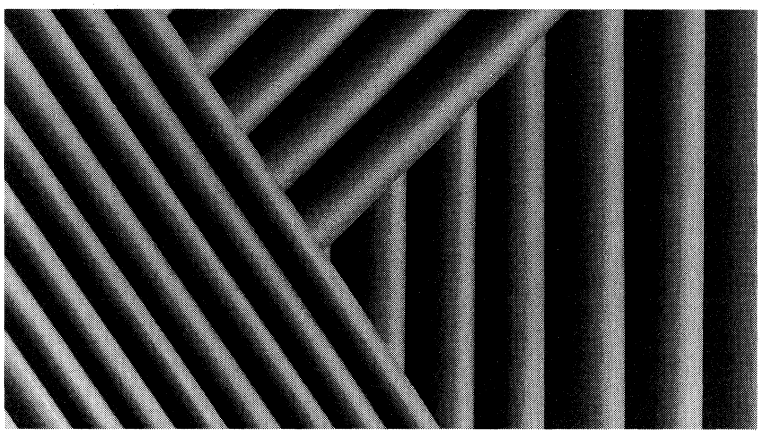
Type DWP31 Dual-Wall Polyolefin Heat Shrinkable Tubing (AMPSULATION)

Adhesive Lined Thin-Wall

3 to 1 Shrink Ratio

Product Facts

- Radiation crosslinked, heat shrinkable, polyolefin material
- Rated for continuous operation from -40°F [-40°C] to 230°F [110°C]
- Minimum application shrink temperature is 257°F [125°C]
- Adhesive liner melts and flows to seal and encapsulate components
- Adhesive develops an excellent bond to a wide variety of substrates
- Material is flame retardant and meets UL 224 requirements (600V, 257°F [125°C])
- Recognized under the Component Program of Underwriters Laboratories Inc., File No. E45580



Black Tubing (Unmarked)

Size	Tubing Diameter		Fully Recovered Nominal Wall	Weight per Linear Foot		Part Numbers Length	
	Expanded ID	Recovered ID	Thickness	lb.	g	1 ft. [.30 m]	4 ft. [1.22 m]
1/8 3.18	.125 3.18	.040 1.02	.040 1.02	.0050	2.25	603316-3	603316-4
3/16 4.76	.187 4.76	.060 1.50	.055 1.40	.0098	4.43	603312-3	603312-4
1/4 6.35	.250 6.35	.080 2.00	.057 1.45	.0122	5.52	603313-3	603313-4
3/8 9.53	.375 9.53	.120 3.05	.065 1.65	.0192	8.69	603314-3	603314-4
1/2 12.70	.500 12.70	.157 4.00	.070 1.78	.0249	11.27	603315-3	603315-4
3/4 19.05	.750 19.05	.230 5.84	.080 2.03	.0390	17.69	603317-2	603317-4
1 25.40	1.000 25.40	.320 8.13	.100 2.54	.0657	29.80	603318-2	603318-4

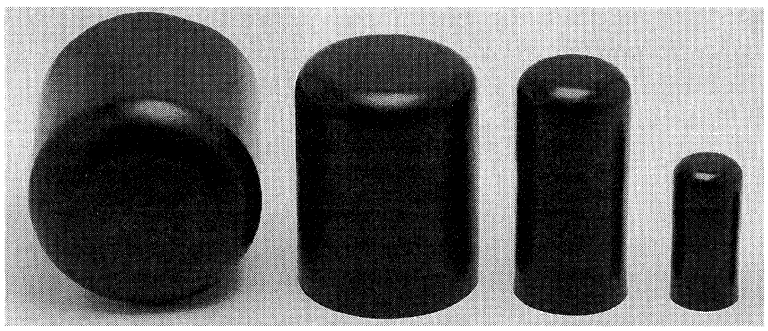
Note: Other lengths are available. Consult your local AMP sales representative.

Heat Shrinkable End Caps with Sealant

3 to 1 Shrink Ratio (Approx.)

Product Facts

- Form a pressure-tight seal on the ends of communication and power cables and electric leads
- Applied quickly and easily by means of a flameless heat gun or gas torch
- The internal coating of high-grade, hot-melt sealant provides excellent bonding
- Ideal shrink temperature is 275°F [135°C]



Standard End Caps

Expanded ID	Cable Dia. Application Range		Part Number With Sealant
	Maximum	Minimum	
.550 13.97	.390 9.91	.160 4.06	607500-1
.980 24.89	.790 20.07	.350 8.89	607500-2
1.570 39.88	1.26 32.00	.670 17.02	607500-3
2.600 66.04	2.28 57.91	1.06 26.92	607500-4
4.170 105.92	3.78 96.01	1.73 43.94	607500-5
5.350 135.89	4.92 124.97	2.60 66.04	607500-6

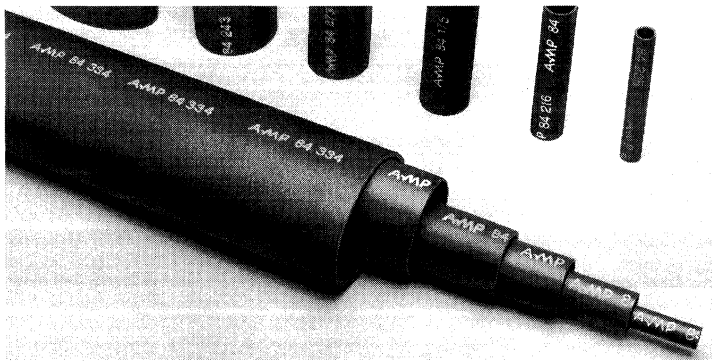
SOURCE: Catalog 124132

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

Type HWP31 Heavy-Wall Polyolefin Heat Shrinkable Tubing, Commercial Grade (AMPSULATION)

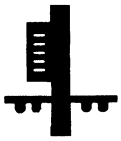
3 to 1 Shrink Ratio

Tubing has an operating temperature range of -67°F [-55°C] to +230°F [110°C]. The minimum application shrink temperature is 250°F [121°C].



Applications

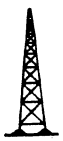
- **Electrical Generation & Distribution**



  - Sealing cable from conduit to main junction box
  - Sealing splices for direct burial or above ground cables
- **Plant Maintenance**

  - Covering for electrical splices
  - Sealing steel cable splices
  - Cable repairs
- **Truck Fleets**

  - Covering battery cable installations
  - Covering harness wires for tail lights
- **CATV Industry**



  - Above ground or direct burial sealing of CATV connectors and splices
- **Municipalities**

  - Above ground or direct burial sealing of connectors for fire alarm, traffic and street signal departments

Black Tubing (Marked with White Lettering)

Size	Tubing Diameter		Fully Recovered Nominal Wall Thickness	Weight per Linear Foot		Part Numbers* With Sealant		
	Expanded ID	Recovered ID		lb.	g	1/2 ft. [.15 m]	1 ft. [.30 m]	4 ft. [1.22 m]
2/5 10.16	**.400** 10.16	**.150** 3.81	**.060** 1.52	**.03**	13.6	53706-5	53706-6[1]	53706-7
3/4 19.05	**.750** 19.05	**.220** 5.59	**.105** 2.67	**.07**	31.7	53711-3	53711-5[1]	1-53711-0
1-1/10 27.94	**1.100** 27.94	**.375** 9.53	**.120** 3.05	**.13**	60.0	53712-2	53712-4[2]	1-53712-1
1-1/2 38.10	**1.500** 38.10	**.500** 12.70	**.140** 3.56	**.18**	81.6	53713-2	53713-4	1-53713-3
2 50.80	**2.000** 50.80	**.750** 19.05	**.155** 3.94	**.31**	140.6	53714-2	53714-4	1-53714-4
3 76.20	**3.000** 76.20	**1.250** 31.75	**.155** 3.94	**.56**	254.0	53715-1	53715-3	53715-9

Black Tubing (Marked with White Lettering)

Size	Tubing Diameter		Fully Recovered Nominal Wall Thickness	Weight per Linear Foot		Part Numbers* Without Sealant		
	Expanded ID	Recovered ID		lb.	g	1 ft. [.30 m]	4 ft. [1.22 m]	25 ft. [7.62 m]
2/5 10.16	**.400** 10.16	**.150** 3.81	**.060** 1.52	**.03**	13.6	53700-5	53700-1	53700-2
3/4 19.05	**.750** 19.05	**.220** 5.59	**.105** 2.67	**.07**	31.7	53701-7	53701-1	53701-2
1-1/10 27.94	**1.100** 27.94	**.375** 9.53	**.120** 3.05	**.12**	54.4	53702-6	53702-1	53702-2
1-1/2 38.10	**1.500** 38.10	**.500** 12.70	**.140** 3.56	**.17**	77.1	53703-4	53703-1	53703-2
2 50.80	**2.000** 50.80	**.750** 19.05	**.155** 3.94	**.29**	131.5	53704-4	53704-1	53704-2
3 76.20	**3.000** 76.20	**1.250** 31.75	**.155** 3.94	**.51**	231.3	53705-4	53705-1	53705-2

Red Tubing (Marked with White Lettering)

Size	Tubing Diameter		Fully Recovered Nominal Wall Thickness	Weight per Linear Foot (lb./g)	Part Numbers* With Sealant			Without Sealant	
	Expanded ID	Recovered ID			1/2 ft. [.15 m]	1 ft. [.30 m]	4 ft. [1.22 m]	4 ft. [1.22 m]	25 ft. [7.62 m]
2/5 10.16	**.400** 10.16	**.150** 3.81	**.060** 1.52	**.03** 13.6	—	608128-1	608128-2	—	—
3/4 19.05	**.750** 19.05	**.220** 5.59	**.105** 2.67	**.07** 31.7	54053-5	54053-3[1]	54053-7	54162-1	54162-3
1-1/10 27.94	**1.100** 27.94	**.375** 9.53	**.120** 3.05	**.13** 60.0	54057-5	54057-3[2]	54057-7	—	—
1-1/2 38.10	**1.500** 38.10	**.500** 12.70	**.140** 3.56	**.17** 77.1	—	—	—	54100-1	54100-4
3 76.20	**3.000** 76.20	**1.250** 31.75	**.155** 3.94	**.51** 231.3	—	—	—	—	54229-1

Note: [1]25 pieces per package
[2]10 pieces per package
*Other lengths available upon request. Minimums required. Consult your local AMP sales representative.

SOURCE: Catalog 124132

Specifications subject to change.

1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

Type MHWP31 Military Heavy-Wall Polyolefin Heat Shrinkable Tubing, MIL-I-23053/15A (AMPSULATION)

3 to 1 Shrink Ratio

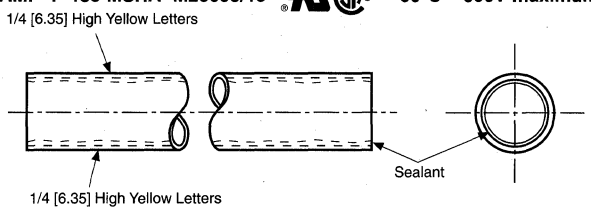
Product Facts

- Ultimate in electrical insulation stability, abrasion resistance, strain relief, corrosion protection and water sealing properties
- Inner wall of the tubing is coated with a hot-melt material, which effectively seals the enclosed area

Approvals (For Tubing With Sealant)

- Recognized under the Component Program of Underwriters Laboratories Inc., File No. E45580
- Certified by Canadian Standards Association, File No. LR33017

AMP P-158-MSHA M23053/15 – – 90°C – 600V maximum

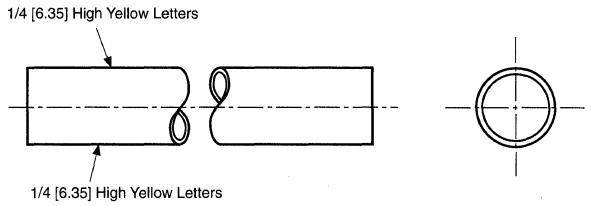


AMP 608506-6 1.100 – .375 28 mm – 9.5 mm 4 – 3/0 AWG 94 412

Black Tubing With Sealant (Marked with Yellow Lettering)

M23053/15 Military Part Number	Size	Tubing Diameter Expanded ID	Tubing Diameter Recovered ID	Fully Recovered Nominal Wall Thickness	Weight per Linear Foot lb.	Weight per Linear Foot g	Part Numbers Length 1 ft. [.30 m]	Part Numbers Length 2 ft. [.61 m]	Part Numbers Length 4 ft. [1.22 m]
-108-0	2/5 10.16	.400 10.16	.150 3.81	.060 1.52	.03	13.6	608504-1	—	608504-2
-101-0	3/4 19.05	.750 19.05	.220 5.59	.105 2.67	.07	31.7	608505-1	—	608505-6
-102-0	1-1/10 27.94	1.100 27.94	.375 9.53	.120 3.05	.13	60.0	608506-6	—	608506-5
-103-0	1-1/2 38.10	1.500 38.10	.500 12.70	.140 3.56	.18	81.6	608507-5	—	608507-4
-104-0	2 50.80	2.000 50.80	.750 19.05	.155 3.94	.31	140.6	608508-6	—	608508-5
-105-0	3 76.20	3.000 76.20	1.250 31.75	.155 3.94	.56	254.0	608509-5	608509-1	—

Note: Other lengths may be available. Consult your local AMP sales representative.



AMP 608952-1 1.100 – .375 28 mm – 9.5 mm 4 – 3/0 AWG 94 412

Black Tubing Without Sealant (Marked with Yellow Lettering)

Size	Tubing Diameter Expanded ID	Tubing Diameter Recovered ID	Fully Recovered Nominal Wall Thickness	Weight per Linear Foot lb.	Weight per Linear Foot g	Part Numbers Length 1 ft. [.30 m]	Part Numbers Length 4 ft. [1.22 m]
2/5 10.16	.400 10.16	.150 3.81	.060 1.52	.03	13.6	608950-1	608950-2
3/4 19.05	.750 19.05	.220 5.59	.105 2.67	.07	31.7	608951-1	608951-2
1-1/10 27.94	1.100 27.94	.375 9.53	.120 3.05	.13	60.0	608952-1	608952-2
1-1/2 38.10	1.500 38.10	.500 12.70	.140 3.56	.18	81.6	608953-1	608953-2
2 50.80	2.000 50.80	.750 19.05	.155 3.94	.31	140.6	608954-1	608954-2
3 76.20	3.000 76.20	1.250 31.75	.155 3.94	.56	254.0	608955-1	608955-2

Note: Other lengths may be available. Consult your local AMP sales representative.

SOURCE: Catalog 124132

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

Flameless Heat Guns for Heat Shrinkable Tubing

Flameless Heat Guns are compact, portable units capable of delivering instant heat in environments where open flame could be hazardous.

Economy Dual Temperature Model HG-3

Part No. 606712-2
IS 408-4085

Performance Characteristics

120 volts AC

1250 watts

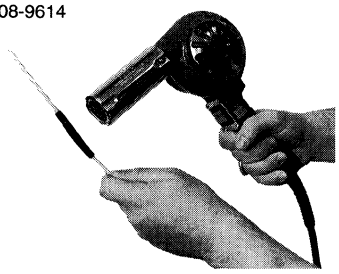
Temperatures:

Low setting— 625 watts, 640°F [338°C]

High setting— 1250 watts, 932°F [500°C]

Professional Variable Temperature Model HG-1

Part No. 600655-2
IS 408-9614



Performance Characteristics

120 volts AC

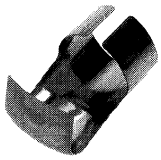
14.5 amps

Temperatures:

750°F [399°C] to 1000°F [538°C], variable

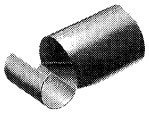
Note: Replacement parts are available – order IS 408-9614, for details.

Heat Gun Deflector

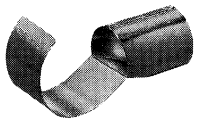


Part No. 606712-4
Up to 1 [25.4] O.D.

Heat Gun Deflectors



Part No. 600655-3
Up to 3/4 [19.05] O.D.

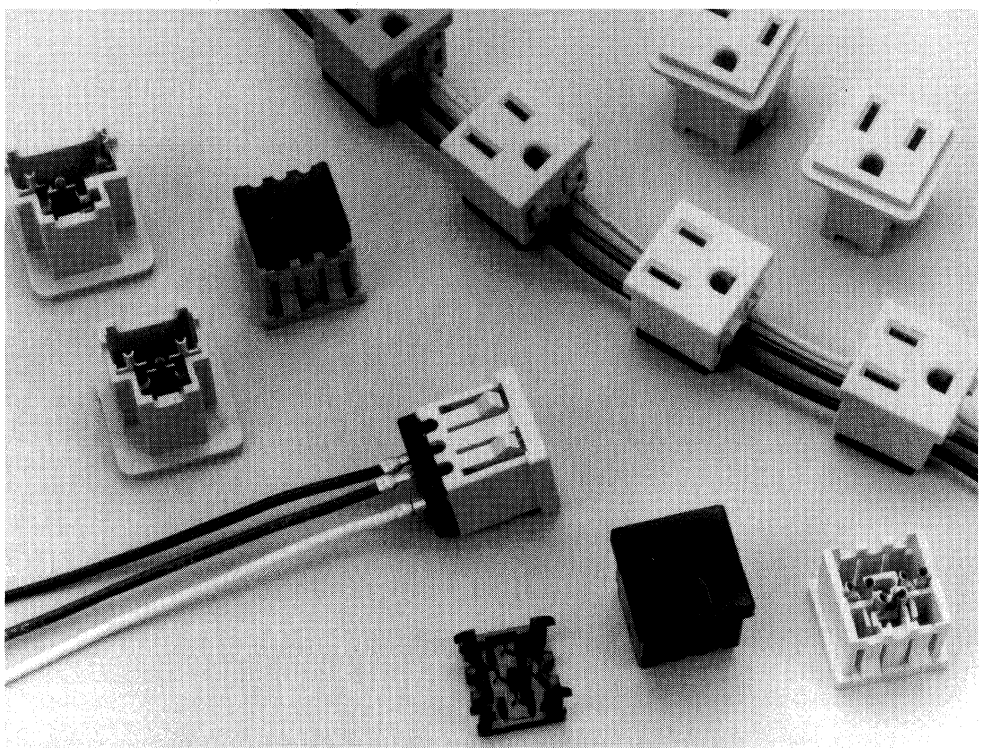


Part No. 600655-4
Up to 2 [50.8] O.D.

SOURCE: Catalog 124132

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

Convenience Outlets (15A or 20A, 125 VAC)

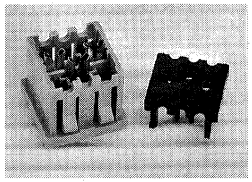


Product Facts

- Panel mount connector snaps in without the use of tools and holds securely without retention hardware
- Terminates solid copper wire using stripless insulation displacement terminals
- Terminates wire end or allows wire to feed thru
- Alternate connection uses FASTON 205 Series tabs (see below)
- Panel mount connectors available in two sizes:
  14-12 AWG [2-3 mm²]
  18-16 AWG [0.8-1.4 mm²]
- Panel mount connectors available in multiple colors
- Printed circuit connectors feature tin-lead plated contacts, compatible with standard wave soldering processes
- Pc board versions available in 15- or 20-amp configurations
- Pc board versions available in choice of black or gray housings (other colors can be made available; consult AMP)
- All connectors are rated for 125 VAC
- Rated under the Component Recognition Program of Underwriters Laboratories Inc., File No. E28476*
- Designed to UL Performance Std. 498
- Certified by Canadian Standards Association, File No. LR 7189

*Pc Board Mount, 20A version pending

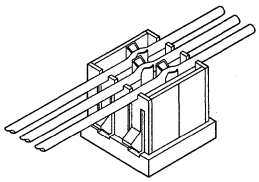
Panel Mount



Note: Housing Dim. (Typ.)—1.195 [30.35] L x 1.060 [26.92] W x 1.060 [26.92] H

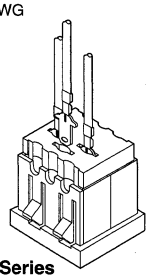
Part Number		Housing Color
14-12 AWG[1] [2-3 mm²]	18-16 AWG[2] [0.8-1.4 mm²]	
208979-2	208697-2	Black
208979-4	208697-4	Almond
208979-7	—	White
208979-9	—	Cream
1-208979-0	—	Platinum
1-208979-1	—	Gray
1-208979-2	—	Orange

[1]UL and CSA rated 15A.
[2]UL rated 15A; CSA rated 13A for 16 AWG and 10A for 18 AWG
Note: Panel thickness—.030-.070 [0.76-1.78]



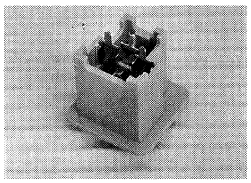
Insulation Displacement Application

.205 [5.21] Tab Application



Accepts 205 Series FASTON Tabs for 18-14 AWG [0.8-2 mm²] wire with .120-.150 [3.05-3.81] insulation diameter Part No. 62531-1, Strip Form

Pc Board Mount



Note: Housing Dim. (Typ.)—1.285 [32.6] L x 1.225 [31.12] W x 1.004 [25.50] H

Part Number		Housing Color
15 Amperes	20 Amperes*	
213598-1	213727-1	Gray
213598-2	—	Black

*UL and CSA pending.

SOURCE: Catalog 82067

Specifications subject to change.

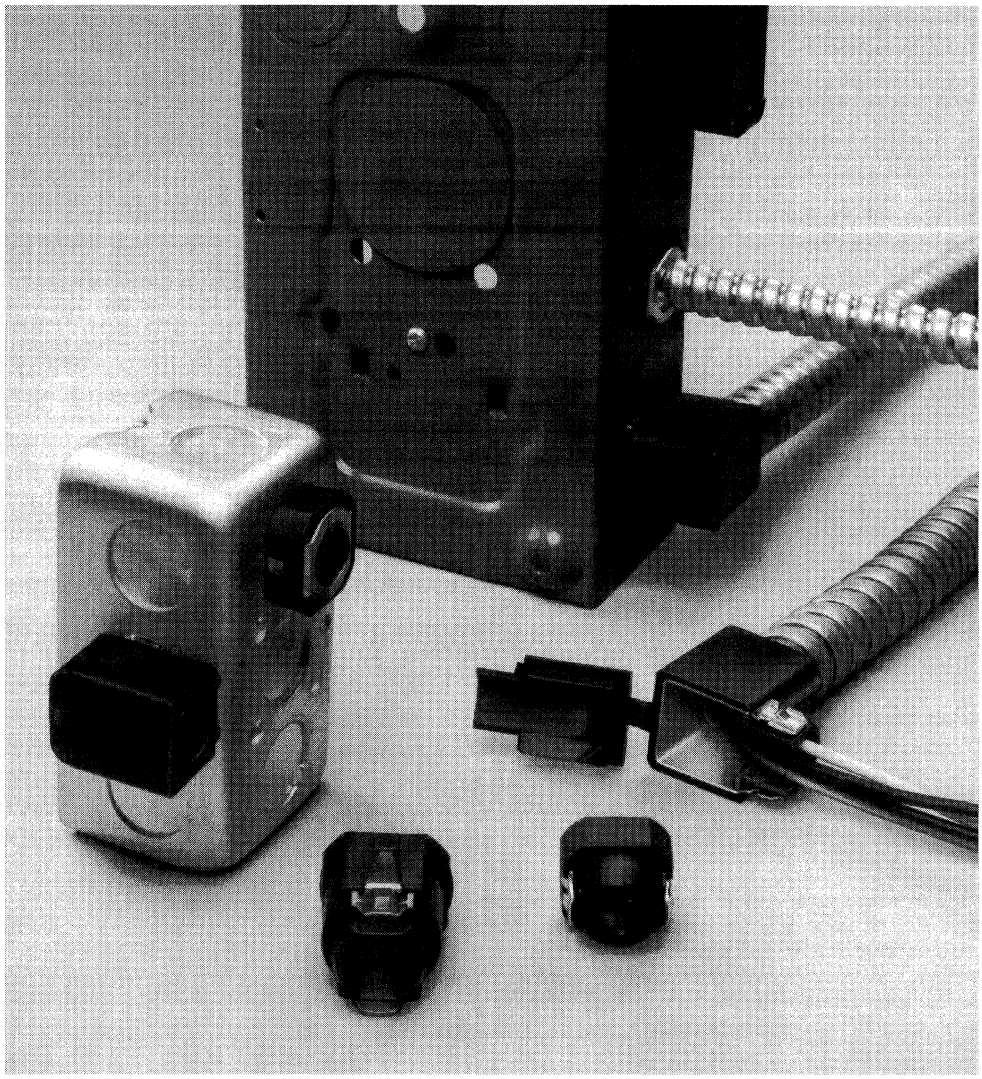
1-800-522-6752
Product Information Center/ AMP FAX Service

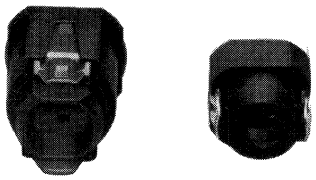
1-800-722-1111
Tooling/Technical Assistance Center

Flexible Conduit Connectors

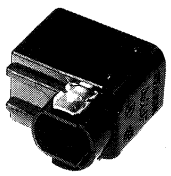
Product Facts

- Accepts steel or aluminum conduit (Greenfield, Bx)
- No tools, screws, bushings or locknuts required for installation
- Screws directly onto flexible conduit
- Snaps into knockout hole in panel or box
- Provides low profile on both sides of mounting surface
- Dismountable with conventional pliers
- Available in straight-through and right-angle versions
- Sizes accept 3/8 [9.53] and 1/2 [12.7] conduit
- Rated 125°C maximum
- Fully grounded
- Listed by Underwriters Laboratories Inc., File No. E60108 (Except Part No. 208332-1 which is UL Recognized)
- Designed to UL performance Standard 514B
- Certified by Canadian Standards Association, File No. LR38656 (Except Part Nos. 208332-1 and 207508-1)





Straight-Through



Right-Angle

Connector Type	Flexible Conduit Size	Part Number
Straight-Through	3/8 [9.53]	207370-1
	1/2 [12.7]	207373-1
	1/2 [12.7] for Superflex Conduit	208332-1
Right-Angle	3/8 [9.53]	207508-1
	1/2 [12.7]	207507-1

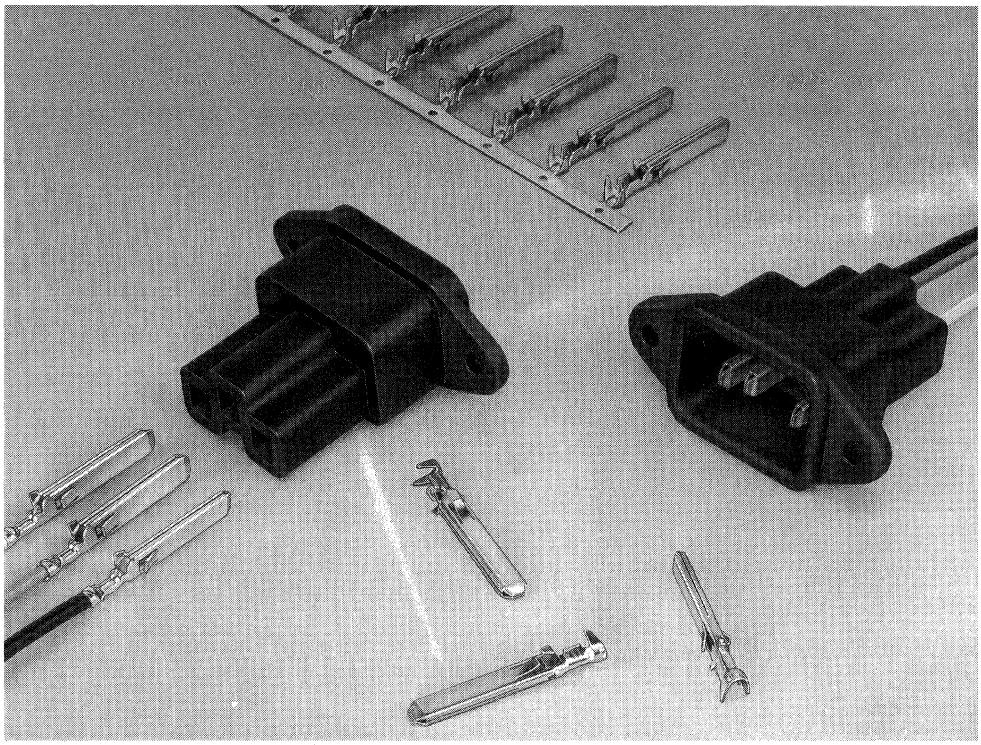
SOURCE: Catalog 82058

Specifications subject to change.

1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

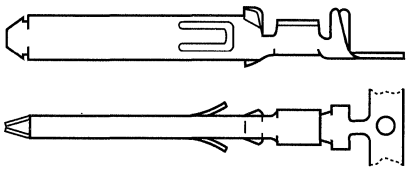
Power Cord Receptacle



Product Facts

- Designed to international standard CEE-22
- Mates with standard international plugs
- Machine applied, crimp, snap-in contacts
- Same contact design for ground and power—one inventory item
- Rear of housing is "egg-crated" for maximum protection—no post termination sleeving required
- Recognized under the Component Program of Underwriters Laboratories Inc., File No. E28476
- Certified by Canadian Standards Association, File No. LR7189
- VDE approved

Contacts

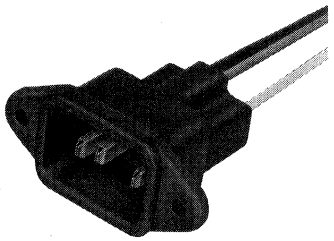


Wire Size Range		Ins. Dia. Range	Contact Part Number		Hand Tool Part Number
AWG	mm²		Strip Form	Loose Piece	
20-16	0.5-1.4	.080-.135 2.08-3.43	206638-2	206638-3	90315-1

Extraction Tool **Part No. 91106-1**

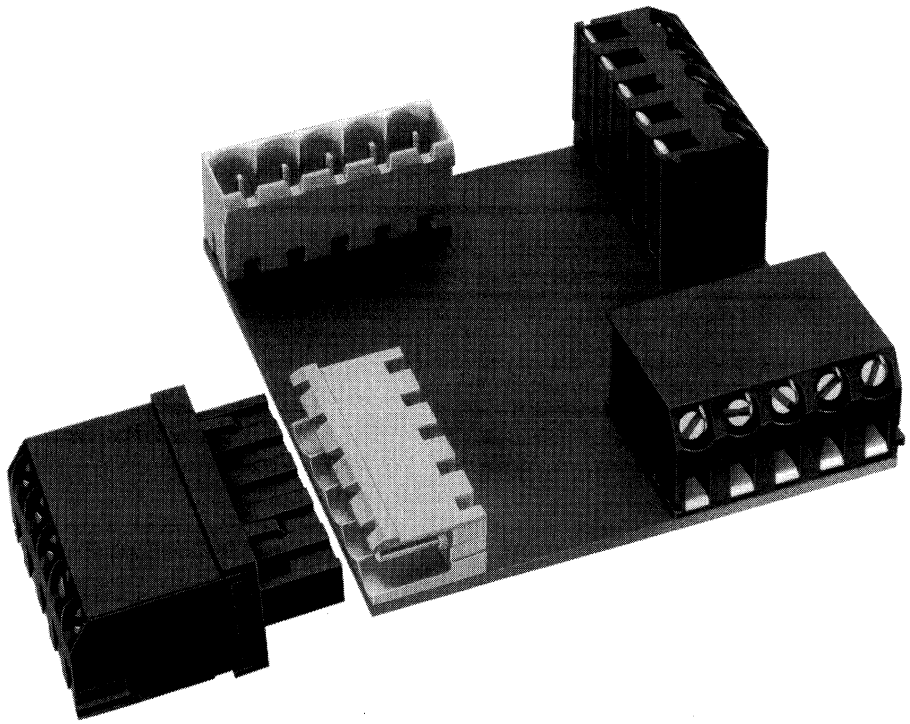
3 Position Receptacle Housing

Part No. 206637-1



Note: Typ. Dim.—1.969 [50.01] L x 1.475 [37.47] W x .760 [19.3] H

TERMI-BLOK Stacking Connectors



Product Facts

- **One-piece right-angle and vertical mount pcb connectors, available in 1 thru 10 contact positions**
- **Cable connectors in 1 thru 10 positions; mix-and-match with pcb header configurations**
- **Pcb headers available in 2 thru 10 positions**
- **Modular design for maximum flexibility**
- **Connectors accept a stripped wire length of .550 [13.97]**
- **Pcb connectors and headers have thru-hole retention legs for stability prior to soldering**
- **End-wall interlocks facilitate end-to-end stacking**
- **End-wall interlocks assure true centerline spacing**
- **Choice of .200 [5.08] and .197 [5.00] contact centerlines**
- **Contact tails maintain .016 [0.41] true position**
- **Rugged screw clamp contacts accept wire size range 24-12 AWG [0.2–3.3 mm²]**
- **Parallel wire entry (<30° deviation permitted)**
- **Housings made of 94V-0 rated thermoplastic in black or natural (other colors can be made available to meet industry standards)**
- **Headers intermatable with competitive plug connectors**
- **Pcb footprint compatible with existing industry standards**
- **Recognized under the Component Program of Underwriters Laboratories Inc., File No. E60677**
- **Certified by Canadian Standards Association, File No. LR 7189A-442**
- **Produced under a Quality Management System certified to ISO 9001**

A copy of the certificate is available upon request

The new, modular design TERMI-BLOK connector consists of one-piece right-angle and vertical mount pcb terminal blocks, and cable connectors with mating right-angle or vertical mount pcb headers.

Stackable terminal block connectors feature screw clamp contacts (see illustration, page 10012) that accept wire size range 24-12 AWG [0.2–3.3 mm²], solid or stranded. Wire entry is parallel to the screws (deviation <30°). They are available in 1 thru 10 positions.

Pcb receptacle headers are available with either open or closed ends, and are available in 2 thru 10 positions.

TERMI-BLOK cable connectors feature rugged, integral retention latches for secure connector-to-header mating and positive metal-to-metal contact. Available in 1 thru 10 positions, they can be interlocked, end-to-end, without loss of centerline spacing, in any combination to match the circuit requirements of the pcb headers.

Housings are made of UL 94V-0 rated, high-temperature thermoplastic and are available in natural or black colors. Additional colors can be made available to meet industry standards. A choice of contact centerline spacing is offered: .197 [5.00] and .200 [5.08].

Right-angle and vertical mount terminal blocks, as well as the pcb mating headers, are stackable, end-to-end, without loss of centerline spacing. Ease of assembly is facilitated by built-in interlocks on the housings. When combined with built-in, thru-hole retention legs, they stabilize the connectors and headers prior to the soldering process. Modular design allows combination of connectors or headers to meet a number of circuit requirements.

TERMI-BLOK stacking connectors have a minimum current rating of 10 amps with a 30° temperature rise for the larger wire sizes. Contact tails maintain .016 [0.51] true position. Pcb headers are intermatable with competitive plug connectors, and have a pcb footprint compatible with existing industry standards.

These versatile, modular terminal block connectors are widely used in the Process Controls, Telecommunications, Traffic Control, and Building Equipment Industries, in addition to a wide range of related industries.

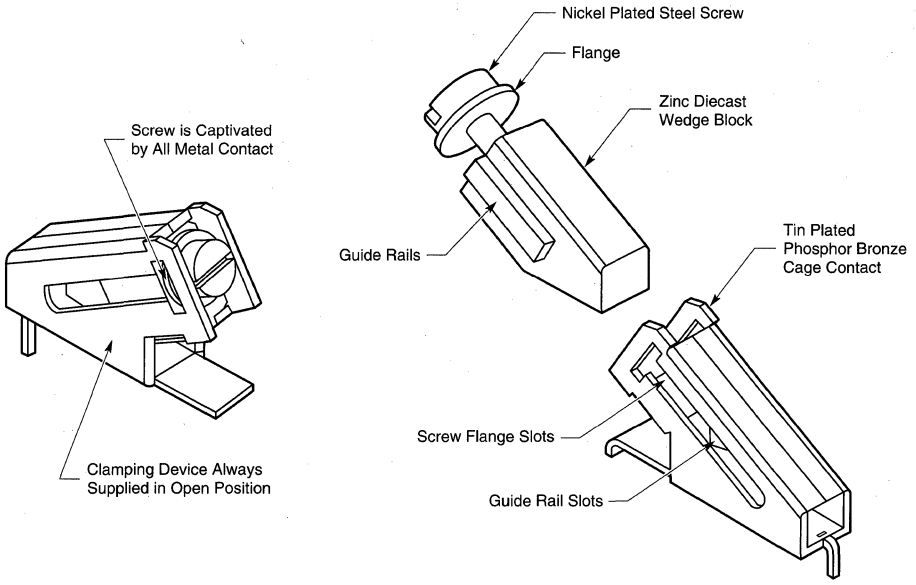
SOURCE: Catalog 65451

Specifications subject to change.

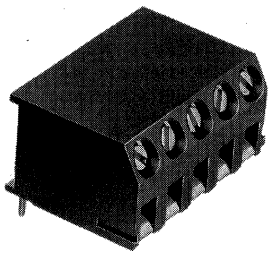
1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

Screw Clamp System



PCB Terminal Block, Right-Angle .200 [5.08] Centers

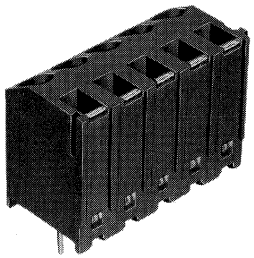


Note: 5 Pos. Housing Dim. (Typ.)—1.000 [25.40] L x .690 [17.53] W x .490 [12.45] H

No. of Pos.	Part Numbers	
	Natural	Black
1	786469-8	786469-1
2	786469-9	786469-2
3	1-786469-0	786469-3
4	1-786469-1	786469-4
5	1-786469-2	786469-5

No. of Pos.	Part Numbers	
	Natural	Black
6	1-786469-8	1-786469-5
7	1-786469-9	1-786469-6
8	1-786469-3	786469-6
9	2-786469-0	1-786469-7
10	1-786469-4	786469-7

PCB Terminal Block, Vertical .200 [5.08] Centers



Note: 5 Pos. Housing Dim. (Typ.)—1.000 [25.40] L x .490 [12.45] W x .690 [17.53] H

No. of Pos.	Part Numbers	
	Natural	Black
1	786473-8	786473-1
2	786473-9	786473-2
3	1-786473-0	786473-3
4	1-786473-1	786473-4
5	1-786473-2	786473-5

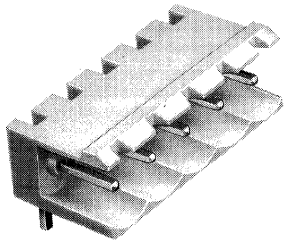
No. of Pos.	Part Numbers	
	Natural	Black
6	1-786473-8	1-786473-5
7	1-786473-9	1-786473-6
8	1-786473-3	786473-6
9	2-786473-0	1-786473-7
10	1-786473-4	786473-7

SOURCE: Catalog 65451

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

Header Assembly, Right-Angle, Open Ends, .200 [5.08] Centers

Mates with—
Pluggable Terminal Block, .200 [5.08] Centers

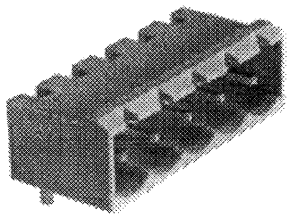


Note: 5 Pos. Housing Dim. (Typ.)—1.000 [25.40] L x .472 [11.99] W x .334 [8.48] H

No. of Pos.	Part Numbers	
	Natural	Black
2	786487-2	1-786487-1
3	786487-3	1-786487-2
4	786487-4	1-786487-3
5	786487-5	1-786487-4
6	786487-6	1-786487-5
7	786487-7	1-786487-6
8	786487-8	1-786487-7
9	786487-9	1-786487-8
10	1-786487-0	1-786487-9

Header Assembly, Right-Angle, Closed Ends, .200 [5.08] Centers

Mates with—
Pluggable Terminal Block, .200 [5.08] Centers

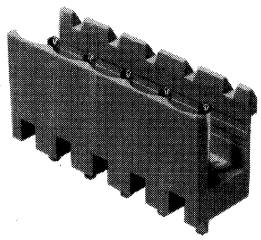


Note: 5 Pos. Housing Dim. (Typ.)—1.050 [26.67] L x .472 [11.99] W x .334 [8.48] H

No. of Pos.	Part Numbers	
	Natural	Black
2	786488-2	1-786488-1
3	786488-3	1-786488-2
4	786488-4	1-786488-3
5	786488-5	1-786488-4
6	786488-6	1-786488-5
7	786488-7	1-786488-6
8	786488-8	1-786488-7
9	786488-9	1-786488-8
10	1-786488-0	1-786488-9

Header Assembly, Vertical, Open Ends, .200 [5.08] Centers

Mates with—
Pluggable Terminal Block, .200 [5.08] Centers

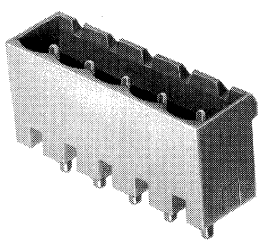


Note: 5 Pos. Housing Dim. (Typ.)—1.000 [25.40] L x .334 [8.48] W x .472 [11.99] H

No. of Pos.	Part Numbers	
	Natural	Black
2	786485-2	1-786485-1
3	786485-3	1-786485-2
4	786485-4	1-786485-3
5	786485-5	1-786485-4
6	786485-6	1-786485-5
7	786485-7	1-786485-6
8	786485-8	1-786485-7
9	786485-9	1-786485-8
10	1-786485-0	1-786485-9

Header Assembly, Vertical, Closed Ends, .200 [5.08] Centers

Mates with—
Pluggable Terminal Block, .200 [5.08] Centers



Note: 5 Pos. Housing Dim. (Typ.)—1.050 [26.67] L x .334 [8.48] W x .472 [11.99] H

No. of Pos.	Part Numbers	
	Natural	Black
2	786486-2	1-786486-1
3	786486-3	1-786486-2
4	786486-4	1-786486-3
5	786486-5	1-786486-4
6	786486-6	1-786486-5
7	786486-7	1-786486-6
8	786486-8	1-786486-7
9	786486-9	1-786486-8
10	1-786486-0	1-786486-9

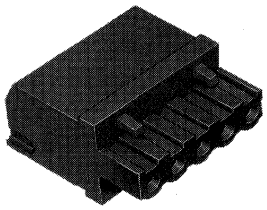
SOURCE: Catalog 65451

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

Pluggable Terminal Block, .200 [5.08] Centers

Note: Cable assemblies can be mixed to match the positions of the pcb headers. Ex., 3- and 4-position pluggable terminal blocks interlock and mate with a 7-position header, while maintaining true .200 [5.08] centerlines.

Mates with—
Right-Angle and Vertical Headers, .200 [5.08] Centers

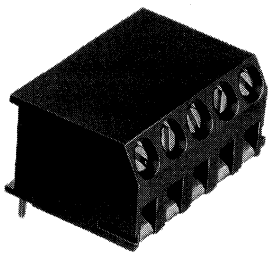


Note: 5 Pos. Housing Dim. (Typ.)—1.000 [25.40] L x 1.073 [27.25] W x .545 [13.84] H

No. of Pos.	Part Numbers	
	Natural	Black
1	786478-8	786478-1
2	786478-9	786478-2
3	1-786478-0	786478-3
4	1-786478-1	786478-4
5	1-786478-2	786478-5

No. of Pos.	Part Numbers	
	Natural	Black
6	1-786478-8	1-786478-5
7	1-786478-9	1-786478-6
8	1-786478-3	786478-6
9	2-786478-0	1-786478-7
10	1-786478-4	786478-7

PCB Terminal Block, Right-Angle .197 [5.00] Centers

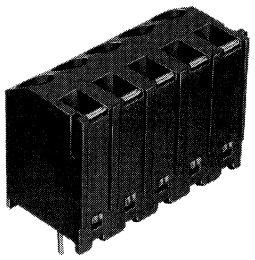


Note: 5 Pos. Housing Dim. (Typ.)—.984 [25.00] L x .690 [17.53] W x .490 [12.45] H

No. of Pos.	Part Numbers	
	Natural	Black
1	786472-8	786472-1
2	786472-9	786472-2
3	1-786472-0	786472-3
4	1-786472-1	786472-4
5	1-786472-2	786472-5

No. of Pos.	Part Numbers	
	Natural	Black
6	1-786472-8	1-786472-5
7	1-786472-9	1-786472-6
8	1-786472-3	786472-6
9	2-786472-0	1-786472-7
10	1-786472-4	786472-7

PCB Terminal Block, Vertical .197 [5.00] Centers



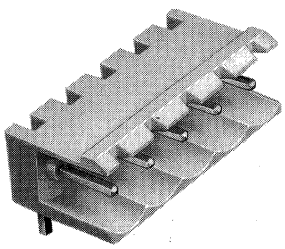
Note: 5 Pos. Housing Dim. (Typ.)—.984 [25.00] L x .490 [12.45] W x .690 [17.53] H

No. of Pos.	Part Numbers	
	Natural	Black
1	786476-8	786476-1
2	786476-9	786476-2
3	1-786476-0	786476-3
4	1-786476-1	786476-4
5	1-786476-2	786476-5

No. of Pos.	Part Numbers	
	Natural	Black
6	1-786476-8	1-786476-5
7	1-786476-9	1-786476-6
8	1-786476-3	786476-6
9	2-786476-0	1-786476-7
10	1-786476-4	786476-7

Header Assembly, Right-Angle, Open Ends, .197 [5.00] Centers

Mates with—
Pluggable Terminal Block, .197 [5.00] Centers



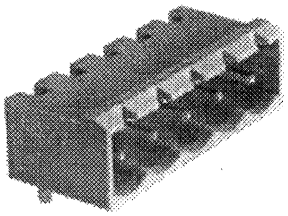
Note: 5 Pos. Housing Dim. (Typ.)—.984 [25.00] L x .472 [11.99] W x .334 [8.48] H

No. of Pos.	Part Numbers	
	Natural	Black
2	786499-2	1-786499-1
3	786499-3	1-786499-2
4	786499-4	1-786499-3
5	786499-5	1-786499-4
6	786499-6	1-786499-5

No. of Pos.	Part Numbers	
	Natural	Black
7	786499-7	1-786499-6
8	786499-8	1-786499-7
9	786499-9	1-786499-8
10	1-786499-0	1-786499-9

Header Assembly, Right-Angle, Closed Ends, .197 [5.00] Centers

Mates with—
Pluggable Terminal Block, .197 [5.00] Centers

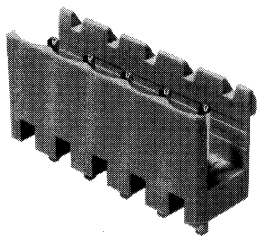


Note: 5 Pos. Housing Dim. (Typ.)—1.034 [26.27] L x .472 [11.99] W x .334 [8.48] H

No. of Pos.	Part Numbers	
	Natural	Black
2	786500-2	1-786500-1
3	786500-3	1-786500-2
4	786500-4	1-786500-3
5	786500-5	1-786500-4
6	786500-6	1-786500-5
7	786500-7	1-786500-6
8	786500-8	1-786500-7
9	786500-9	1-786500-8
10	1-786500-0	1-786500-9

Header Assembly, Vertical, Open Ends, .197 [5.00] Centers

Mates with—
Pluggable Terminal Block, .197 [5.00] Centers

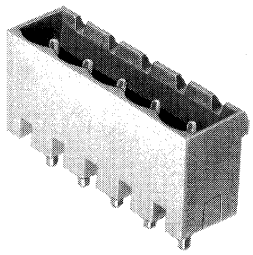


Note: 5 Pos. Housing Dim. (Typ.)—.984 [25.00] L x .334 [8.48] W x .472 [11.99] H

No. of Pos.	Part Numbers	
	Natural	Black
2	786497-2	1-786497-1
3	786497-3	1-786497-2
4	786497-4	1-786497-3
5	786497-5	1-786497-4
6	786497-6	1-786497-5
7	786497-7	1-786497-6
8	786497-8	1-786497-7
9	786497-9	1-786497-8
10	1-786497-0	1-786497-9

Header Assembly, Vertical, Closed Ends, .197 [5.00] Centers

Mates with—
Pluggable Terminal Block, .197 [5.00] Centers

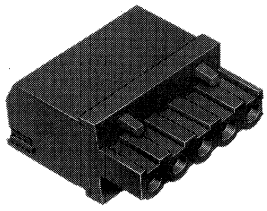


Note: 5 Pos. Housing Dim. (Typ.)—1.034 [26.27] L x .334 [8.48] W x .472 [11.99] H

No. of Pos.	Part Numbers	
	Natural	Black
2	786498-2	1-786498-1
3	786498-3	1-786498-2
4	786498-4	1-786498-3
5	786498-5	1-786498-4
6	786498-6	1-786498-5
7	786498-7	1-786498-6
8	786498-8	1-786498-7
9	786498-9	1-786498-8
10	1-786498-0	1-786498-9

Pluggable Terminal Block, .197 [5.00] Centers

Note: Cable assemblies can be mixed to match the positions of the pcb headers. Ex., 3- and 4-position pluggable terminal blocks interlock and mate with a 7-position header, while maintaining true .197 [5.00] centerlines.



Note: 5 Pos. Housing Dim. (Typ.)—.984 [25.00] L x 1.073 [27.25] W x .545 [13.84] H

No. of Pos.	Part Numbers	
	Natural	Black
1	786479-8	786479-1
2	786479-9	786479-2
3	1-786479-0	786479-3
4	1-786479-1	786479-4
5	1-786479-2	786479-5
6	1-786479-8	1-786479-5
7	1-786479-9	1-786479-6
8	1-786479-3	786479-6
9	2-786479-0	1-786479-7
10	1-786479-4	786479-7

Mates with—
Right-Angle and Vertical Headers, .197 [5.00] Centers

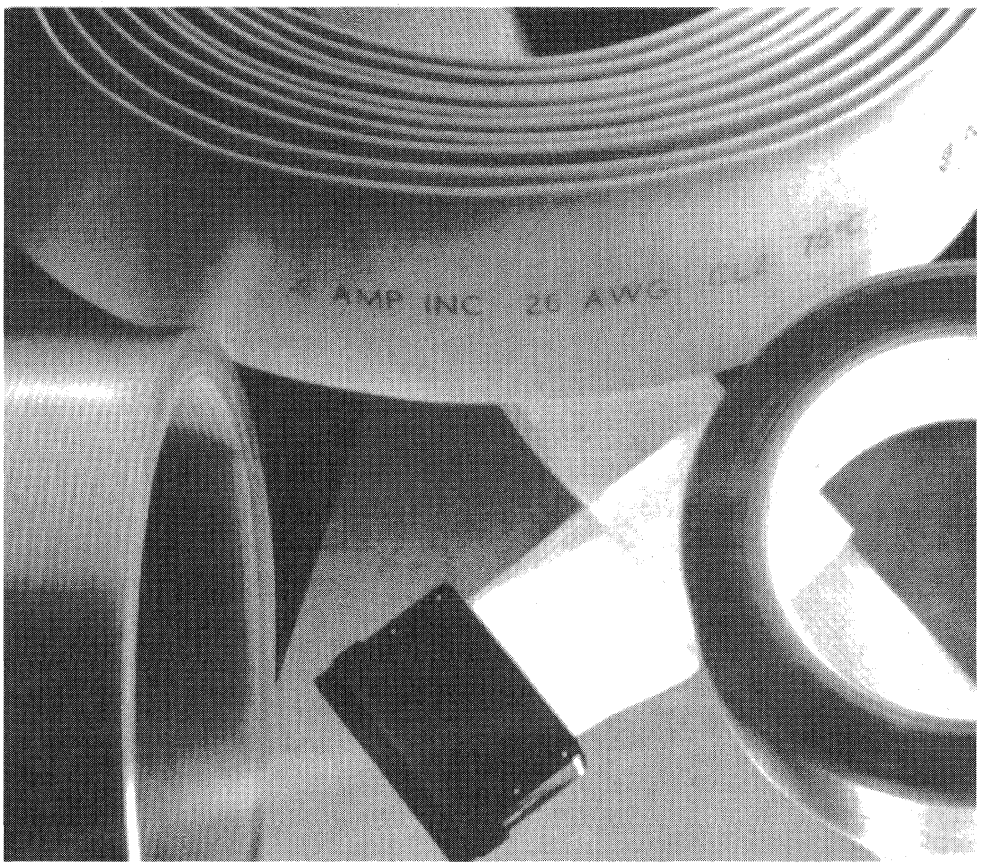
SOURCE: Catalog 65451

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

High Speed Digital Transmission Cables

Product Facts

- **High performance, low-dieletric FEP fluoropolymer reduces costs**
- **Electrical performance that meets or exceeds other commonly used fluoroplastic insulated cable**
- **Controlled impedance, low crosstalk and high speed, high fidelity signal transmission**
- **Center-to-center conductor spacing as close as 12.5 mil increases signal transmission density**
- **Ideal for logic level designs based on technologies ranging from low speed CMOS to high speed ECL**
- **Suitable for applications with temperature requirements to 200°C [392°F]**
- **Manufactured to meet all size requirements in continuous lengths from several hundred feet to over 1000 feet [304.8 m]**
- **Reduces trim waste and labor costs associated with using multiple lengths on a single cable**
- **Available in standard or custom configurations, in balanced (differential pair) or unbalanced (single ended) configurations**
- **UL Approved Style 20865**



High Speed, High Fidelity Signal Transmission At Lower Cost

Superior electrical performance and cost efficiency enable AMP High Speed Digital Transmission Line Cable to satisfy a broad range of application requirements. For example, the ability to hold high dimensional tolerances from conductor to conductor results in precisely controlled impedance as well as low crosstalk and high signal fidelity. Center-to-center conductor spacing as close as 12.5 mil increases signal transmission capabilities in a single cable. AMP FEP fluoropolymer cables provide a low 2.0 dielectric constant comparable to that in other commonly used fluoroplastic insulations, at a lower cost. Available in standard or custom, balanced (differential pair) or unbalanced (single ended) configurations, AMP High Speed Digital Transmission Cables are suited for applications with temperature requirements as high as 200°C [392°F].

Utilizing the industry's most advanced manufacturing techniques, AMP provides continuous cable lengths ranging from several hundred feet to over 1000 feet [304.8 m]. As a result, there is less cable to cut away and scrap, less labor required to handle the cable, and lower overall manufacturing costs.

By specifying AMP High Speed Digital Transmission Cables, engineers are able to optimize the potential of logic level designs based on technologies ranging from low speed CMOS to high speed ECL. The result is improved performance and lower installed costs in telecommunications equipment, medical electronics, mainframe computers, workstations, peripherals and numerous other products.

Applications

- **Telecommunications**
- **Medical Electronics**
- **Workstations**
- **Mainframe Computers**
- **Super Computers**
- **Peripherals**
- **Industrial Robotics**
- **Automated Test Equipment**
- **Emulator Probes**

SOURCE: Catalog 65663

Specifications subject to change.

1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

How to specify High Speed Digital Transmission Cable.

AMP cables can be precisely configured to meet the most demanding high speed signal transmission applications. To obtain a quote, specify your cable requirements and send to AMP by mail, fax, or call your Sales Engineer.

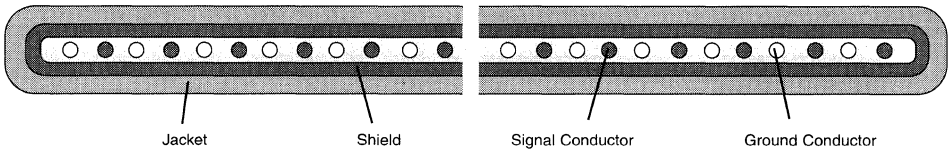
Choose standard or custom, balanced (differential) or unbalanced (single ended) configurations with virtually any number of signal and ground conductors. Jacketed and shielded cable are available in a variety of materials. For custom needs, AMP can offer your choice of conductors in combinations of signal and ground wires of varying gauges and spacing.

The first two illustrations on this page represent typical examples of single ended and balanced pair possibilities. The next two drawings show the scope of AMP manufacturing capabilities. For example, the hybrid cable includes a mix of single ended and balanced pair configurations of varying impedance in a single transmission cable.

Each High Speed Digital Transmission Cable provided by AMP is thoroughly tested for electrical integrity and conformance to customer specifications.

Typical Single Ended Signal Conductors

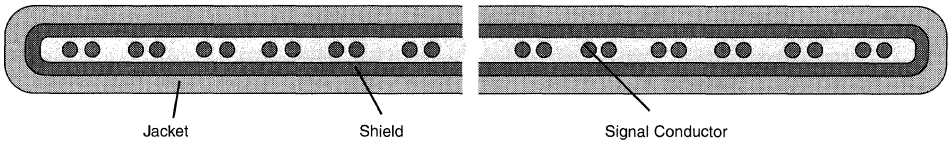
GSGSGS Configuration



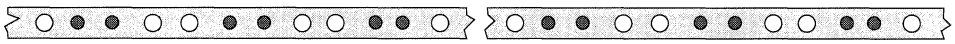
GSGGSGGS Configuration

Typical Balanced Pair Signal Conductors

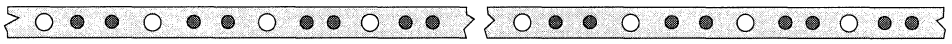
SS SS SS Configuration



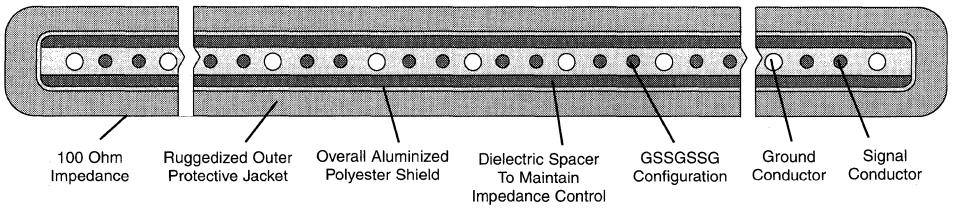
GSSGGSSG Configuration



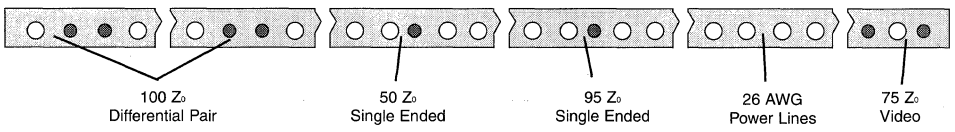
GSSGSSG Configuration



Differential Pair With Ground Isolation



Customer Defined Hybrid Cable



SOURCE: Catalog 65663

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

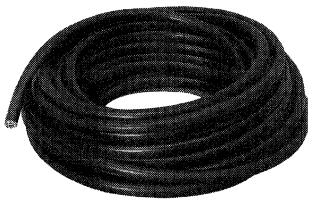
Primary Wire
18-10 AWG

SXL Cross Linked
135°C [275°F] Max. Temp.
SAE J1128

Ins. Color	Reel Part Numbers							
	18 AWG	16 AWG		14 AWG		12 AWG		10 AWG
	100 ft. [30.48 m]	100 ft. [30.48 m]	500 ft. [152.40 m]	100 ft. [30.48 m]	500 ft. [152.40 m]	100 ft. [30.48 m]	500 ft. [152.40 m]	100 ft. [30.48 m]
White	607719-1	607720-1	1-607720-1	607721-1	1-607721-1	607722-1	1-607722-1	607723-1
Red	607719-2	607720-2	1-607220-2	607721-2	1-607721-2	607722-2	1-607722-2	607723-2
Black	607719-3	607720-3	1-607720-3	607721-3	1-607721-3	607722-3	1-607722-3	607723-3
Green	607719-4	607720-4	1-607720-4	607721-4	1-607721-4	607722-4	1-607722-4	607723-4
Brown	607719-5	607720-5	1-607720-5	607721-5	1-607721-5	607722-5	1-607722-5	607723-5
Blue	607719-6	607720-6	1-607720-6	607721-6	1-607721-6	607722-6	1-607722-6	607723-6
Yellow	607719-7	607720-7	1-607720-7	607721-7	1-607721-7	607722-7	1-607722-7	607723-7
Orange	—	607720-8	1-607720-8	607721-8	—	—	—	—

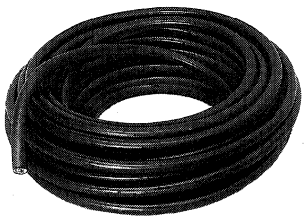
Battery Cable

For reliable connections—the AMP stranded copper battery cable is the cable for heavy-duty wiring. Available in 25-, 50- and 100-foot lengths, the cable provides a reliable connection between your battery and the starter. Order the quantity and the size you need from the part list—wire sizes range from 8 AWG to 4/0 AWG.



Welding Cable

Made with a highly flexible conductor of fine, soft drawn copper wires with Mylar wrapper for easy stripping and sheathed with Super K-600 insulation. Super K-600 was designed for extreme low temperature conditions and has an operating flexibility of minus 70°F. The insulation is rated at 600 volts and provides excellent abrasion resistance, flame resistance and sunlight resistance. The excellent outdoor qualities make Super K-600 a perfect candidate for most welding applications.



Wire Size	Length	Part Numbers		
		Battery Cable	Welding Cable	
		Black	Red	Black
8 AWG	**100 ft.** [30.48 m]	29056-8	—	—
6 AWG	**100 ft.** [30.48 m]	29056-6	—	—
4 AWG	**100 ft.** [30.48 m]	29056-5	604513-3	604513-4
	50 ft. [15.24 m]	29056	604513-1	604513-2
2 AWG	**100 ft.** [30.48 m]	1-29056-2	—	—
	50 ft. [30.48 m]	29056-2	604245-1	604245-2
1 AWG	**50 ft.** [30.48 m]	29056-1	—	—
1/0 AWG	**50 ft.** [15.24 m]	29057	604246-1	604246-2
2/0 AWG	**100 ft.** [30.48 m]	601256-4	—	—
	50 ft. [15.24 m]	601256-3	604247-1	604247-2
3/0 AWG	**50 ft.** [15.24 m]	601253-3	—	604248-2
4/0 AWG	**50 ft.** [15.24 m]	601255-2	—	604838-2
	25 ft. [7.62 m]	601255-1	—	—

SOURCE: Catalog 82552

Specifications subject to change.

1-800-522-6752
Product Information Center/ AMP FAX Service

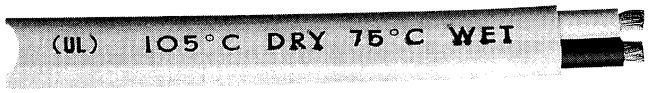
1-800-722-1111
Tooling/Technical Assistance Center

Boat and Truck, Trailer Cable

Marine Boat and Truck Cable (600 V)

Product Facts

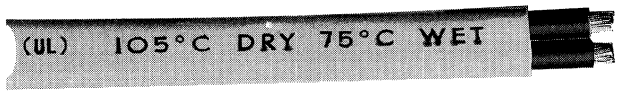
- **Meets Requirements of U.S. Coast Guard Standard 183-435**
- **600 V, 105°C Dry 75°C Wet**
- **Resists oils and salt water corrosion**
- **Tinned, stranded copper conductors**
- **Listed by Underwriters Laboratories Inc., File No. E67078**



2-Conductor

PVC White Outer Jacket with White and Black Inner Conductor for A.C.

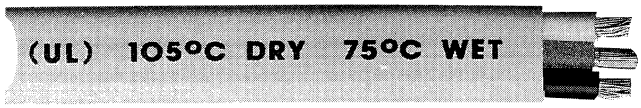
Wire Size	Length	Part No.
16 AWG	**250 ft.** [76.20 m]	605752-1
	100 ft. [30.48 m]	605752-2
14 AWG	**250 ft.** [76.20 m]	605753-1
	100 ft. [30.48 m]	605753-2
12 AWG	**250 ft.** [76.20 m]	605755-1
	100 ft. [30.48 m]	605755-2
10 AWG	**250 ft.** [76.20 m]	605756-1



2-Conductor

PVC Gray Outer Jacket with Red and Black Inner Conductor for D.C.

Wire Size	Length	Part No.
16 AWG	**250 ft.** [76.20 m]	605752-4
	100 ft. [30.48 m]	605752-3
14 AWG	**250 ft.** [76.20 m]	605753-4
	100 ft. [30.48 m]	605753-3
12 AWG	**250 ft.** [76.20 m]	605755-4
	100 ft. [30.48 m]	605755-3
10 AWG	**250 ft.** [76.20 m]	605756-4
	100 ft. [30.48 m]	605756-3



3-Conductor

PVC White Outer Jacket with Black, Green and White Inner Conductors

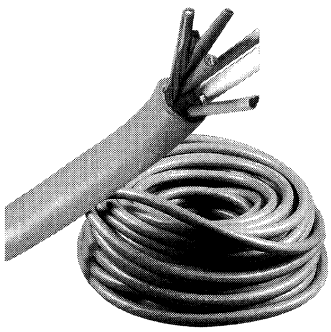
Wire Size	Length	Part No.
14 AWG	**250 ft.** [76.2 m]	605758-1
	100 ft. [30.48 m]	605758-2
12 AWG	**250 ft.** [76.20 m]	605754-1

Trailer Cable

-80°C to +105°C
4, 6 and 7 Conductor

The J1067 Type Trailer Cable has been designed to meet the demands for reliable electrical cable for heavy-duty trucks and trailers. This cable meets all of the standards set up for late model heavy-duty trucks equipped with anti-skid braking devices.

100 Foot [30.48 m] Reels



Part No.	Description
607779-1 (Round)	4- Conductor, 14 AWG, (White, Black, Red, Green)
604244-2	6- Conductor, 14 AWG, (Black, White, Red, Green, Yellow, Brown)
601944-6	7- Conductor, 1 ea. 8 AWG, 1 ea. 10 AWG, 5 ea. 12 AWG (White, Brown, Black, Green, Blue, Yellow, Red)
607778-1	7- Conductor, 1 ea. 10 AWG, 6 ea. 12 AWG (White, Brown, Black, Green, Blue, Yellow, Red)

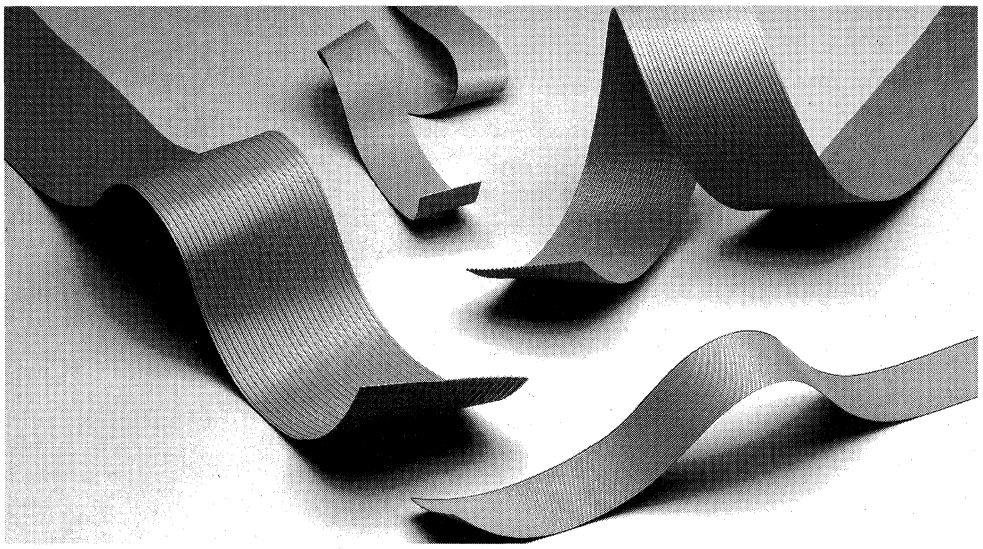
SOURCE: Catalog 82552

Specifications subject to change.

1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

Planar Ribbon Cable

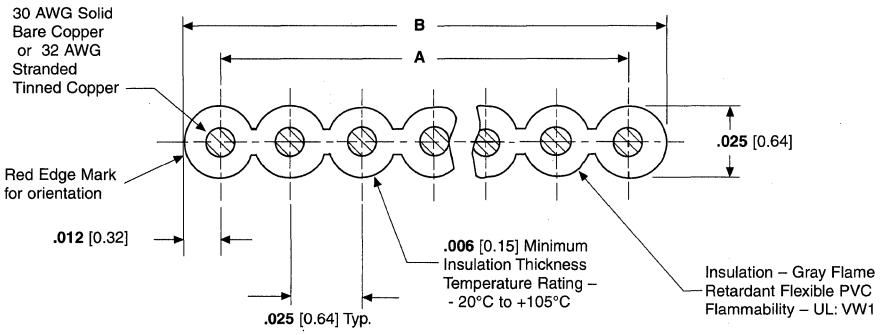


Product Facts

- Compatible with a variety of Insulation Displacement Connectors
- Available on .025 [0.64], .039 [1.00], .050 [1.27], .100 [2.54] and .156 [3.96] centerlines
- Color code edge mark on conductor #1
- Gray, flame-retardant, flexible PVC insulation
- Insulation rated for temperature of -20°C to +105°C [-4°F to 221°F]

.025 [0.64] Centerline, Flat Ribbon Cable, PVC Insulation

Recognized under the Component Program of Underwriters Laboratories Inc., File No. E53793 (UL Style 2678)



No. of Conductors	Dimensions		Reel Part Numbers*			
			30 AWG, Solid Bare Copper		32 AWG, 7/40 Stranded Tinned Copper	
	A	B	100 ft. [30.5 m]	500 ft. [152.4 m]	100 ft. [30.5 m]	500 ft. [152.4 m]
20	.475 12.07	.500 12.70	1-57013-3	57013-1	1-57038-3	57038-1
24	.575 14.61	.600 15.24	1-57013-4	57013-8	1-57038-4	57038-8
26	.625 15.88	.650 16.51	2-57013-6	2-57013-5	2-57038-6	2-57038-5
30	.725 18.42	.750 19.05	1-57013-5	57013-6	1-57038-5	57038-6
36	.875 22.23	.900 22.86	1-57013-6	57013-7	1-57038-6	57038-7
40	.975 24.77	1.000 25.40	1-57013-7	57013-2	1-57038-7	57038-2
44	1.075 27.31	1.100 27.94	1-57013-8	57013-9	1-57038-8	57038-9
50	1.225 27.94	1.250 31.75	1-57013-9	1-57013-0	1-57038-9	1-57038-0
60	1.475 37.47	1.500 38.10	2-57013-0	57013-3	2-57038-0	57038-3
68	1.675 42.55	1.700 43.18	2-57013-1	1-57013-1	2-57038-1	1-57038-1
72	1.775 45.09	1.800 45.72	2-57013-2	1-57013-2	2-57038-2	1-57038-2
80	1.975 50.17	2.000 50.80	2-57013-3	57013-4	2-57038-3	57038-4
100	2.475 62.87	2.500 63.50	2-57013-4	57013-5	2-57038-4	57038-5

* Reel may contain separate lengths, 20 ft. [6.1 m] min. per length.

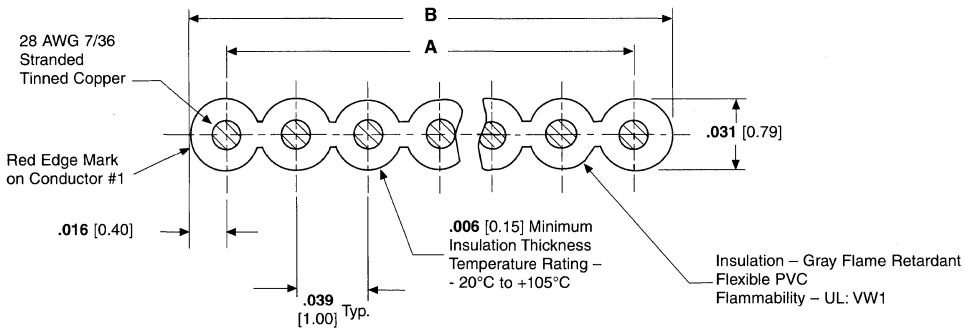
SOURCE: Catalog 65755

Specifications subject to change.

1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

.039 [1.00] Centerline, Flat Ribbon Cable, PVC Insulation



Recognized under the Component Program of Underwriters Laboratories Inc., File No. E53793 (UL Style 2678)

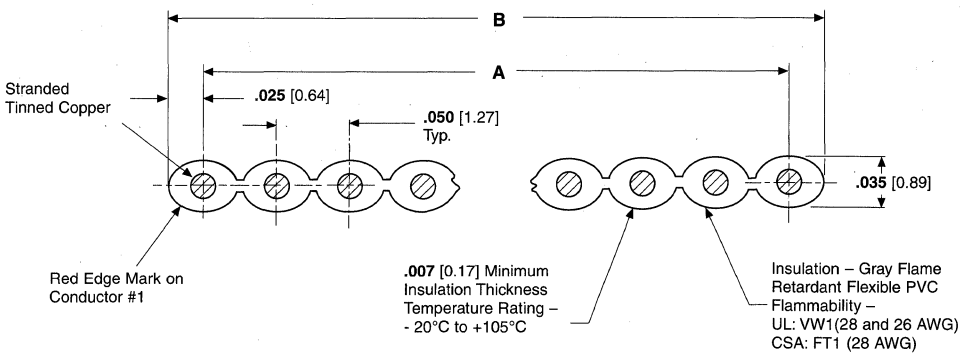
No. of Conductors	Dimensions		Reel Part Numbers* 28 AWG, 7/36 Stranded Tinned Copper	
	A	B	100 ft. [30.5 m]	500 ft. [152.4 m]
6	.197 5.00	.228 5.79	1-57051-7	57051-1
8	.276 7.10	.307 7.79	1-57051-8	57051-2
10	.354 8.99	.385 9.79	1-57051-9	57051-3
14	.512 13.00	.543 13.79	2-57051-0	57051-4
16	.591 15.01	.622 15.79	2-57051-1	57051-5
20	.748 19.00	.779 19.79	2-57051-2	57051-6
24	.906 23.01	.937 23.79	2-57051-3	57051-7
26	.984 24.99	1.015 25.79	2-57051-4	57051-8
30	1.142 29.01	1.173 29.79	2-57051-5	57051-9
34	1.299 32.99	1.330 33.79	2-57051-6	1-57051-0
40	1.535 38.99	1.567 39.79	2-57051-7	1-57051-1
44	1.693 43.00	1.724 43.79	2-57051-8	1-57051-2
50	1.929 49.00	1.960 49.79	2-57051-9	1-57051-3
60	2.323 59.00	2.354 59.79	3-57051-0	1-57051-4
64	2.480 62.99	2.511 83.79	3-57051-1	1-57051-5
68	2.638 67.01	2.669 67.69	3-57051-2	1-57051-6

* Reel may contain separate lengths, 20 ft. [6.1 m] min. per length.

SOURCE: Catalog 65755

Specifications subject to change.
1-800-522-6752 Product Information Center/ AMP FAX Service
1-800-722-1111 Tooling/Technical Assistance Center

.050 [1.27] Centerline, Flat Ribbon Cable, PVC Insulation



****Cable Surface Printed per UL and CSA requirements:**

Legend reads: CSA LL83498 AWM IA 105C 300V FT1 AWM E53793

Character Height: .075 [1.91] min.

Legend located between red edge mark conductor and sixth conductor from edge mark.

Legend repeats every 10.25 [260.4]

Recognized under the Component Program of Underwriters Laboratories Inc., File No. E53793 (UL Style 2651)

Certified by Canadian Standards Association, File No. LL83498 (Except 26 AWG)

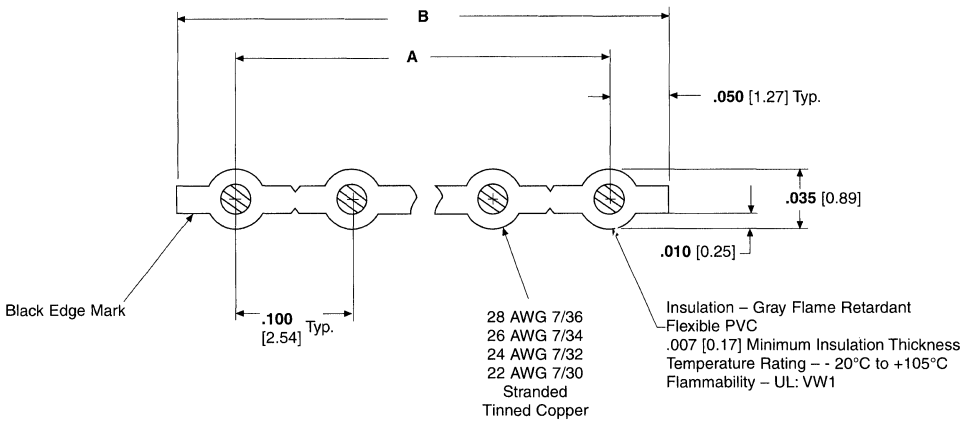
No. of Conductors	Dimensions A	Dimensions B	Reel Part Numbers* 28 AWG 7/36 Stranded Tinned Copper** 100 ft. [30.4 m]	28 AWG 7/36 Stranded Tinned Copper** 500 ft. [152.4 m]	26 AWG 7/34 Stranded Tin Copper 500 ft. [152.4 m]
6	.250 6.35	.300 7.62	1-57040-9	1-971111-9	57034-1
8	.400 10.16	.450 11.43	—	—	57034-2
9	.350 8.89	.400 10.16	2-57040-0	2-971111-0	—
9	.400 10.16	.450 11.43	1-57040-2	1-971111-2	—
10	.450 11.43	.500 12.70	1-57040-3	1-971111-3	57034-3
14	.650 16.51	.700 17.78	1-57040-4	1-971111-4	57034-4
15	.700 17.78	.750 19.05	1-57040-5	1-971111-5	57034-5
16	.750 19.05	.800 20.32	1-57040-6	1-971111-6	57034-6
18	.850 21.59	.900 22.86	2-57040-3	2-971111-3	—
20	.950 24.13	1.000 25.40	57040-1	971111-1	57034-7
24	1.150 29.21	1.200 30.48	1-57040-7	1-971111-7	57034-8
25	1.200 30.48	1.250 31.75	57040-2	971111-2	57034-9
26	1.250 31.75	1.300 33.02	57040-3	971111-3	1-57034-0
28	1.350 34.29	1.400 35.56	57040-8	3-971111-3	—
30	1.450 36.83	1.500 38.10	2-57040-1	2-971111-1	—
34	1.650 41.91	1.700 43.18	57040-4	971111-4	1-57034-1
36	1.750 44.45	1.800 45.72	2-57040-5	2-971111-5	1-57034-2
37	1.800 45.72	1.850 46.99	1-57040-8	1-971111-8	1-57034-3
40	1.950 49.53	2.000 50.80	57040-5	971111-5	1-57034-4
44	2.150 54.61	2.200 55.88	2-57040-4	2-971111-4	—
50	2.450 62.23	2.500 63.50	57040-6	971111-6	1-57034-5
60	2.950 74.93	3.000 76.20	57040-7	971111-7	1-57034-6
64	3.150 80.01	3.200 81.28	2-57040-2	2-971111-2	—

* Reel may contain separate lengths, 20 ft. [6.1 m] min. per length.

SOURCE: Catalog 65755

Specifications subject to change.
1-800-522-6752 Product Information Center/ AMP FAX Service
1-800-722-1111 Tooling/Technical Assistance Center

.100 [2.54] Centerline, Flat Ribbon Cable, PVC Insulation



Cable Ordering Information

The "Base Part Numbers" Chart at right shows the base part number and number of conductors available.

Prefixes and suffixes are determined by the number of conductors desired. For example, the complete part number for a 10 conductor cable for 28 AWG Overcoated Stranded Tinned Copper Cable would be:

base number **642015** plus prefix **(1)** and suffix **(0)**

The correct ordering number is **1-642015-0**

Base Part Numbers

Wire Size	Description	Length Per Reel**	Base Part Number	No. of Conductors
28 AWG	Stranded Tinned Copper	500 ft. [152.4 m]*	642147	2-28
	Overcoated Stranded Tinned Copper		642015	
26 AWG	Stranded Tinned Copper	250 ft. [76.2 m]*	642057	2-28
	Overcoated Stranded Tinned Copper		642041	
24 AWG	Stranded Tinned Copper	250 ft. [76.2 m]*	642049	2-28
	Overcoated Stranded Tinned Copper		642004	
22 AWG	Stranded Tinned Copper	250 ft. [76.2 m]*	642068	2-28
	Overcoated Stranded Tinned Copper		642084	

* Reel may contain separate lengths, 20 ft. [6.1 m] min. per length.
••100-foot reels also available.

Cable Dimensions

No. of Conductors	Dimensions A	Dimensions B	Prefix/ Suffix
2	.100 2.54	.200 5.08	-2
3	.200 5.08	.300 7.62	-3
4	.300 7.62	.400 10.16	-4
5	.400 10.16	.500 12.70	-5
6	.500 12.70	.600 15.24	-6
7	.600 15.24	.700 17.78	-7
8	.700 17.78	.800 20.32	-8
9	.800 20.32	.900 22.86	-9
10	.900 22.86	1.000 25.40	1- -0
11	1.000 22.86	1.100 25.40	1- -1
12	1.100 27.94	1.200 30.48	1- -2
13	1.200 30.48	1.300 33.02	1- -3
14	1.300 33.02	1.400 35.56	1- -4
15	1.400 35.56	1.500 38.10	1- -5
16	1.500 38.10	1.600 40.64	1- -6
17	1.600 40.64	1.700 43.18	1- -7
18	1.700 43.18	1.800 45.72	1- -8
19	1.800 45.72	1.900 48.26	1- -9
20	1.900 48.26	2.000 50.80	2- -0
21	2.000 50.80	2.100 53.34	2- -1
22	2.100 53.34	2.200 55.88	2- -2
23	2.200 55.88	2.300 58.42	2- -3
24	2.300 58.42	2.400 60.96	2- -4
25	2.400 60.96	2.500 63.50	2- -5
26	2.500 63.50	2.600 66.04	2- -6
27	2.600 66.04	2.700 68.58	2- -7
28	2.700 68.58	2.800 71.12	2- -8

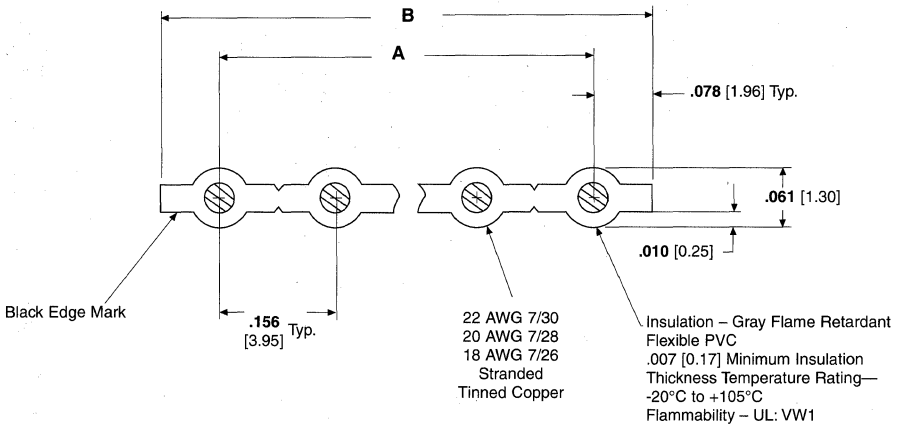
SOURCE: Catalog 65755

Specifications subject to change.

1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

.156 [3.96] Centerline, Flat Ribbon Cable, PVC Insulation



Cable Ordering Information

The "Base Part Numbers" Chart at right shows the base part number and number of conductors available.

Prefixes and suffixes are determined by the number of conductors desired. For example, the complete part number for a 10 conductor cable for 22 AWG Overcoated Stranded Tinned Copper Cable would be:

base number **642129** plus prefix **(1)** and **(0)** suffix

The correct ordering number is **1-642129-0**

Base Part Numbers

Wire Size	Description	Length Per Reel**	Base Part Number	No. of Conductors
22 AWG	Stranded Tinned Copper	250 ft. [76.2 m]*	642064	2-24
	Overcoated Stranded Tinned Copper		642129	
18 AWG	Stranded Tinned Copper	250 ft. [76.2 m]*	642099	2-24
	Overcoated Stranded Tinned Copper		642062	

*Reel may contain separate lengths, 20 ft. [6.1] min. per length:
**100-ft. reel also available

Cable Dimensions

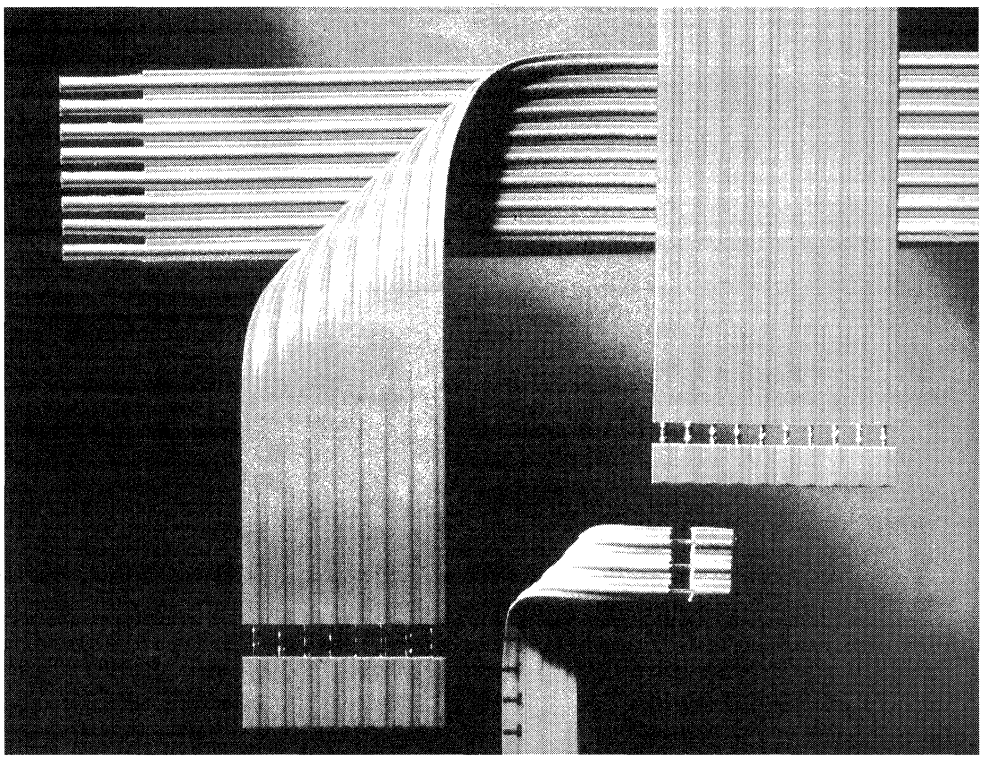
No. of Conductors	Dimensions A	Dimensions B	Prefix/ Suffix
2	**.156** 3.96	**.312** 7.92	-2
3	**.312** 7.92	**.468** 11.88	-3
4	**.468** 11.88	**.624** 15.85	-4
5	**.624** 15.85	**.780** 19.81	-5
6	**.780** 19.81	**.936** 23.77	-6
7	**.936** 23.77	**1.092** 27.74	-7
8	**1.092** 27.74	**1.248** 31.70	-8
9	**1.248** 31.70	**1.404** 35.66	-9
10	**1.404** 35.66	**1.560** 39.62	1- -0

No. of Conductors	Dimensions A	Dimensions B	Prefix/ Suffix
11	**1.560** 39.62	**1.716** 43.59	1- -1
12	**1.716** 43.59	**1.872** 47.55	1- -2
13	**1.872** 47.55	**2.028** 51.51	1- -3
14	**2.028** 51.51	**2.184** 55.47	1- -4
15	**2.184** 55.47	**2.340** 59.44	1- -5
16	**2.340** 59.44	**2.496** 63.90	1- -6
17	**2.496** 63.90	**2.652** 67.36	1- -7
18	**2.652** 67.36	**2.808** 71.32	1- -8
19	**2.808** 71.32	**2.964** 75.29	1- -9

No. of Conductors	Dimensions A	Dimensions B	Prefix/ Suffix
20	**2.964** 75.29	**3.120** 79.25	2- -0
21	**3.120** 79.25	**3.276** 83.21	2- -1
22	**3.276** 83.21	**3.432** 87.17	2- -2
23	**3.432** 87.17	**3.588** 91.14	2- -3
24	**3.588** 91.14	**3.744** 95.10	2- -4

SOURCE: Catalog 65755

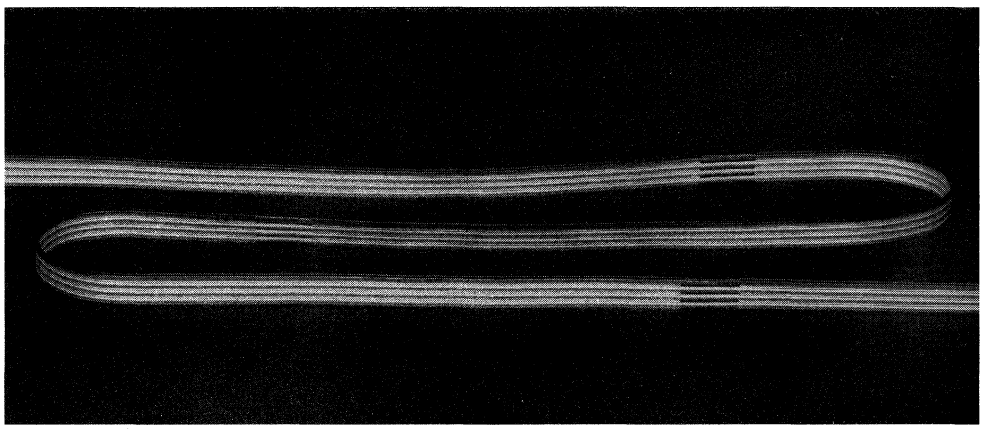
Prepared Cable



In addition to bulk cable, AMP offers Prepared Cable for the .100 [2.54] and .156 [3.96] centerline cables. This can be in the form of prenotched reels or cut-to-length cable segments.

Prenotched reels can be produced with notches at even increments along the cable. The maximum width of these cables is 20 conductor for the .100 [2.54] centerline and 13 conductor for the .156 [3.96] centerline.

Prepared Cable is also available with a Strip and Retain feature allowing the cable assembly to be soldered directly to the pc board. This saves space and cost and reduces spare parts inventory. Strip and Retain on both ends is used in family board applications to maintain the electrical connection when the pc board is separated into smaller boards after soldering. Widths are limited to 20 conductors for the .100 [2.54] centerline and 13 conductors for the .156 [3.96] centerline. However, multiple cables can be placed side-by-side in a single connector.



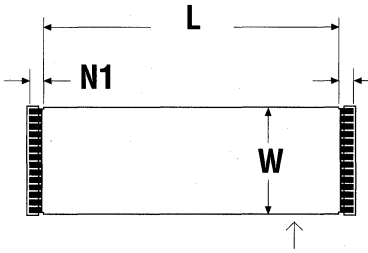
SOURCE: Catalog 65755

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

Customized Cable for Mass Termination Assemblies (MTA) Request for Price Quotation

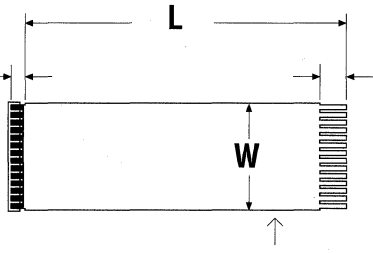
For fast, accurate pricing, copy this form, complete the information requested, and FAX to 1-717-780-7510.

Style 1 Number



EDGE STRIPE

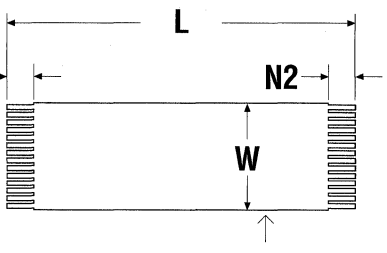
Style 2 Number



EDGE STRIPE

Cable Centerline Tolerance ± .015 [.38]

Style 3 Number



EDGE STRIPE

Date	Style Number
This request for pricing is made by:	Conductor Type
Name	AWG Wire Size
Title	Number of Conductors
Company	Centerline
Address	L ± .060 [± 1.52]
City State Zip	W Max.
Phone No. ( )	N1 ± .030 [± .76]
Fax No. ( )	N2 ± .030 [± .76]
Comments	

LOC	DWG SIZE	PART NO	DESCRIPTION	ITEM NO
DIST	← REVISION OF EACH ASSY NO (WHEN BLANK, USE DWG REVISION)			
QTY REQD PER ASSY	PARTS LIST			

MATERIAL	HEAT TREAT	FINISH
DIMENSIONS IN INCHES. DO NOT SCALE PRINT. TOLERANCES UNLESS OTHERWISE SPECIFIED. 2 PLC DEC ± 3 PLC DEC ± 4 PLC DEC ± ANGLES ± SURF TEXTURE, √ REMOVE BURRS, BREAK SHARP EDGES .015 R MAX	DR	APP
	CHK	REL

AMP AMP Incorporated Harrisburg, PA 17105-3608

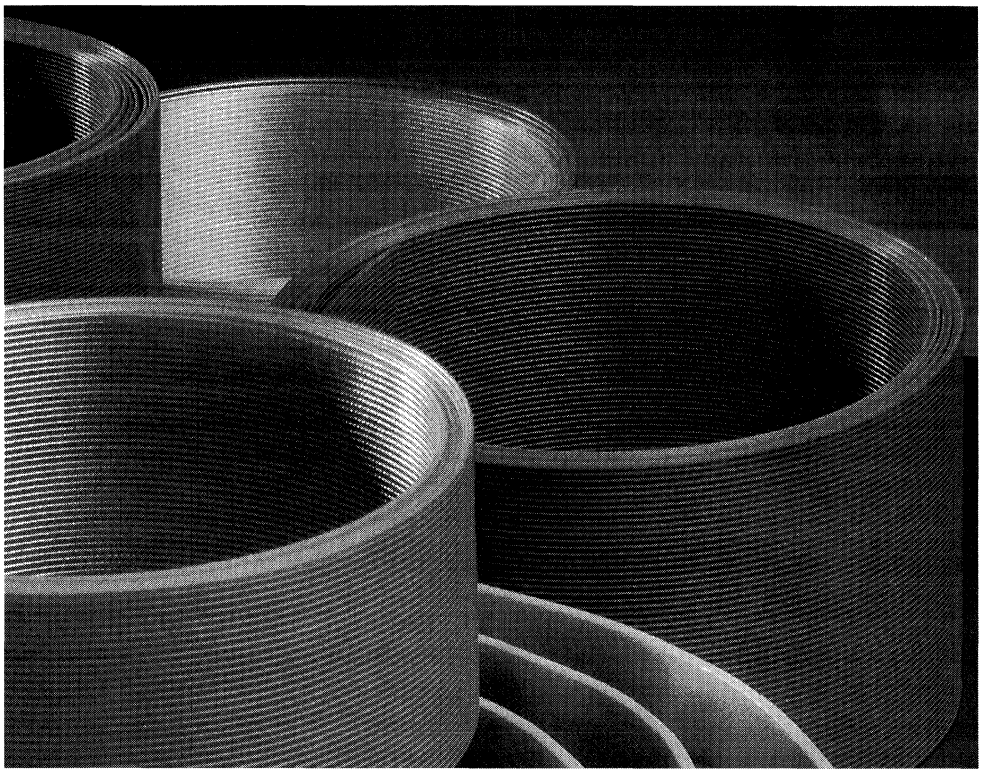
NAME MTA Assemblies

P	F	LTR	REVISION RECORD	APP	DATE

SCALE	DWG NO	SHEET	REV
A			

SOURCE: Catalog 65755

High Performance, Insulation Displacement Ribbon Cable with Fluropolymer Insulation



Product Facts

- .025 [0.64] pitch displacement
  - 85 and 93 ohm impedance (30 AWG)
  - 105 and 110 ohm impedance (32 AWG)
- .050 [1.27] pitch displacement
  - 105 ohm impedance (26 AWG)
  - 120 ohm impedance (28 AWG)
- 1mm [0.04] pitch displacement
  - 100 ohm impedance (28 AWG)
- Low coefficient of friction resists heat buildup allowing 100,000,000-plus flex cycles
- Low dielectric constant FEP insulation for low crosstalk, faster signal speed and improved fidelity
- Unique tin plating for high signal transmission performance at less cost
- Non-burning, MIL-C-49055 approved insulation material for airborne applications
- Temperature range from -65°C to +200°C [-149°F to +392°F]

Available in .025 [0.64], .050 [1.27] and 1 mm pitch displacements, AMP fluropolymer (FEP) insulated ribbon cables are lightweight, easy to handle and they can be quickly and economically terminated using any standard insulation displacement connector (IDC). AMP FEP IDC cable is the low cost, high performance solution to numerous applications, including:

Continuous flex life.
The low coefficient of friction inherent in FEP reduces the possibility of heat buildup. As a result, the flex life of of AMP IDC cable can exceed 100,000,000 flex cycles.

Faster signal speed.
The low dielectric constant of FEP insulation, combined with the industry's most advanced material control and manufacturing techniques, results in low crosstalk, improved signal fidelity and faster signal speed. Compared to other cable insulation materials, FEP insulation offers lower capacitance, allowing longer cable lengths with less signal degradation. With the option of tin plated conductors from AMP, high performance signal bussing can be achieved at significant cost savings.

Extreme high-reliability environments.
The exceptional mechanical durability and high temperature handling capabilities of AMP FEP IDC cable provides long-life, high-reliability operation in today's most demanding applications. FEP is nonburning and rated for continuous operation at temperatures from -65°C to +200°C. MIL-C-49055 tested dielectric means FEP insulation can be used in airborne equipment and other applications that require exceptional reliability. Since FEP insulation does not age, cable life is maximized. Resistance to chemical attack promotes reliable operation in harsh industrial environments.

Impedance Reference

Impedance	Pitch	Conductor AWG Size	Page Number
120 Ohms	**.050** [1.27]	28 Stranded	Page 10029 and 10030
110 Ohms	**.025** [0.64]	32 Solid	Page 10028
105 Ohms	**.025** [0.64]	32 Stranded	Page 10028
	.050 [1.27]	26 Stranded	Page 10029
100 Ohms	**1 mm** [0.04]	28 Stranded	Page 10030
93 Ohms	**.025** [0.64]	30 Solid	Page 10028
85 Ohms	**.025** [0.64]	30 Stranded	Page 10028

SOURCE: Catalog 124081

Specifications subject to change.

1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

.025 [0.64] Pitch FEP IDC Ribbon Cable

30 AWG Stranded Unplated Copper
Conductors: #30 AWG, 7/38 stranded
Plating: unplated
Temperature rating: -65°C to +200°C
Insulation material: FEP

30 AWG Stranded Silver Plated Copper
Conductors: #30 AWG, 7/38 stranded
Plating: silver
Temperature rating: -65°C to +200°C
Insulation material: FEP

30 AWG Stranded Tin Plated Copper
Conductors: #30 AWG, 7/38 stranded
Plating: tin
Temperature rating: -65°C to +200°C
Insulation material: FEP

30 AWG Solid Unplated Copper
Conductors: #30 AWG solid
Plating: unplated
Temperature rating: -65°C to +200°C
Insulation material: FEP

32 AWG Stranded Unplated Copper
Conductors: #32 AWG, 7/40 stranded
Plating: unplated
Temperature rating: -65°C to +200°C
Insulation material: FEP

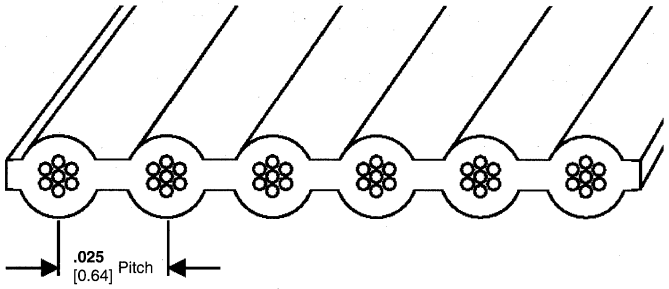
32 AWG Stranded Silver Plated Copper
Conductors: #32 AWG, 7/40 stranded
Plating: silver
Temperature rating: -65°C to +200°C
Insulation material: FEP

32 AWG Stranded Tin Plated Copper
Conductors: #32 AWG, 7/40 stranded
Plating: tin
Temperature rating: -65°C to +200°C
Insulation material: FEP

32 AWG Solid, Unplated Copper
Conductors: #32 AWG solid
Plating: unplated
Temperature rating: -65°C to +200°C
Insulation material: FEP

32 AWG Solid Silver Plated Copper
Conductors: #32 AWG solid
Plating: silver
Temperature rating: -65°C to +200°C
Insulation material: FEP

32 AWG Solid Tin Plated Copper
Conductors: #32 AWG solid
Plating: tin
Temperature rating: -65°C to +200°C
Insulation material: FEP

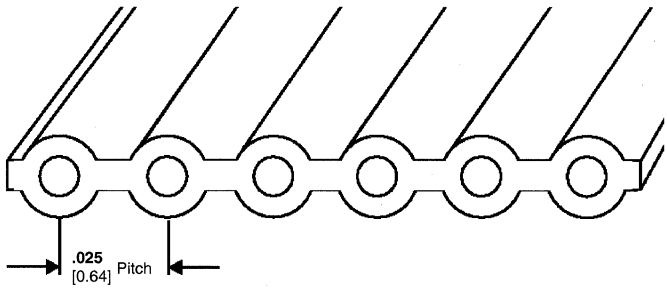


Wire Size	Impedance	Description	Base Part No.*	Color
30 AWG	85 Ohms	7-Strand Unplated Copper	57288	Blue/Gray
		7-Strand Silver Plated	57290	Blue/Gray
		7-Strand Tin Plated	57289	Blue/Gray
	93 Ohms	Solid Unplated Copper	57139	Blue/Gray
		Solid Silver Plated	57119	Blue/Gray
		Solid Tin Plated	57145	Blue/Gray

*To specify the number of conductors, add the prefix/suffix number from the chart below.

30 AWG Solid Silver Plated Copper
Conductors: #30 AWG solid
Plating: silver
Temperature rating: -65°C to +200°C
Insulation material: FEP

30 AWG Solid Tin Plated Copper
Conductors: #30 AWG solid
Plating: tin
Temperature rating: -65°C to +200°C
Insulation material: FEP



Wire Size	Impedance	Description	Base Part No.*	Color
32 AWG	105 Ohms	7-Strand Unplated Copper	57138	Blue/Gray
		7-Strand Silver Plated	57118	Blue/Gray
		7-Strand Tin Plated	57144	Blue/Gray
	110 Ohms	Solid Unplated Copper	57293	Blue/Gray
		Solid Silver Plated	57292	Blue/Gray
		Solid Tin Plated	57291	Blue/Gray

*To specify the number of conductors, add the prefix/suffix number from the chart below.

No. Conductors	Prefix/ Suffix
10	-8
16	-9
20	-1
24	1- -0
30	1- -1
34	1- -2
36	1- -3
40	-2

No. of Conductors	Prefix/ Suffix
44	1- -4
50	-3
60	-4
64	1- -5
68	-5
80	-6
100	-7

When ordering cable, use the prefix/suffix with the Base Part Number.

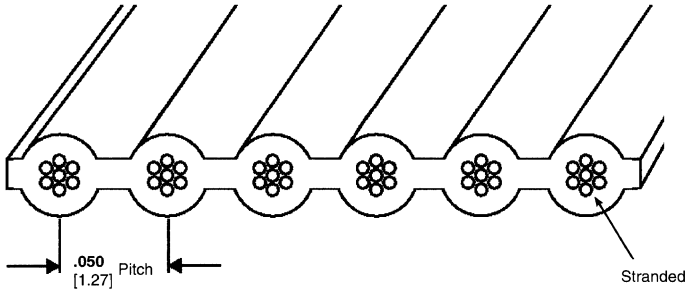
SOURCE: Catalog 124081

.050 [1.27] Pitch FEP IDC Ribbon Cable

26 AWG Stranded Unplated Copper
Conductors: #26 AWG, 7/34 stranded
Plating: unplated
Temperature rating: -65°C to +200°C
Insulation material: FEP

26 AWG Stranded Silver Plated Copper
Conductors: #26 AWG 7/34 stranded
Plating: silver
Temperature rating: -65°C to +200°C
Insulation material: FEP

26 AWG Stranded Tin Plated Copper
Conductors: #26 AWG, 7/34 stranded
Plating: tin
Temperature rating: -65°C to +200°C
Insulation material: FEP



Wire Size	Impendance	Description	Base Part No.*	Color
26 AWG	105 Ohms	7-Strand Unplated Copper	57137	Blue/Gray
		7-Strand Silver Plated	57238	Blue/Gray
		7-Strand Tin Plated	57143	Blue/Gray

*To specify the number of conductors, add the prefix/suffix number from the chart below.

28 AWG Stranded Unplated Copper
Conductors: #28 AWG, 7/36 stranded
Plating: unplated
Temperature rating: -65°C to +200°C
Insulation material: FEP

28 AWG Stranded Silver Plated Copper
Conductors: #28 AWG, 7/36 stranded
Plating: silver
Temperature rating: -65°C to +200°C
Insulation material: FEP

28 AWG Stranded Tin Plated Copper
Conductors: #28 AWG, 7/36 stranded
Plating: tin
Temperature rating: -65°C to +200°C
Insulation material: FEP

28 AWG Stranded Unplated Copper
Conductors: #28 AWG, 19/40 stranded
Plating: unplated
Temperature rating: -65°C to +200°C
Insulation material: FEP

28 AWG Stranded Silver Plated Copper
Conductors: #28 AWG, 19/40 stranded
Plating: silver
Temperature rating: -65°C to +200°C
Insulation material: FEP

28 AWG Stranded Tin Plated Copper
Conductors: #28 AWG, 19/40 stranded
Plating: tin
Temperature rating: -65°C to +200°C
Insulation material: FEP

Wire Size	Impedance	Description	Base Part No.*	Color
28 AWG	120 Ohms	7-Strand Unplated Copper	57136	Blue/Gray
		7-Strand Silver Plated	57239	Blue/Gray
		7-Strand Tin Plated	57142	Blue/Gray
		19-Strand Unplated Copper	57235	Gray/Clear
		19-Strand Silver Plated	57236	Gray/Clear
		19-Strand Tin Plated	57237	Gray/Clear

*To specify the number of conductors, add the prefix/suffix number from the chart below.

No. of Conductors	Prefix/ Suffix
9	-9
10	1- -0
12	1- -2
14	1- -4
15	1- -5
16	1- -6
20	2- -0
24	2- -4
25	2- -5
26	2- -6

No. of Conductors	Prefix/ Suffix
30	3- -0
32	3- -2
34	3- -4
36	3- -6
40	4- -0
44	4- -4
50	5- -0
60	6- -0
64	6- -4

When ordering cable, use the prefix/suffix with the Base Part Number.

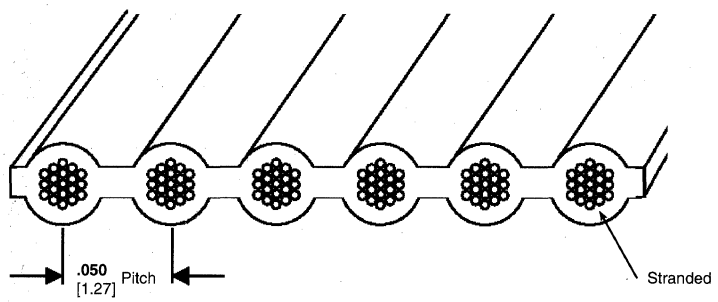
SOURCE: Catalog 124081

Specifications subject to change.

1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

.050 [1.27] Pitch Continuous Flex Life FEP IDC Ribbon Cable



28 AWG Stranded Bare Alloy
Conductors: #28 AWG, 19/40 stranded
Plating: unplated
Temperature rating: -65°C to +200°C
Insulation material: FEP

28 AWG Stranded Nickel Plated Alloy
Conductors: #28 AWG, 19/40 stranded
Plating: nickel
Temperature rating: -65°C to +200°C
Insulation material: FEP

28 AWG Stranded Silver Plated Alloy
Conductors: #28 AWG, 19/40 stranded
Plating: silver
Temperature rating: -65°C to +200°C
Insulation material: FEP

Wire Size	Impedance	Description	Base Part No.*	Color
28 AWG	120 Ohms	19-Strand Unplated Alloy	57234	Blue/Clear
		19-Strand Nickel Plated	57233	Blue/Clear
		19-Strand Silver Plated	57232	Blue/Clear

*To specify the number of conductors, add the prefix/suffix number from the chart below.

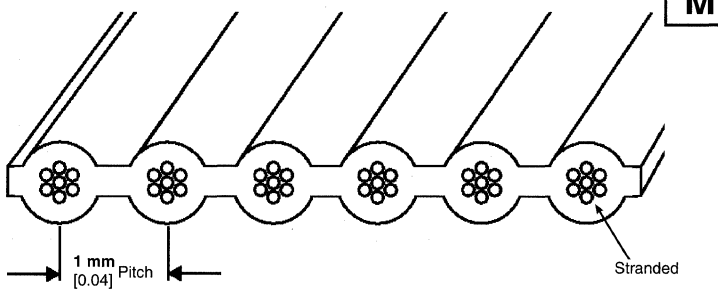
No. of Conductors	Prefix/ Suffix
9	-9
10	1- -0
12	1- -2
14	1- -4
15	1- -5
16	1- -6
20	2- -0
24	2- -4
25	2- -5
26	2- -6

No. of Conductors	Prefix/ Suffix
30	3- -0
32	3- -2
34	3- -4
36	3- -6
40	4- -0
44	4- -4
50	5- -0
60	6- -0
64	6- -4

When ordering cable, use the prefix/suffix with the Base Part Number.

1 mm [0.04] Pitch FEP IDC Ribbon Cable

METRIC



28 AWG Stranded Unplated Copper
Conductors: #28 AWG, 7/36 stranded
Plating: unplated
Temperature rating: -65°C to +200°C
Insulation material: FEP

28 AWG Stranded Silver Plated Copper
Conductors: #28 AWG, 7/36 stranded
Plating: silver
Temperature rating: -65°C to +200°C
Insulation material: FEP

28 AWG Stranded Tin Plated Copper
Conductors: #28 AWG, 7/36 stranded
Plating: tin
Temperature rating: -65°C to +200°C
Insulation material: FEP

Wire Size	Impedance	Description	Base Part No.*	Color
28 AWG	100 Ohms	7-Strand Unplated Copper	57141	Blue/Gray
		7-Strand Silver Plated	57140	Blue/Gray
		7-Strand Tin Plated	57146	Blue/Gray

*To specify the number of conductors, add the prefix/suffix number from the chart below.

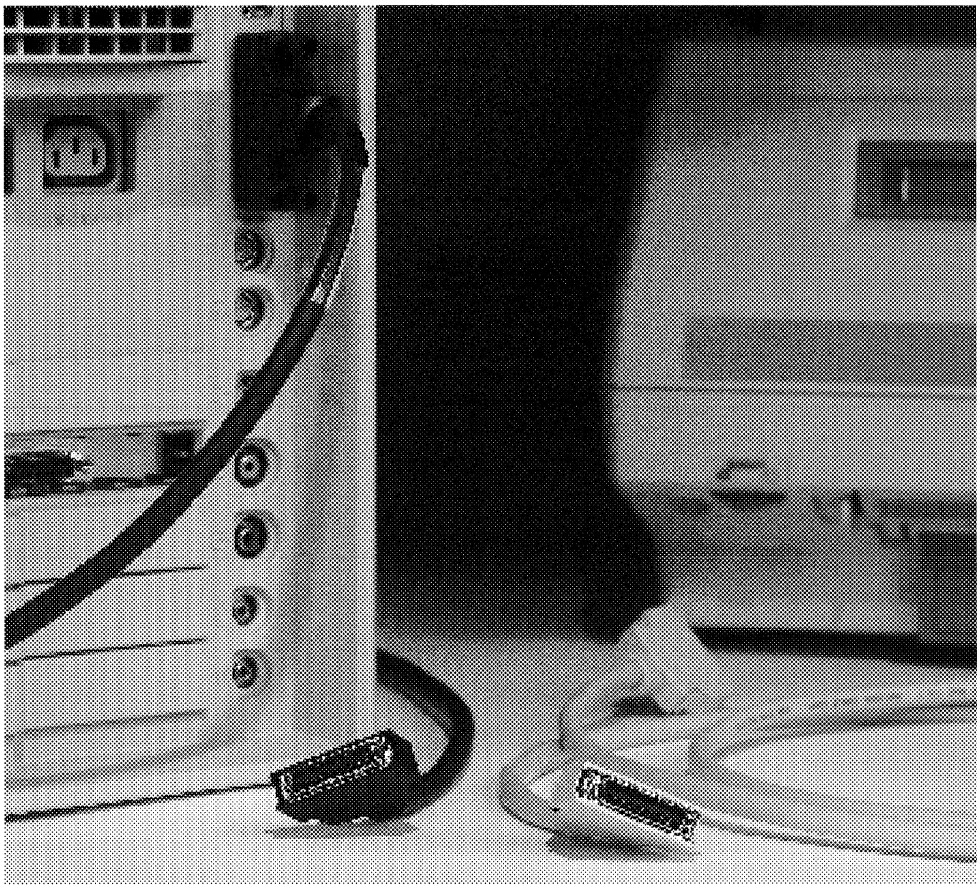
No. of Conductors	Prefix/ Suffix
6	-1
8	-2
10	-3
14	-4
16	-5
20	-6
24	-7
26	-8
30	-9

No. of Conductors	Prefix/ Suffix
34	1- -0
40	1- -1
44	1- -2
50	1- -3
60	1- -4
64	1- -5
68	1- -6
80	1- -7

When ordering cable, use the prefix/suffix with the Base Part Number.

SOURCE: Catalog 124081

IEEE 1284 Cable Assemblies



Product Facts

- Full family of products available for all IEEE 1284 requirements
- Assemblies available in all standard 1284 configurations
  - A-B D-Sub 25 pin, Standard CHAMP 36 position plug (Centronics)
  - A-C D-Sub 25 pin, CHAMP .050 36 position plug
  - C-C Two CHAMP .050 36 position plugs
  - C-B Standard CHAMP 36 position plug, CHAMP .050 36 position plug
  - A-A Two D-Sub 25 pin plugs
- Most common assemblies available from stock
- Three 1284 compliant assembly types using 1284 compliant cable
  - Best: Connectors with .000030 [.00076] gold plated contacts
  - Better: Connectors with .000015 [.00038] gold plated contacts
  - Good: Connectors with gold flash plated contacts
- Compatible style assemblies available with economy cable construction
- Two colors standard: beige and black
- Custom lengths available upon request
- Custom cable and wiring configurations available upon request
- Additional position sizes available for other applications (FDD, tape drives, network, etc.)
- Full line of standard mating pc board connectors
- Produced under a Quality Management System Certified to ISO 9001

A copy of the certificate is available upon request

ISO 9001 Certified

The IEEE 1284 specification for the next generation parallel port interface is gaining wide acceptance in the personal computer and peripheral device marketplace. AMP has a full family of products available to meet your interconnection requirements. All standard 1284 configurations are available in two colors with the most commonly used types maintained in stock for immediate delivery. Four product levels give you the choices you need to meet your application needs.

Included are three 1284 compliant level type assemblies all using 1284 specification compliant cable (18 twisted pair, 28 AWG, foil and braid shielding): The 'Best' level products have connectors with minimum .000030 [.00076] gold plated contacts for high mate/unmate cycle life applications. 'Better' level products have connectors with .000015 [.00038] gold plated contacts for less stringent applications. 'Good' level products use connectors with gold flash plated contacts for economy.

For applications that do not have the robust shielding or transmission speed requirements of 1284 compliant devices, 'Compatible' style cable assemblies are available. The 1284 type interface connectors with gold flash plated contacts are used with a non-compliant cable for a true economy cable assembly.

SOURCE: Catalog 124266

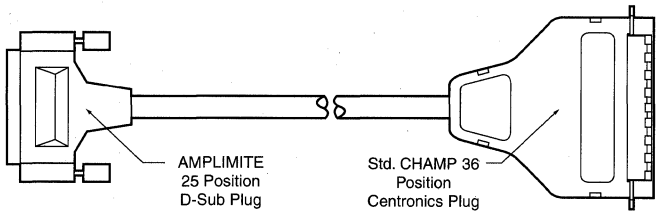
Specifications subject to change.

1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

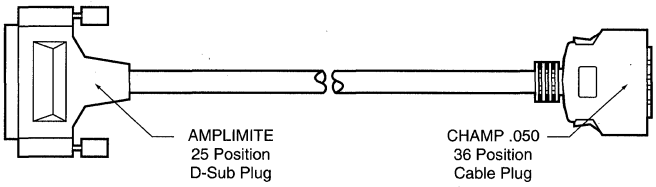
IEEE 1284 Cable Assemblies
(Continued)

1284 A-B



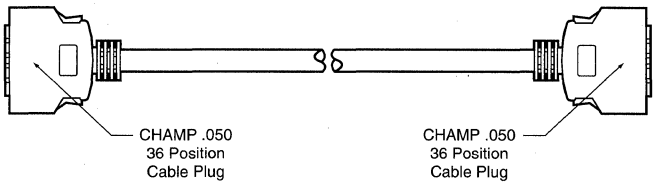
1284-A (Host) to 1284-B (Peripheral) Cable Assembly

1284 A-C



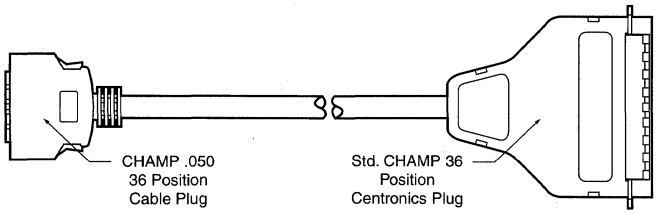
1284-A (Host) to 1284-C (Peripheral) Cable Assembly

1284 C-C



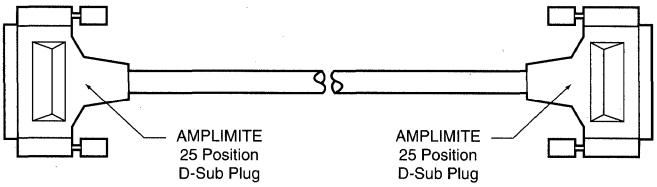
1284-C (Host) to 1284-C (Peripheral) Cable Assembly

1284 C-B



1284-C (Host) to 1284-B (Peripheral) Cable Assembly

1284 A-A*



1284-A (Host) to 1284-A (Peripheral) Cable Assembly

*Available upon request.

IEEE 1284 Cable Assemblies
(Continued)

'Best' Cable Assemblies

Configuration	Length, m [ft]											
	0.5 [1.64]		1.5 [4.92]		2.0 [6.56]		3.0 [9.84]		6.0 [19.69]		10.0 [32.81]	
	Black	Beige	Black	Beige	Black	Beige	Black	Beige	Black	Beige	Black	Beige
A-B	158243-1	158392-1	158243-2	158392-2	158243-3	158392-3	158243-4	158392-4	158243-5	158392-5	158243-6	158392-6
A-C	158242-1	158393-1	158242-2	158393-2	158242-3	158393-3	158242-4	158393-4	158242-5	158393-5	158242-6	158393-6
C-C	158241-1	158394-1	158241-2	158394-2	158241-3	158394-3	158241-4	158394-4	158241-5	158394-5	158241-6	158394-6
C-B	158244-1	158395-1	158244-2	158395-2	158244-3	158395-3	158244-4	158395-4	158244-5	158395-5	158244-6	158395-6
A-A*												

*Available upon request.
Note: Cable: IEEE 1284 compliant cable
Connectors: .000030 [.00076] gold plated contacts

'Better' Cable Assemblies

Configuration	Length, m [ft]											
	0.5 [1.64]		1.5 [4.92]		2.0 [6.56]		3.0 [9.84]		6.0 [19.69]		10.0 [32.81]	
	Black	Beige	Black	Beige	Black	Beige	Black	Beige	Black	Beige	Black	Beige
A-B	158396-1	158400-1	158396-2	158400-2	158396-3	158400-3	158396-4	158400-4	158396-5	158400-5	158396-6	158400-6
A-C	158397-1	158401-1	158397-2	158401-2	158397-3	158401-3	158397-4	158401-4	158397-5	158401-5	158397-6	158401-6
C-C	158398-1	158402-1	158398-2	158402-2	158398-3	158402-3	158398-4	158402-4	158398-5	158402-5	158398-6	158402-6
C-B	158399-1	158403-1	158399-2	158403-2	158399-3	158403-3	158399-4	158403-4	158399-5	158403-5	158399-6	158403-6
A-A*												

*Available upon request.
Note: Cable: IEEE 1284 compliant cable
Connectors: .000015 [.00038] gold plated contacts

'Good' Cable Assemblies

Configuration	Length, m [ft]											
	0.5 [1.64]		1.5 [4.92]		2.0 [6.56]		3.0 [9.84]		6.0 [19.69]		10.0 [32.81]	
	Black	Beige	Black	Beige	Black	Beige	Black	Beige	Black	Beige	Black	Beige
A-B	158404-1	158409-1	158404-2	158409-2	158404-3	158409-3	158404-4	158409-4	158404-5	158409-5	158404-6	158409-6
A-C	158405-1	158410-1	158405-2	158410-2	158405-3	158410-3	158405-4	158410-4	158405-5	158410-5	158405-6	158410-6
C-C	158406-1	158411-1	158406-2	158411-2	158406-3	158411-3	158406-4	158411-4	158406-5	158411-5	158406-6	158411-6
C-B	158407-1	158412-1	158407-2	158412-2	158407-3	158412-3	158407-4	158412-4	158407-5	158412-5	158407-6	158412-6
A-A*												

*Available upon request.
Note: Cable: IEEE 1284 compliant cable
Connectors: Gold flash plated contacts

'Compatible' Cable Assemblies

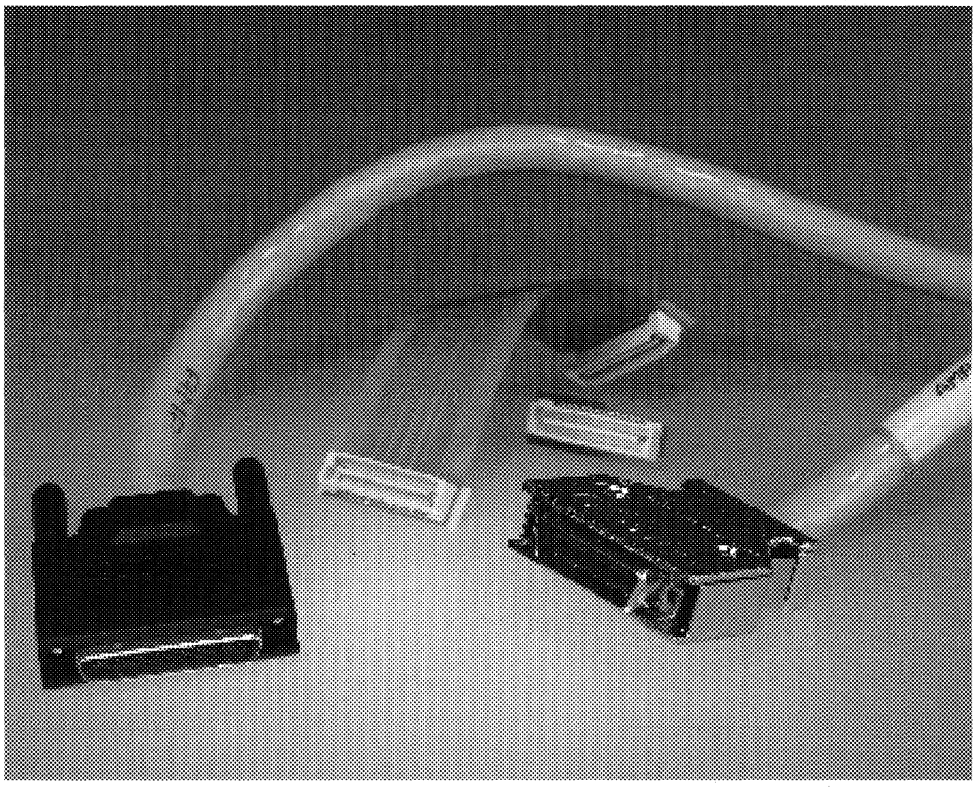
Configuration	Length, m [ft]											
	0.5 [1.64]		1.5 [4.92]		2.0 [6.56]		3.0 [9.84]		6.0 [19.69]		10.0 [32.81]	
	Black	Beige	Black	Beige	Black	Beige	Black	Beige	Black	Beige	Black	Beige
A-B	158413-1	158417-1	158413-2	158417-2	158413-3	158417-3	158413-4	158417-4	158413-5	158417-5	158413-6	158417-6
A-C	158414-1	158418-1	158414-2	158418-2	158414-3	158418-3	158414-4	158418-4	158414-5	158418-5	158414-6	158418-6
C-C	158415-1	158419-1	158415-2	158419-2	158415-3	158419-3	158415-4	158419-4	158415-5	158419-5	158415-6	158419-6
C-B	158416-1	158420-1	158416-2	158420-2	158416-3	158420-3	158416-4	158420-4	158416-5	158420-5	158416-6	158420-6
A-A*												

*Available upon request.
Note: Cable: Shielded twisted pair cable
Connectors: Gold flash plated contacts

SOURCE: Catalog 124266

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

High Performance Cable Assemblies for the QuickRing System



Product Facts

- **Two versions of external point-to-point assemblies**
- **26 position, shielded AMPLIMITE .050 Series assemblies**
- **50 position, shielded CHAMP 0.8 mm assemblies**
- **Both have integral cable braid termination and strain relief**
- **CHAMP connectors available with squeeze-to-release latches or jackscrews; AMPLIMITE connectors available with squeeze-to-release latches only**
- **180° cable exit on both**
- **External cable is eight, 100 ohm, #28 AWG, low skew, shielded differential pairs in a shielded and jacketed cable**
- **Internal "Bridge" and "Loopback" assemblies**
- **Use 40 position 0.8 mm FH Series connectors**
- **Bridge assembly uses a controlled impedance, flexible etched circuit**
- **Produced under a Quality Management System Certified to ISO 9001**

A copy of the certificate is available upon request

ISO 9001 Certified

AMP now provides high speed interconnect solutions for National Semiconductor's QuickRing data stream controller. The QuickRing controller can be used for data streaming, at rates up to 200 megabytes per second, between cards or between peripherals for multimedia, digital video applications. The QuickRing system provides OEMs a low cost approach to high value additions to their multimedia and networking systems.

The external cable assemblies are used to connect, in an UpPort/DnPort fashion, between network hubs and a variety of peripherals and other computing units. AMP offers two solutions for these external assemblies which both provide high density, shielded interconnects. The current assemblies are for point-to-point ring applications. Additional cable assemblies are being developed for what is known as the "twisted ring" concept.

The internal interconnect solutions consist of both a "Bridge" assembly and a "Loopback" terminator. These use 0.8 mm FH Series connectors. The "Bridge" assembly is an FEC jumper that connects between the internal printed circuit cards. The "Loopback" terminator provides an end of the line connection between the UpPort and DnPort.

The AMP interconnect solutions for the QuickRing system provide the critical performance essential to making your system operate properly. The combination of tight skew and attenuation requirements, impedance and noise control demand that this be a carefully engineered interconnect system. AMP provides a complete offering of virtually every cable interconnect solution you need to get up and running with the QuickRing system.

SOURCE: Catalog 124248

Specifications subject to change.

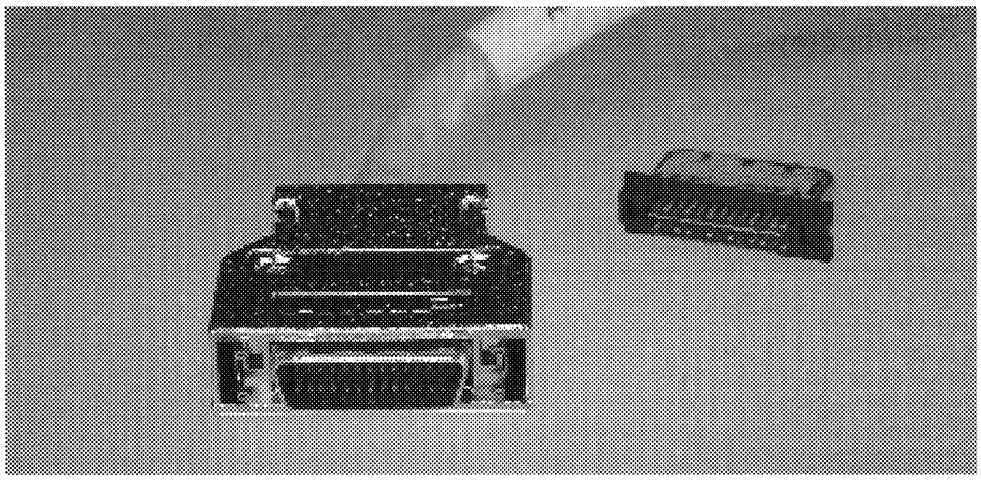
1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

External Point-to-Point

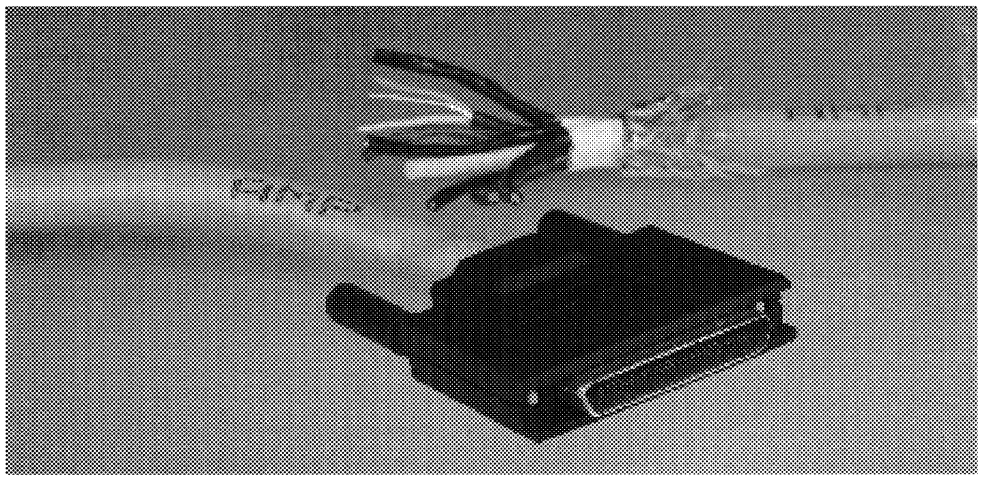
26 Position AMPLIMITE .050 Series Welded Cable Assemblies

Part Numbers 621269-1 through -7
(Dash numbers represent lengths from 0.5 meter to 5 meters.)
Low skew, 100 ohm, #28 AWG, shielded differential pair cable



50 Position CHAMP 0.8 mm Cable Assemblies

Part Numbers 621271-1 through -5
(Dash numbers represent lengths from 1 meter to 5 meters.)
Low skew, 100 ohm, #28 AWG, shielded differential pair cable



Internal Card-to-Card

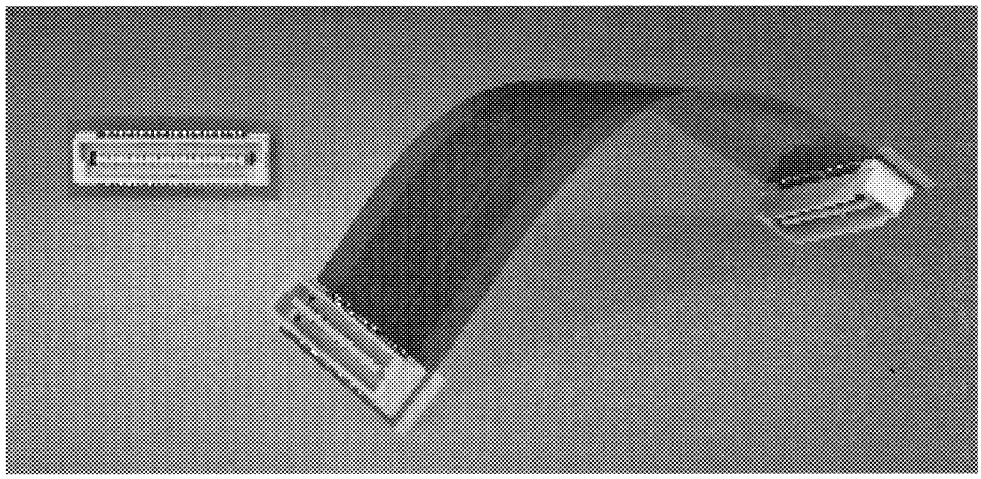
The "Bridge" Assembly is two, 40 Position, 0.8 mm FH Series Plugs on a Controlled Impedance Flexible Etched Circuit

Part Number 621261-1

The "Loopback" Terminator is a 40 Position, 0.8 mm FH Series Plug on a Printed Circuit Board

Part Number 621263-1

Note: Both Internal Assemblies mate with Receptacle **Part Number 177983-1**



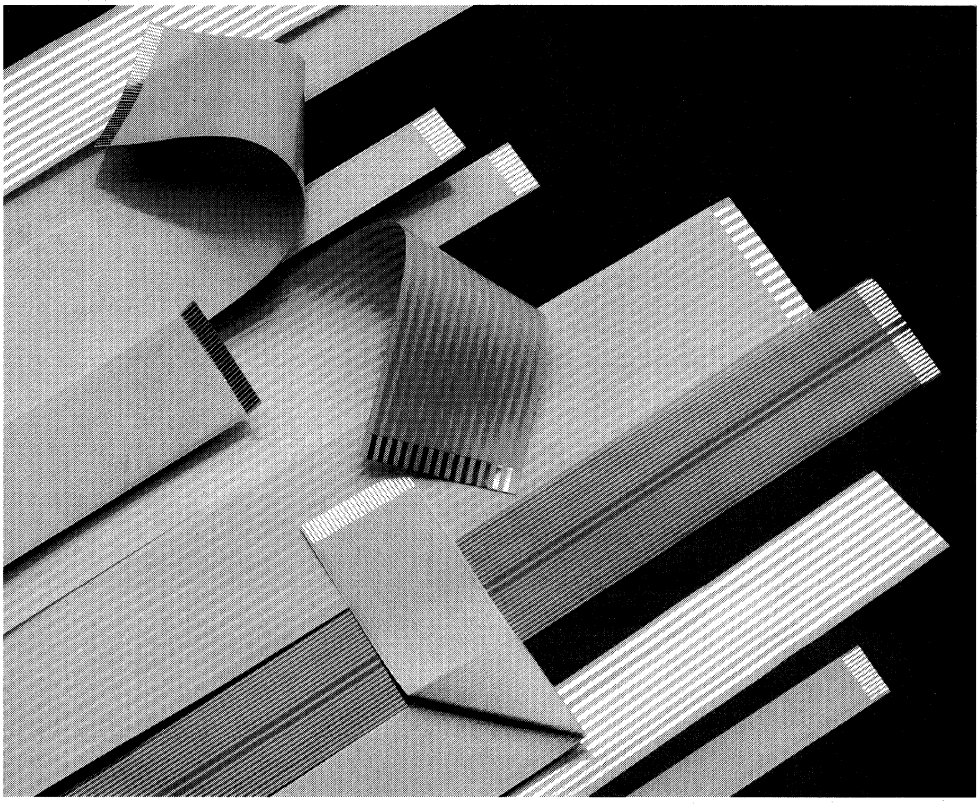
SOURCE: Catalog 124248

Specifications subject to change.

1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

Flexible Flat Conductor Cable Jumpers



Product Facts

- Ideal for low cost board-to-board interconnects
- Cost efficient—mates directly to the pc board header, no tooling required
- English and metric conductor spacings, custom hybrids
- Compatible with industry standard LIF and ZIF connectors such as AMP FPC, see Catalog 82007
- Supplied in any length over 1.5 in. [38.0]
- Foldable to fixed specifications and rigid shapes for easy routing
- Temperature ranges available from -55° to 150°C
- Perfect for high flex applications
- Resistant to most common organic solvents and cleaning agents
- Recognized under the Component Program of Underwriters Laboratories Inc., File No. E53793

Cost Effective Performance with Designed-in Quality

Flat flex jumpers from AMP are made with the same design and performance guidelines that are used worldwide at AMP in our connector products. Whether you're looking for a low cost solution for a laptop's LCD to board problem or a carriage cable for a high-end plotter, our flat flex jumpers are tailor-made to meet the most demanding of packaging requirements.

Small Outline and Low Profile = High Density

Today's commercial electronics demand lightweight, high density packaging, a natural home for a product that is almost paper thin. AMP FFC Cable Jumpers provide the low profile interconnect that designers look for when developing new laptop computers, notebook/Personal Digital Assistant (PDAs) and cellular telecommunications gear.

High Flex Life

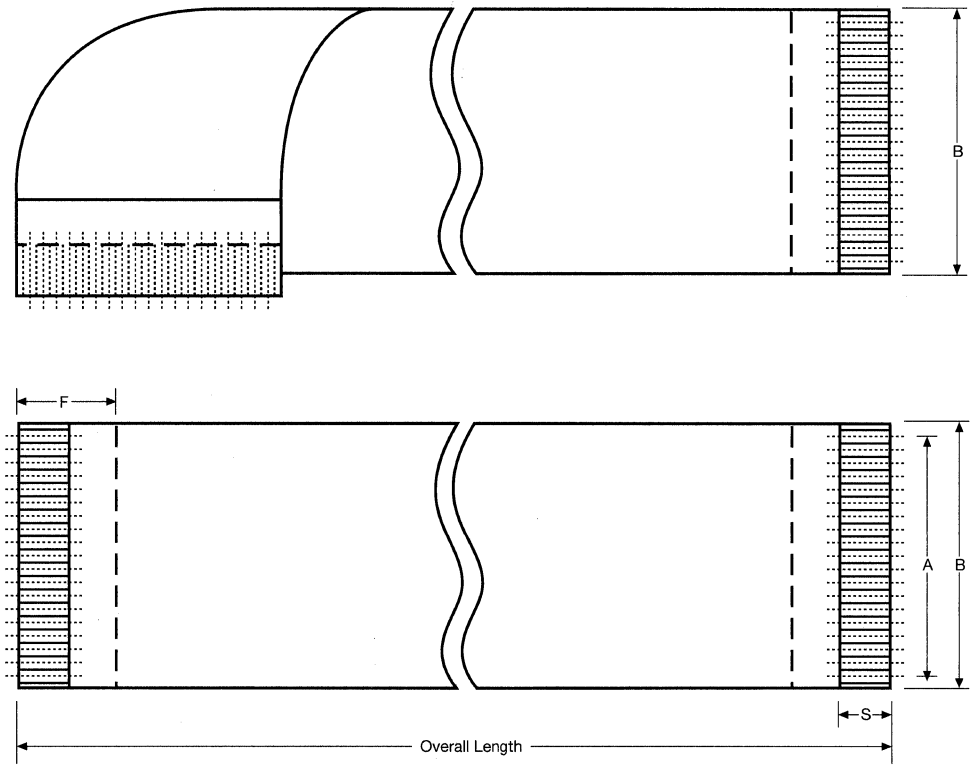
Unlike other flat cables that utilize solid round connectors, AMP FFC Cable is made with flat ribbon wire that is engineered for high flex life application. A typical cycle life of over 10 million is attainable with a 22.0 mm [0.87] radius.

Jumpers made from this cable are the perfect application solution for printers, plotters, automatic insertion equipment and copiers. Plus, FFC jumpers can be folded into shapes, making routing even easier.

Materials

Conductors—Tin plated copper, per QQ-C-502

Insulation—Flame retardant polyester, polyimide



Cable Specifications	Conductor Pitch			
	.100 [2.54]	.050 [1.27]	1.25 mm [.049]	1.00 mm [.039]
Cable Width: B	(N + 1).100	(N + 1).050	(N + 1)1.25 mm	(N + 1)1.00 mm
Span: A	(N - 1).100	(N - 1).050	(N - 1)1.25 mm	(N - 1)1.00 mm
Stiffener Length: F	.400 [10.16]	.400 [10.16]	10 mm [.39]	10 mm [.39]
Exposed Length: S	.250 [6.35]	.250 [6.35]	5 mm [.20]	5 mm [.20]
Conductor Size	.003 x .050 [.076 x 1.27]	.003 x .026 [.076 x .66]	.05 x .8 mm [.002 x .032]	.076 x .7 mm [.003 x .028]
Voltage Rating	300 VAC	300 VAC	300 VAC	300 VAC
Temperature Rating (Std.)	105°C	105°C	105°C	105°C
Current Rating*	2 amps	1.5 amps	1.0 amps	.9 amps
UL Style	2646	2690	2896	2896
Resistance	55 ohms/1000 ft.	110 ohms/1000 ft.	131 ohms/1000 ft.	110 ohms/1000 ft.
Number of Conductors	4 - 24	2 - 35	6 - 30	4 - 68
Characteristic Impedance**	128 ohms	113 ohms	106 ohms	82 ohms
Capacitance (Max.)	10.8 pF/ft.	13.8 pF/ft.	13.9 pF/ft.	16.3 pF/ft.
Product Specification	108-40002	108-40002	108-4000x	108-4000x

*Current rating for single circuit. Multiple circuits, ambient temperature affect current-carrying capacity.
**GND-SIG-GND (nominal)
Note: Other sizes and mixed conductor types available.

Custom Configurations

If you require a custom FFC Jumper configuration not shown in this catalog, call the AMP Product Information Center: 1-800-522-6752 or FAX your cable specifications to the Fax No. below. Our knowledgeable experts can satisfy any number of mechanical or electrical requirements. Cables can also be provided to meet special termination specifications. Our goal is to offer you improved performance at a lower cost.

SOURCE: Catalog 124060

FAX 910-665-6625
FFC Jumper Quote or More Information

Specifications subject to change.

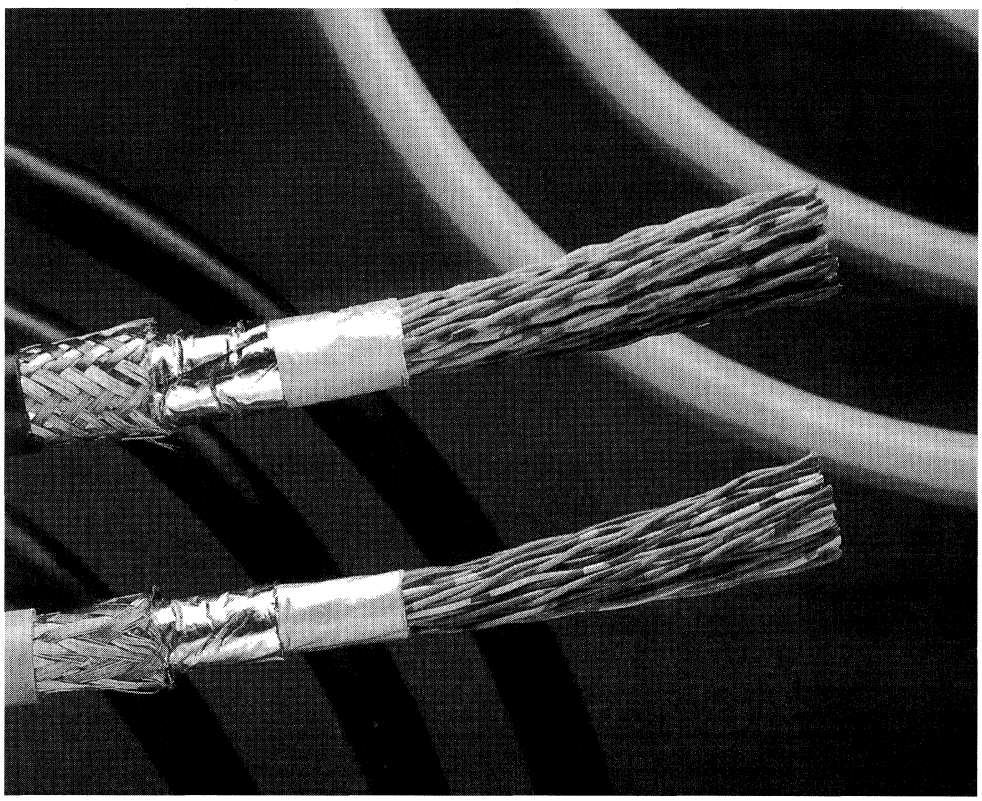
1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

High Performance Multipair SCSI Cable

Product Facts

- **65 ohm Single Ended (SE)/105 ohm Differential (DIFF) 25, 34, 50 & 60 pairs (28 AWG)**
- **77 ohm SE/123 ohm DIFF 25 & 34 pairs (28 AWG)**
- **88 ohm SE/130 ohm DIFF 25 & 34 pairs (28 AWG)**
- **80 ohm SE/130 ohm DIFF 25 & 34 pairs (30 AWG)**
- **90 ohm SE/144 ohm DIFF 25, 34 & 50 pairs (30 AWG)**
- **Extra Flex cables available to increase routing flexibility in space-restrictive applications**
- **Solid polyolefin insulation controls impedances for low crosstalk and reduced propagation delay**
- **Reduced skew due to advanced manufacturing techniques and tighter material control**



AMP SCSI (Small Computer System Interface) cable can be specified in impedances ranging from 65 ohm single ended/105 ohm differential to 90 ohm single ended/144 ohm differential. Choose from 25, 34, 50 and 60 twisted pairs, as well as 28 and 30 AWG sizes. (See page 10040 for the complete part number list.)

Extra Flex SCSI Cable

Extra flexible configurations of AMP high performance multipair SCSI cable are available to increase cable application versatility. By infusing the cable's PVC jacket material with specially formulated plasticizers and fillers, the cable is easier to terminate. Extra Flex cables can also be used in tight areas where other cable would be difficult or impossible to route.

Superior Performance

Material consistency and tight dimensional control of the cable's construction result in exceptional electrical performance. For example, AMP utilizes advanced extrusion processes to control the dielectric material and thickness of the insulation. As a result, propagation delay delta (skew) is substantially reduced.

Precisely controlled impedances made possible by solid and foamed polyolefin insulation materials further reduce propagation delay and provide lower attenuation/signal loss at less cost than many other insulation choices.

Critical Manufacturing Control

By staggering pair lays in each successive layer so that no two adjacent pairs have the same pair lay and by controlling the lay length of each layer of the cable, crosstalk is effectively lowered. In addition, a buffer tape over the cable core controls critical electrical parameters.

Numerous I/O Applications

AMP multipair SCSI cable is designed, tested and manufactured to provide the high signal performance necessary to meet a variety of I/O interface applications, for example: magnetic disks, small tape drives and other computer peripherals.

Custom Configurations

If you require a high performance multipair SCSI configuration not shown in this catalog, call the Product Information Center or send us a sample of the cable you need. Our knowledgeable experts can satisfy any number of mechanical or electrical requirements. Cables can also be provided to meet special termination specifications. Outside diameter can be sized to facilitate routing. Jackets can be color coded to improve cable identification. Our goal is to offer you improved performance at a lower cost.

SOURCE: Catalog 124214

65 Ohm Single Ended/ 105 Ohm Differential/ 28 AWG SCSI Cable

Electrical Specifications

Impedance
Single Ended: 65 ± 8 ohms
Differential: 105 ± 13 ohms

Capacitance
Single Ended: 25.0 pF/ft nom.
Mutual: 16.0 pF/ft nom.
Pair to shield delta:
0.6 pF/ft max.

DCR
70 ohms/1000 ft. max.

Attenuation
Single Ended:
6.5 dB/100 ft max. @ 5 MHz
15.0 dB/100 ft max. @ 50 MHz
Differential:
2.5 dB/100 ft max. @ 5 MHz
8.0 dB/100 ft max. @ 50 MHz

Time Delay
1.58 ns/ft max.

Time Delay Delta
.040 ns/ft max.

Mechanical Specifications

Individual Primaries
Number: 50/68/100/120
AWG: #28, 7/36 tinned copper
Insulation: polyolefin
O.D.: .029 ± .001 [.74 ± .03]

Twisted Pairs
Number: 25/34/50/60 pairs of primaries
Lay direction: left hand
Color code: see Customer Drawing

Cable
Lay length: 25 pr., 4.34 [110.23];
34 pr., 4.93 [125.22];
50 pr., 4.75 [120.65];
60 pr., 5.25 [133.35]
Filler: none

Buffer
Tape: foamed polyolefin with 100% coverage and 50% nominal overlap

Shield No. 1
Tape: aluminum polyester, aluminum side out, 100% coverage, 20% minimum overlap

Shield No. 2
Type: braid
AWG: #36 tinned copper
Coverage: 90% minimum

Jacket
Insulation: polyvinyl chloride
Wall thickness: .032 [.81] nominal
Final O.D.: .389 [9.88]/.410 [10.41]/ .485 [12.32]/.515 [13.08], ± .010 [.25] nominal.
Color: Black

Approvals
UL: type CL2
CSA: AWM, I/II A, FT4
CSA: AWM, I/II A, FT1 (Extra Flex)

77 Ohm Single Ended/ 123 Ohm Differential/ 28 AWG SCSI Cable

Electrical Specifications

Impedance
Single Ended: 77 ± 7 ohms
Differential: 123 ± 110 ohms

Capacitance
Single Ended: 24.0 pF/ft nom.
Mutual: 15.0 pF/ft nom.
Pair-to-shield delta:
0.45 pF/ft max.

DCR
70 ohms/1000 ft. max.

Attenuation
Single Ended:
20 dB/100 ft max. @ 50 MHz
Differential:
7 dB/100 ft max. @ 50 MHz

Time Delay
1.58 ns/ft max.

Time Delay Delta
0.35 ns/ft max.

Mechanical Specifications

Individual Primaries
Number: 50/68
AWG: #28, 7/36 tinned copper
Insulation: polyolefin
O.D.: .034 ± .001 [.86 ±.003]

Twisted Pairs
Number: 25/34 pairs of primaries
Lay direction: left hand
Color code: see Customer Drawing

Cable
Lay length: 25 pr., 4.25 [107.95];
34 pr., 5.57 [141.48]
Filler: none

Buffer
Tape: foamed polyolefin with 100% coverage and 50% nominal overlap

Shield No. 1
Tape: aluminum polyester, aluminum side out, 100% coverage, 50% nominal overlap

Shield No. 2
Type: braid
AWG: #36 tinned copper
Coverage: 90% minimum

Jacket
Insulation: polyvinyl chloride
Wall thickness: .032 [.81] nominal
Final O.D.: .425 [10.80]/.490 [12.45], ± .010 [.25] nominal.
Color: Black

Approvals
UL: type CL2
CSA: AWM, I/II A/B, FT4
CSA: AWM, I/II A/B, FT1 (Extra Flex)

88 Ohm Single Ended/ 130 Ohm Differential/ 28 AWG SCSI Cable

80 Ohm Single Ended/ 120 Ohm Differential/ 30 AWG SCSI Cable

Electrical Specifications

Impedance
28 AWG: Single Ended: 88 ± 8 ohms
Differential: 130 ± 12 ohms
30 AWG: Single Ended: 80 ± 8 ohms
Differential: 120 ± 10 ohms

Capacitance
28 AWG: Mutual 13.5 pF/ft nom.
Single Ended: 20.0 pF/ft nom.
30 AWG: Mutual 14.0 pF/ft nom.
Single Ended: 22.0 pF/ft nom.

DCR
28 AWG: 70 ohms/1000 ft max.
30 AWG: 108 ohms/1000 ft max.

Attenuation
28 AWG: 2.3 db/100 ft max. Single Ended
30 AWG: 3.5 db/100 ft max. Single Ended

Time Delay
28 AWG: 1.53 ns/ft max.
30 AWG: 1.59 ns/ft max.

Time Delay Delta
28 AWG: 082 ns/ft max.
30 AWG: 080 ns/ft max.

Mechanical Specifications

Individual Primaries
Number: 50/68
AWG: #28, 7/36 tinned copper
Insulation: foamed polyolefin
Wall thickness: .010 [.25] nominal
O.D.: .034 ± .001 [.86 ± .02]
AWG: #30, 7/38 tinned copper
Insulation: polyolefin
Wall thickness: .006 [.15] nominal
O.D: .024 ± .001 [.61 ±.03]

Twisted Pairs
Number: 25/34 pairs of primaries
Lay direction: left hand
Color code: see Customer Drawing

Cable
Lay length:
28 AWG: 25 pr., 3.45 [87.63];
34 pr., 5.57 [141.48];
30 AWG: 25 pr., 3.98 [101.09];
34 pr., 4.50 [114.30]
Filler: none

Buffer
Tape: foamed polyolefin with 100% coverage and 50% minimum overlap

Shield No. 1
Tape: aluminum polyester, aluminum side out, 100% coverage, 25% minimal overlap

Shield No. 2
Type: braid
AWG: #38 tinned copper
Coverage: 85% minimum

Jacket
Insulation: polyvinyl chloride
Wall thickness: .032 [.81] nominal
Final O.D.: .350 [8.89]/.370 [9.40]/ .425 [10.80]/.490 [12.45], ± .010 [.25] nominal.
Color: Black

Approvals
UL: type CL2
CSA: AWM, I/II, A/B, FT4
CSA: AWM, I/II, A/B, FT1 (Extra Flex)

SOURCE: Catalog 124214

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

90 Ohm Single Ended/ 144 Ohm Differential/ 30 AWG SCSI Cable

Electrical Specifications

Impedance
Single Ended: 90 ± 8 ohms
Differential: 144 ± 13 ohms

Capacitance
Conductor-to-conductor: 14.0 pF/ft nom.

DCR
110 ohms/1000 ft nominal

Attenuation
Single Ended: 3.3 dB/100 ft max. @ 5 MHz

Time Delay
1.42 ns/ft nominal

Time Delay Delta
.050 ns/ft max.

Mechanical Specifications

Individual Primaries
Number: 50/68/100
AWG: #30, 7/38 tinned copper
Insulation: foamed polyolefin
Wall thickness: .009 [.23] nominal
O.D.: .030 ± .001[.76 ± .03]

Twisted Pairs
Number: 25/34/50 pairs of primaries.
Lay direction: left hand.
Color code: see Customer Drawing

Cable
Lay length: 25 pr., 4.34 [110.23];
34 pr., 4.93 [125.22];
50 pr., 5.84 [148.34]
Filler: none

Buffer
Tape: foamed polyolefin with100% coverage and 25% minimum overlap

Shield No. 1
Tape: aluminum polyester, aluminum side out, 100% coverage, 25% minimal overlap

Shield No. 2
Type: braid
AWG: #38 tinned copper
Coverage: 85% minimum

Jacket
Insulation: polyvinyl chloride
Wall thickness: .032 [.81] nominal
Final O.D.: .390 [9.91]/.445 [11.30]/ .511 ± 12.98 [.010 ± .25] nominal
Color: Black

Approvals
UL: type CL2
CSA: AWM, I/II A/B, FT4
CSA: AWM, I/II A/B, FT1 (Extra Flex)

How To Order

Identify the SCSI cable base part number from the adjacent chart.

The length of cable on the spool is determined by the suffix you attach:

The dash numbers are:
-1 indicates a 500 [152.4 m] spool
-2 indicates a bulk spool†

Example:
Part No. 57500 represents a 25 pair, 65 SE/105 DIFF, 28 AWG cable. If you add -1 to the end (57500-1), you specify a 500 [152.4 m] spool.

†For the length of cable on the bulk spools, please contact the Product Information Center.

Allow for splices per spool:
500 [152.4 m]—one
Bulk—two

Minimum length shall be 100 [30.48 m].

To place an order, receive additional technical specifications, or inquire about prototyping SCSI cable lengths of less than 500 [152.4 m], contact your AMP Sales Engineer or call the Product Information Center.

Superior Performance

As the world's leading supplier of interconnection systems, AMP is in a unique position to deliver the optimum cable for your application and budget. Utilizing the industry's most advanced manufacturing, material control and measuring techniques, AMP can provide the high performance SCSI, differential pair, miniature coaxial, transmission line and multiconductor cables to meet the most demanding specifications. Because there is no substitute for knowledge, experience, quality and customer service, there is no substitute for AMP Precision Cable Products.

SCSI Cable

No. of Pairs	Impedance SE	Impedance DIFF	Wire Size AWG	Polyolefin Insulation	Nominal Cable O.D.	Part Number
25	65	105	28	Solid	**.389** [9.88]	57500-☐
34	65	105	28	Solid	**.410** [10.41]	57501-☐
50	65	105	28	Solid	**.485** [12.31]	57502-☐
60	65	105	28	Solid	**.515** [13.08]	57503-☐
25	77	123	28	Solid	**.425** [10.80]	57504-☐
34	77	123	28	Solid	**.490** [12.45]	57505-☐
25	80	120	30	Foam	**.350** [8.89]	57506-☐
25	88	130	28	Foam	**.425** [10.80]	57507-☐
34	80	120	30	Foam	**.370** [9.40]	57508-☐
34	88	130	28	Foam	**.490** [12.45]	57509-☐
25	90	144	30	Foam	**.390** [9.91]	57510-☐
34	90	144	30	Foam	**.445** [11.30]	57511-☐
50	90	144	30	Foam	**0.511** [12.98]	57512-☐

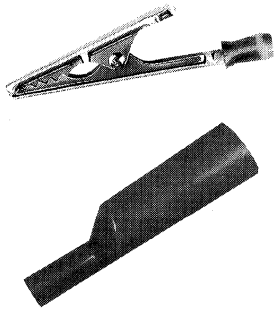
Extra Flex SCSI Cable

No. of Pairs	Impedance SE	Impedance DIFF	Wire Size AWG	Polyolefin Insulation	Nominal Cable O.D.	Part Number
25	65	105	28	Solid	**.389** [9.88]	57513-☐
34	65	105	28	Solid	**.410** [10.41]	57514-☐
50	65	105	28	Solid	**.485** [12.31]	57515-☐
60	65	105	28	Solid	**.515** [13.08]	57516-☐
25	77	123	28	Solid	**.425** [10.80]	57517-☐
34	77	123	28	Solid	**.490** [12.45]	57518-☐
25	88	130	28	Foam	**.425** [10.80]	57519-☐
34	88	130	28	Foam	**.490** [12.45]	57520-☐
25	80	120	30	Foam	**.350** [8.89]	57521-☐
34	80	120	30	Foam	**.370** [9.40]	57522-☐
25	90	144	30	Foam	**.390** [9.91]	57523-☐
34	90	144	30	Foam	**.445** [11.30]	57524-☐
50	90	144	30	Foam	**.511** [12.98]	57525-☐

Note: For pair color code, order Customer Drawing.

SOURCE: Catalog 124214

Crimp Type Alligator Clip and Insulation Boots



Product Facts

- Funnel entry helps eliminate frayed wires
- Wire sizes 22-16 AWG
- Spring-loaded clip with serrated jaws, crimp-type barrel, and insulation sleeve

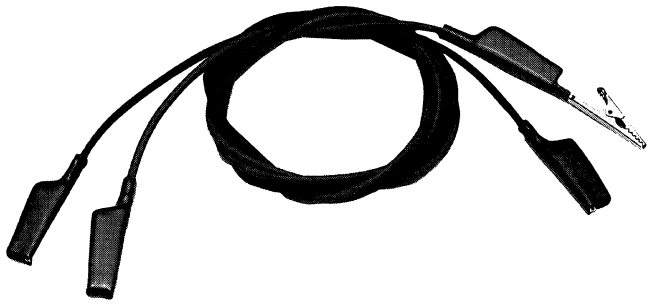
Description	Boot Color	Part Number
Alligator Clip	—	605421-1
Insulation Boot	Black	605600-1
Insulation Boot	Red	605600-2

Note: Crimping Hand Tool, SUPER CHAMP IV **Part No. 604252-1** or CERTI-CRIMP Hand Tool **Part No. 90035-3.**

Test Leads

Pre-assembled set of Alligator clip test leads. 48 in. long, color coded with insulation boots.

Part No. 601882-4



SOURCE: Catalog 82535

Specifications subject to change.

1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

AMP ISO Isolating Transformer/Power Conditioner

Ideal for PCs, audio and recording equipment, workstations, PLCs, telecoms, medical systems and test instruments.

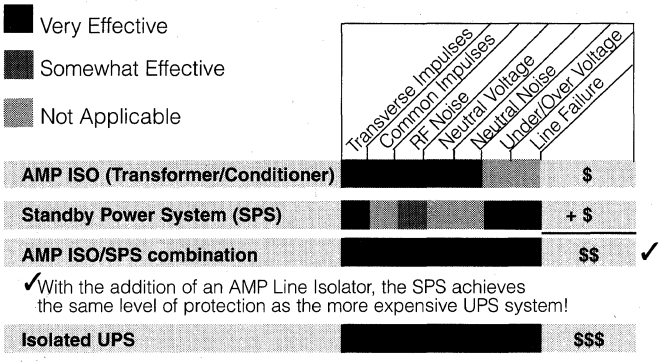
The AMP ISO's low cost, compact design makes it easy to use wherever sensitive electronic equipment is used. It installs quickly in minimum space, and operates quietly without disturbing operators or medical personnel. Virtually eliminates all common mode noise.

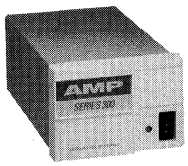
Total, affordable UPS protection.

When combined with a standby power system (SPS), the AMP ISO completes the spectrum of power protection to provide for under/over voltage conditions and line failure. All for hundreds of dollars less than conventional, isolated uninterruptible power systems (UPS).

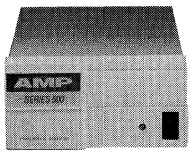
The AMP ISO Isolating Transformer/Power Conditioner combines with SPS systems to provide a low cost alternative to isolated UPS systems.

■ Very Effective
■ Somewhat Effective
■ Not Applicable

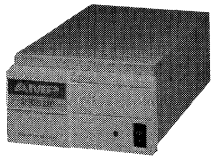




Series 300



Series 500



Series 1000

Performance Characteristics		Series 300 Part No. 83477-1	Series 500 Part No. 83478-1	Series 1000 Part No. 83479-1
INPUT	VOLTAGE	117 Vrms	117 Vrms	117 Vrms
	FREQUENCY	60 Hz	60 Hz	60 Hz
	CURRENT (full load)	3 amps at 117 Vrms	4.8 amps at 117 Vrms	10.0 amps at 117 Vrms
OUTPUT	POWER	300 VAC	500 VAC	1000 VAC
	VOLTAGE (full load)	113 Vrms ±10%	113 Vrms ±10%	109 Vrms ±10%
	(nominal at no load)	125 Vrms	127 Vrms	132 Vrms
	FREQUENCY	Same as input frequency	Same as input frequency	Same as input frequency
	EFFICIENCY (full load)	90%	90%	82%
	ISOLATION	Full isolation from primary	Full isolation from primary	Full isolation from primary
	*GROUND LEAKAGE	100 microamps maximum	100 microamps maximum	100 microamps maximum
PROTECTION	OVERCURRENT	Rear mounted resettable circuit breaker, rated for maximum thermal conditions.		
	OVERTEMPERATURE	Integral self-resetting thermal switch shuts unit down when internal temperature exceeds 110° C.		
EMI/RFI REJECTION	NOISE BAND	9 kHz to 30 MHz		
	COMMON MODE	Greater than 94 dB	Greater than 94 dB	Greater than 92 dB
	TRANSVERSE MODE	Greater than 93 dB	Greater than 82 dB	Greater than 97 dB
	Tested by the Canadian Standards Association laboratories in accordance with the intent of IEEE C63.4-1992, AC Power Line Conducted Emissions Testing.			
SURGE SUPPRESSION	Suppresses voltage surges up to 6 kV, 3 kA per IEEE C62.41-1991, categories B and C (equivalent to UL 1449 impulse characteristics) to safe levels, as tested by the Canadian Standards Association laboratories.			
ENVIRONMENT	OPERATING TEMPERATURE	0° to 40°C		
	STORAGE TEMPERATURE	-40° to 75°C		
	RELATIVE HUMIDITY	95% maximum, non-condensing		
PHYSICAL	WIDTH, inches (cm)	5.62 (14.27)	7.75 (19.69)	7.75 (19.69)
	DEPTH, inches (cm)	10.0 (25.4)	10.0 (25.4)	12.975 (32.96)
	HEIGHT, inches (cm)	4.0 (10.16)	4.0 (10.16)	4.86 (12.34)
	WEIGHT, pounds (kg)	13.0 (5.9)	18.0 (8.2)	30 (13.6)
	NUMBER OF OUTLETS	2	4	6
	MOUNTING	Free standing, floor or desk mount.		
	COLOR	Two-tone computer beige.		
	CONSTRUCTION	Aluminum cabinet with high impact front plastic cover.		
	FRONT PANEL	Fully recessed power switch and indicator light.		
	REAR PANEL	Grounded power line cord, circuit breaker and grounded outlets (orange to indicate isolation).		
CONFORMANCE	CSA	Certified to CSA C22.2 No. 66-1988; C22.2 No. 125-M1984 (as a guide)		
	(pending) UL	Listed to UL Std. 1012		

* C22.2 No. 125-1984 Risk current classification 2G.

SOURCE: Catalog 124403

Specifications subject to change.

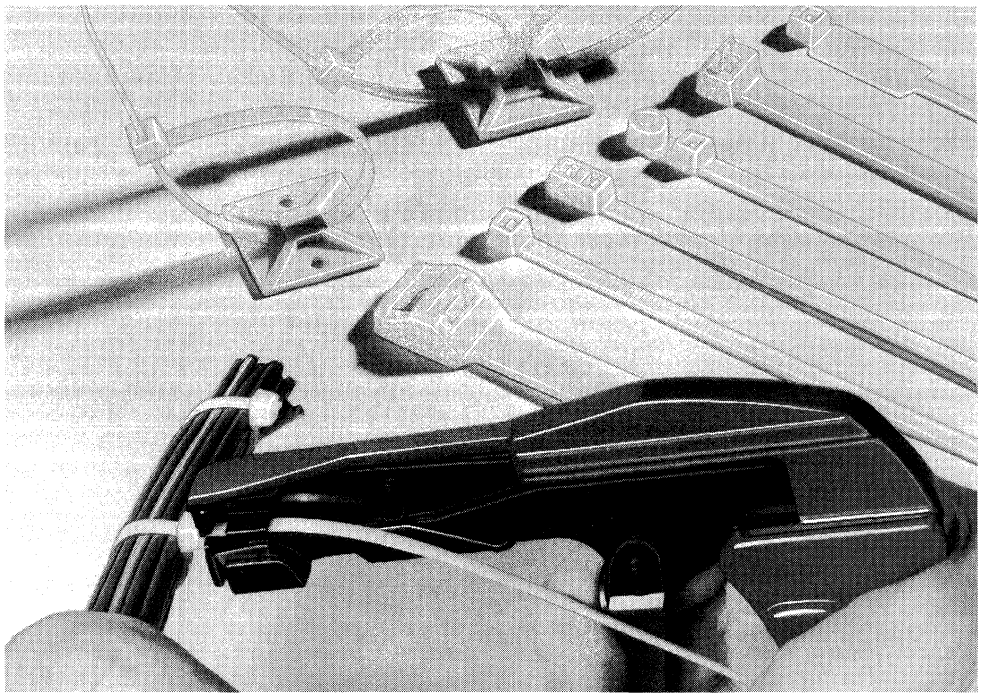
1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

AMP-TY Nylon Cable Ties

Product Facts

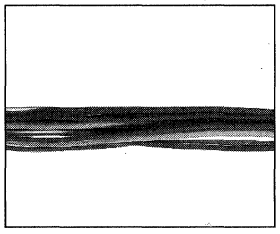
- **Self-locking application by hand or hand tool provides versatility**
- **Tapered tip speeds up threading and reduces applied cost**
- **Interior serrations help hold individual wires in place through friction**
- **Tough, smooth nylon may be used in outdoor and indoor applications. Black, UV-resistant ties are recommended for outdoor use**
- **Specific parts meet the requirements of MIL-S-23190. See MS3367 and MS3368 part number notations**
- **All-nylon design eliminates metal components**
- **Recognized under the Component Program of Underwriters Laboratories Inc., File No. E73541**



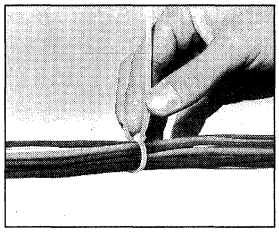
AMP-TY All-Nylon Cable Ties provide a strong, durable way to bundle and harness cable quickly and economically. They can be used on virtually any bundle configuration, in diameters ranging from 1/16 [1.58] to 10 [254.00]. AMP-TY Cable Ties are resistant to common solvents, alkalies, dilute acids, oils and greases.

All packages are heat sealed to retain moisture. Do not open package until you are ready to apply the ties.

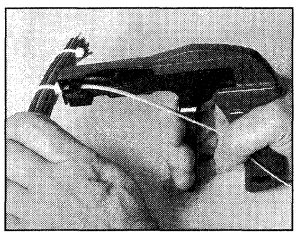
Fast and Easy to Apply



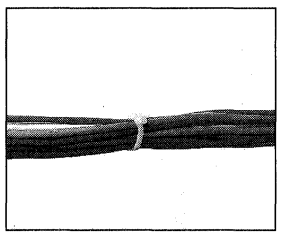
1. Gather cables together.



2. Apply hand-tight.



3. Snug-up with tool.



4. Finished tie holds cables firmly.

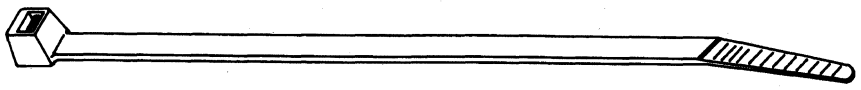
SOURCE: Catalog 82624

Specifications subject to change.

1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

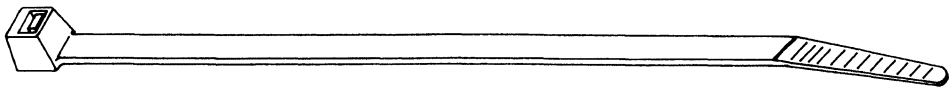
Standard Cable Ties



Dimensions (Approximate)			Part Number	Color	Minimum Tensile Strength	Maximum Bundle Diameter	Package Quantity	Government Designation*
Length	Width	Thickness						
4 103.0	**.096** 2.44	**.037** .94	2-604771-9	Natural	**18 lbs.** 80.1 N	**.75** 19.1	1000	MS3367-4
			2-604771-0	Black			1000	
			1-604771-9	Natural			100	
			1-604771-0	Black			100	
6 155.0	**.140** 3.56	**.045** 1.14	2-603227-9	Natural	**30 lbs.** 133.5 N	**1.25** 31.75	1000	MS3367-5
			2-603227-0	Black			1000	
			1-603227-9	Natural			100	
			1-603227-0	Black			100	
8 202.0	**.100** 2.54	**.045** 1.14	2-608687-9	Natural	**18 lbs.** 80.1 N	**2.0** 50.8	1000	MS3367-4
			2-608687-0	Black			1000	
			1-608687-9	Natural			100	
			1-608687-0	Black			100	
8 204.0	**.184** 4.67	**.047** 1.19	2-604772-9	Natural	**50 lbs.** 222.5 N	**1.75** 44.45	1000	MS3367-1
			2-604772-0	Black			1000	
			1-604772-9	Natural			100	
			1-604772-0	Black			100	
11½ 293.0	**.156** 3.96	**.050** 1.27	2-608688-9	Natural	**40 lbs.** 178 N	**3.0** 76.2	1000	MS3367-7
			2-608688-0	Black			1000	
			1-608688-9	Natural			100	
			1-608688-0	Black			100	
12 300.0	**.183** 4.65	**.051** 1.30	2-604751-9	Natural	**50 lbs.** 222.5 N	**3.0** 76.2	1000	MS3367-7
			1-604751-9	Natural			100	
			1-604751-0	Black			100	
15½ 392.0	**.184** 4.67	**.055** 1.40	2-604774-9	Natural	**50 lbs.** 222.5 N	**4.0** 101.6	1000	MS3367-2
			2-604774-0	Black			1000	
			1-604774-9	Natural			100	
			1-604774-0	Black			100	

*Meets or exceeds the requirements of MIL-S-23190, Type I, Class 1.

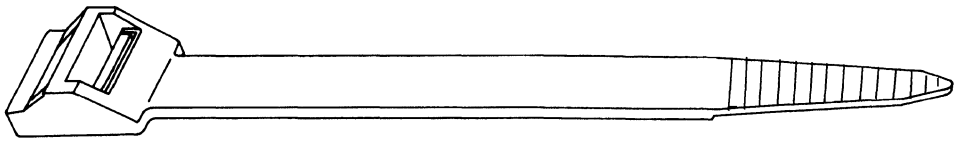
Heavy Duty Cable Ties



Dimensions (Approximate)			Part Number	Color	Minimum Tensile Strength	Maximum Bundle Diameter	Package Quantity	Government Designation*
Length	Width	Thickness						
			3-603225-9	Natural			500	—
9	**.299**	**.063**	3-603225-0	Black	**120 lbs.**	**2.0**	500	—
226.0	7.59	1.60	4-603225-9	Natural	534 N	50.8	50	—
			4-603225-0	Black			50	—
			3-604773-9	Natural			500	
15¼	**.303**	**.078**	3-604773-0	Black	**120 lbs.**	**4.0**	500	MS3367-3
390.0	7.7	1.98	1-604773-9	Natural	534 N	101.6	100	
			1-604773-0	Black			100	
29¾	**.298**	**.075**	4-603222-9	Natural	**120 lbs.**	**8.75**	50	MS3367-6
756.0	7.57	1.91	4-603222-0	Black	534 N	222	50	

*Meets or exceeds the requirements of MIL-S-23190, Type I, Class 1.

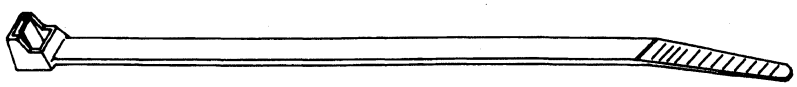
Heavy Duty Lashing Cable Ties



Dimensions (Approximate)			Part Number	Color	Minimum Tensile Strength	Maximum Bundle Diameter	Package Quantity
Length	Width	Thickness					
20	**.492**	**.074**	5-608689-0	Black	**250 lbs.**	**5.0**	25
516.4	12.5	1.9			1112.5 N	127.0	
29	**.492**	**.086**	5-608697-0	Black	**250 lbs.**	**8.0**	25
737.2	12.5	2.2			1112.5 N	203.2	
35	**.492**	**.086**	5-608691-0*	Black	**250 lbs.**	**10.0**	25
891.3	12.5	2.2			1112.5 N	254.0	

*Releasable.

Releasable Cable Ties



Perfect for prototype construction and service requiring the addition of wires on existing harnesses.

Dimensions (Approximate)			Part Number	Color	Minimum Tensile Strength	Maximum Bundle Diameter	Package Quantity
Length	Width	Thickness					
			2-608692-9	Natural			1000
6½	**.186**	**.046**	1-608692-9	Natural	**50 lbs.**	**1.38**	100
165.0	4.72	1.47	1-608692-0	Black	222.5 N	34.93	100
8½	**.157**	**.049**	1-604476-9	Natural	**40 lbs.**	**2.0**	100
216.0	3.99	1.24	1-604476-0	Black	178 N	50.8	100

SOURCE: Catalog 82624

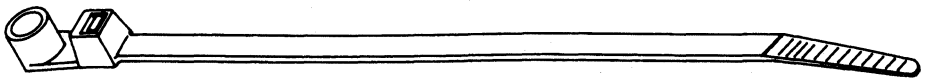
Specifications subject to change.

1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

Screw Mounting Cable Ties

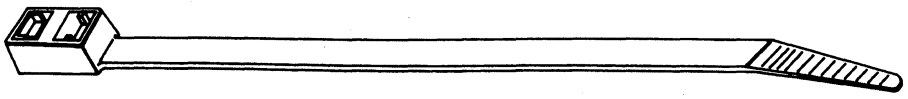
One-piece, all-nylon ties for quick, simple cable mounting. Bundling and mounting are done with one unit.



Dimensions (Approximate)			Mounting Hole Size	Part Number	Color	Minimum Tensile Strength	Maximum Bundle Diameter	Package Quantity
Length	Width	Thickness						
4¼	.099	.042	#4 Screw	1-603231-9	Natural	18 lb.	.75	100
111.0	2.52	1.07		1-603231-0	Black	80.1 N	19.1	100
6¼	.142	.046	#8 Screw	2-608693-0	Black	30 lbs.	1.25	1000
162.0	3.61	1.17		1-608693-9	Natural	133.5 N	31.75	100
				1-608693-0	Black			100
8½	.188	.049	#10 Screw	2-608694-9	Natural	50 lbs.	1.75	1000
215.0	4.78	1.24		2-608694-0	Black	222.5 N	44.45	1000
				1-608694-9	Natural			100
				1-608694-0	Black			100
16	.187	.055	#10 Screw	2-608695-9	Natural	50 lbs.	4.0	1000
408.0	4.75	1.40		2-608695-0	Black	222.5 N	101.6	1000
				1-608695-9	Natural			100
				1-608695-0	Black			100
16	.307	.080	1/4" Screw	4-608696-9	Natural	120 lbs.	4.0	50
413.0	7.80	2.03		4-608696-0	Black	534 N	101.6	50

Double Head Cable Ties

Designed to harness two cables simultaneously. The second loop may also serve as a positioning device for a single cable.



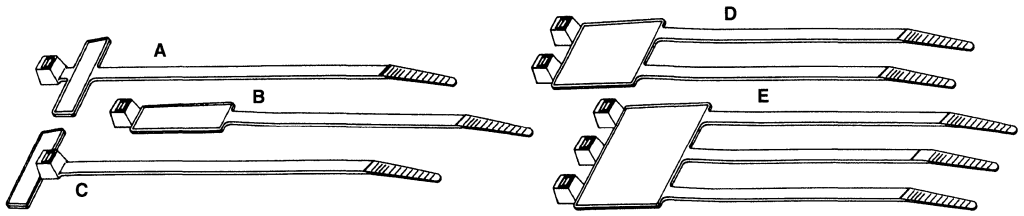
Dimensions (Approximate)			Part Number	Color	Minimum Tensile Strength	Maximum Bundle Diameter	Package Quantity
Length	Width	Thickness					
8	.185	.046	1-608698-9	Natural	50 lbs.	.75	100
210.0	4.70	1.17	1-608698-0	Black	222.5 N	19.05	100
12	.184	.050	1-608699-9	Natural	50 lbs.	1.50	100
308.0	4.7	1.3	1-608699-0	Black	222.5 N	38.1	100
15	.184	.054	1-608700-0	Black	50 lbs.	2.0	100
390.0	4.7	1.4			222.5 N	50.8	

SOURCE: Catalog 82624

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

Identification Cable Ties

Tie and identify bundles of cable in one operation. Large flat area for imprinting or writing the required information.



Style	Dimensions (Approximate)			Part Number	Color	Minimum Tensile Strength	Maximum Bundle Diameter	Marking Pad Size	Package Quantity	Government Designation*
	Length	Width	Thickness							
A	**4** 103.0	**.098** 2.49	**.041** 1.04	6-608701-9 1-608701-9	Natural Natural	**18 lbs.** 80.1 N	**.75** 19.1	**.952 x .290** 24.18 x 7.37	200 100	MS3368-5-E
C	**4** 110.0	**.097** 2.46	**.037** .94	1-603230-9	Natural	**18 lbs.** 80.1 N	**.75** 19.1	**.736 x .307** 18.69 x 7.80	100	—
B	**8** 203.0	**.185** 4.70	**.046** 1.17	2-608702-9 1-608702-9	Natural Natural	**50 lbs.** 222.5 N	**1.75** 44.45	**.966 x .435** 24.54 x 11.05	1000 100	MS3368-1-A
B	**15** 381.0	**.185** 4.70	**.055** 1.40	2-608703-9	Natural	**50 lbs.** 222.5 N	**4.0** 101.6	**2.075 x .429** 52.71 x 10.90	1000	MS3368-2-A
D	**8** 203.0	**.183** 4.65	**.047** 1.19	3-608704-9 4-608704-9	Natural Natural	**50 lbs.** 222.5 N	**1.75** 44.45	**.873 x 1.070** 22.17 x 27.18	500 50	MS3368-3-C
E	**8** 203.0	**.183** 4.65	**.047** 1.19	6-608789-9	Natural	**50 lbs.** 222.5 N	**1.75** 44.45	**.873 x 1.750** 22.17 x 44.45	200	MS3368-4-D

**Meets or exceeds the requirements of MIL-S-23190, Type II, Class 1.

SOURCE: Catalog 82624

Specifications subject to change.

1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

AMP-TY Cable Tie Accessories

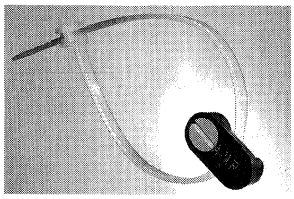
Cable Tie Mount (Screw Type)

Accommodates ties with maximum tensile strength of 50 lbs. [222.5 N]

Part No. 1-350087-0
Package of 100

Part No. 2-350087-0
Package of 1000

Note: Screw not included



Two-Way Cable Tie Mount

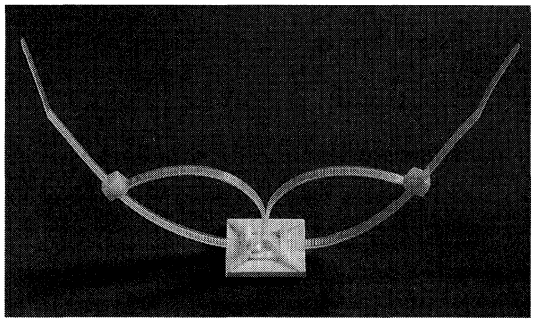
Permits entry from two sides. Available in two sizes.

.38 [9.65] x .6 [15.24], #6 Screw Hole, without Adhesive Back. Accommodates ties with maximum tensile strength of 50 lbs. [222.5 N]

Part No. 608801-1
Package of 100

1.13 [28.70] x 1.13 [28.70] , #6 Screw Hole, with Adhesive* Back. Accommodates ties with maximum tensile strength of 50 lbs. [222.5 N]

Part No. 608800-1
Package of 100



Four-Way Cable Tie Mount

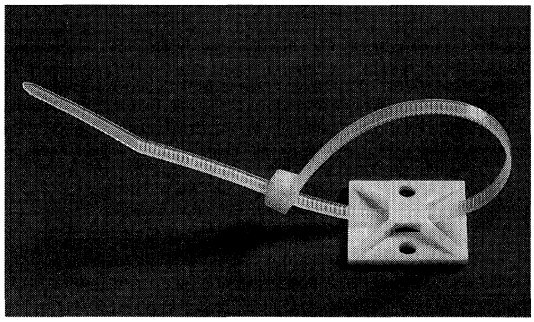
Permits entry from four sides. Available in two sizes.

.75 [19.05] x .75 [19.05], two #4 Screw Holes, with Adhesive* Back. Accommodates ties with maximum tensile strength of 30 lbs. [133.5 N]

Part No. 608802-1
Package of 100

1.13 [28.70] x 1.13 [28.70], two #8 Screw Holes, with Adhesive* Back. Accommodates ties with maximum tensile strength of 50 lbs. [222.5 N]

Part No. 608803-1
Package of 100



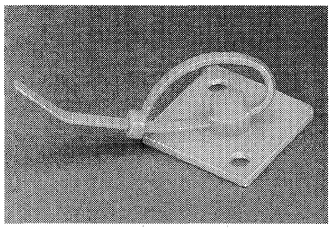
Cable Tie Swivel Mount

with Adhesive Back and Screw Holes (.187 [4.75] Dia.)

1 [25.4] x 1 [25.4], two .187 [4.75] Dia. Screw Holes, with Adhesive Back. Accommodates ties with maximum tensile strength of 30 lbs. [133.5 N]

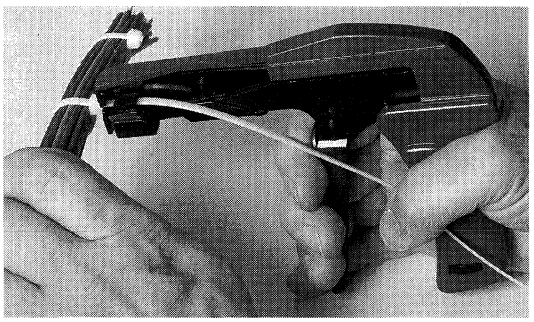
Part No. 607847-1
Package of 100

*The rubber-based adhesive backing on these mounts has a tensile strength of 6 lbs. [26.7 N] per square inch. This rating applies in temperatures from -50°F [-45°C] to 180°F [82°C]. For best performance, mounts should be applied to a smooth, clean, dry, and oil-free surface.



AMP-TY Economy Application Tool

Part No. 608336-1
Tool operates on cable ties up to 50 lbs. [222.5 N] tensile value. It has a tension adjustment and cuts off the end of the tie.



SOURCE: Catalog 82624

Specifications subject to change.

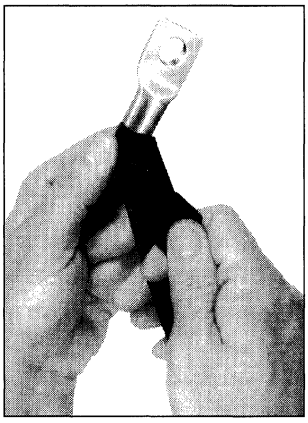
1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

Fusion Tape

Product Facts

- **Forms tough, homogeneous, watertight skin. Provides for long-term protection even during prolonged immersion in water**
- **Resists abrasion, impact, sunlight, and most chemicals; eliminates need for overwrap in most applications; keeps installation costs down**
- **Requires no heat or open flame; minimizes equipment; cuts installation costs**
- **Wraps a wide range of sizes, shapes, and materials; reduces need for special tapes or devices; lowers inventory**
- **Does not transfer adhesive; does away with messy cleanup after use**
- **Has little tack; eases handling; speeds application**



AMP's easy-to-use Fusion Tape is ideal for wrapping electrical cable splices and terminations. It provides neat, trim, long-lasting insulation on a wide range of sizes, shapes, and materials. Although most applications are electrical, Fusion Tape finds wide usage in other areas.

This durable, black elastic tape has excellent electrical properties, water resistance, ozone resistance, and corrosion resistance at temperatures ranging from -40°F [-40°C] to 212°F [100°C] continuous, and to 266°F [130°C] for short periods of time.

Width	Thickness	Length		Weight		Part Numbers
		feet	m	lbs.	grams	
1.000 25.40	**.020** 0.51	**10**	3.05	**.088**	39.6	605262-1
.750 19.05	**.020** 0.51	**30**	9.14	**.032**	14.6	605980-1
1.000 25.40				**.105**	47.8	605980-2
1.500 38.10				**.298**	135.2	605980-3
2.000 50.80				**.398**	180.4	605262-2

SOURCE: Catalog 82571

Specifications subject to change.

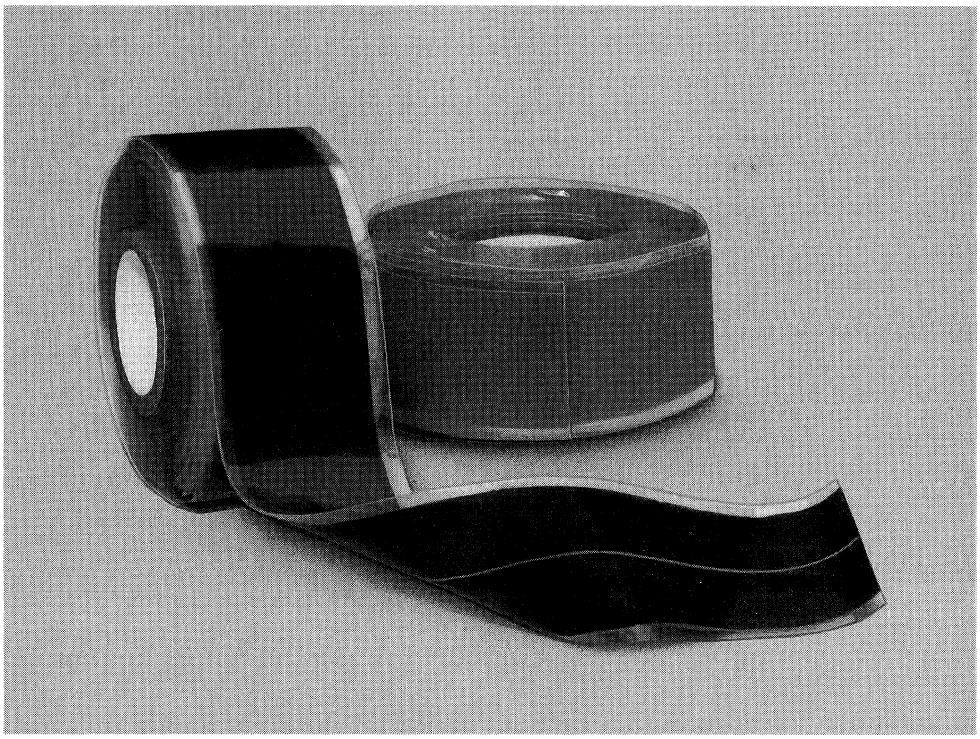
1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

Silicone Fusion Tape

Product Facts

- **Self-adhering and self-curing; bonds into a permanent, inseparable insulator within 24 hours at room temperature**
- **Color stripe guides adequate tape overlap for optimum insulation**
- **Rated for use from -76°F [-60°C] to 392°F [200°C] and up to 500°F [260°C] for short durations**
- **Solid rubber insulating barrier provides greater resistance to moisture and chemicals**
- **Highly flexible, making it ideal for completely covering irregular surfaces**
- **Availability in colors with contrasting color stripe guides offers a wider choice of color-coding**
- **Meets or exceeds the requirements of MIL-I-46852, Type II**



Width	Thickness	Color		Length		Weight		Part Numbers
		Tape	Stripe*	feet	m	lbs.	grams	
1.000 25.40	**.020** 0.51	Red	Blue	**36**	11	**.28**	127.0	608036-1
1.000 25.40	**.020** 0.51	Grey	Blue	**36**	11	**.28**	127.0	608036-2
1.000 25.40	**.030** 0.76	Grey	White	**36**	11	**.38**	172.4	608036-4
1.250 31.75	**.040** 1.02	Red	Green	**36**	11	**.58**	263.1	608036-6
1.500 38.10	**.080** 2.03	Red	White	**36**	11	**1.27**	576.1	608036-9
1.000 25.40	**.020** 0.51	Clear	Blue	**36**	11	**.28**	127.0	1-608036-2
1.000 25.40	**.020** 0.51	Red	Blue	**15**	4.6	**.12**	54.4	1-608036-3
1.000 25.40	**.020** 0.51	Black	White	**15**	4.6	**.12**	54.4	1-608036-4

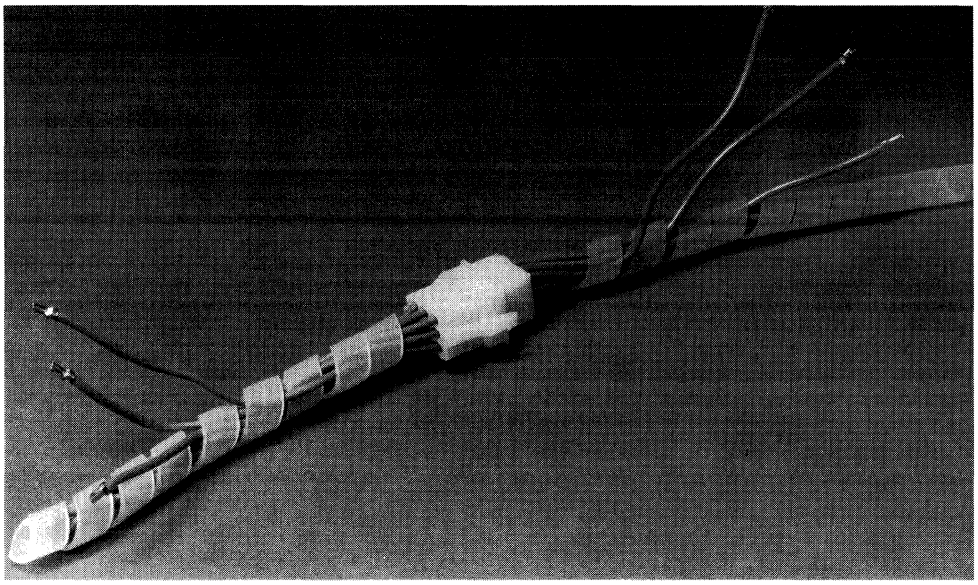
*AMP Silicone Fusion Tape has a center color stripe on one side throughout the length which serves as a guide to proper coverage when wrapping.

SOURCE: Catalog 82267

SPIRAP Plastic Cable Wrap

Product Facts

- Provides abrasion protection for wires, cables, tubing, and hoses
- Attractive — makes neat, compact uniform bundles
- Break-out at any point along the bundle
- Moisture resistant — will not hold "cable-rotting" moisture
- Available in three sizes covering from 1/16th-inch [1.58] to 4-inch [101.60] diameter bundles
- Available in six materials to accommodate any application need
- Quickly applied by hand or by supplied hand tool

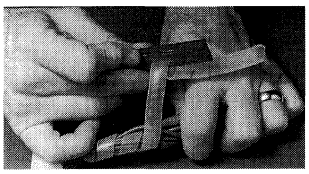


Material	O.D. Size	Max. Bundle Dia. Range	Length ft/Box	Length m/Box	Part Numbers
Polyethylene (Natural)	1/8 3.18	1/16 to 1/2 1.59 to 12.70	50	15.24	500000-1
			100	30.48	500000-2
	1/4 6.35	3/16 to 2 4.76 to 50.8	50	15.24	500001-1
	1/2 12.70	3/8 to 4 9.53 to 101.6	50	15.24	500002-1
Flame Retardant Polyethylene (White)	1/4 6.35	3/16 to 2 4.76 to 50.8	50	15.24	500004-1
	1/2 12.70	3/8 to 4 9.53 to 101.6	50	15.24	500005-1
Nylon (Natural)	1/8 3.18	1/16 to 1/2 1.59 to 12.70	50	15.24	500013-1
			100	30.48	500013-2
	1/4 6.35	3/16 to 2 4.76 to 50.8	50	15.24	500015-1
	1/2 12.70	3/8 to 4 9.53 to 101.6	50	15.24	500017-1
Fluoropolymer (Natural)	1/8 3.18	1/16 to 1/2 1.59 to 12.70	50	15.24	500023-1
			100	30.48	500023-2
	1/4 6.35	3/16 to 2 4.76 to 50.8	50	15.24	500024-1
Outdoor Polyethylene (Black)	1/4 6.35	3/16 to 2 4.76 to 50.8	50	15.24	500030-1*
	1/2 12.70	3/8 to 4 9.53 to 101.6	50	15.24	500031-1*
Outdoor Nylon (Black)	1/4 6.35	3/16 to 2 4.76 to 50.8	50	15.24	500036-1
	1/2 12.70	3/8 to 4 9.53 to 101.6	50	15.24	500037-1

*REA Listed

SPIRAP Hand Tool

Furnished with each box, the SPIRAP Hand Tool increases the speed of application and permits uniform wrapping along the bundle length. The hand tool is slotted for 1/8-inch [3.18], 1/4-inch [6.35] and 1/2-inch [12.70] SPIRAP tubing.



SOURCE: Catalog 82050

Specifications subject to change.

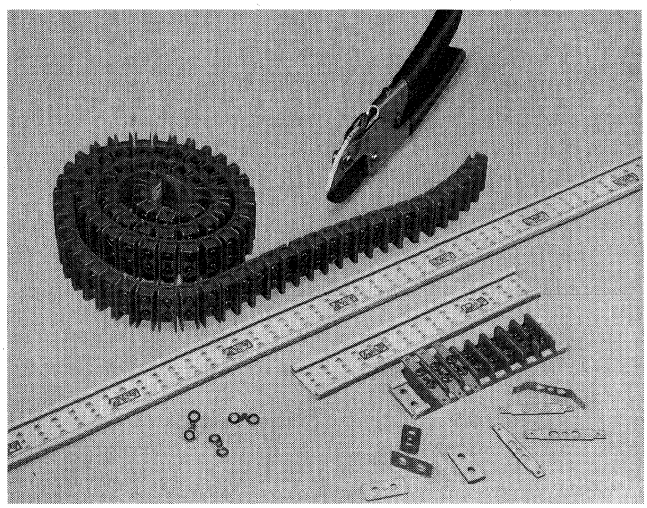
1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

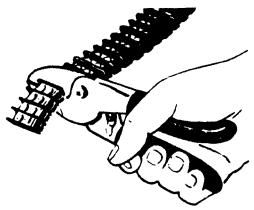
FLEXI-BLOCK Terminal Block System

Product Facts

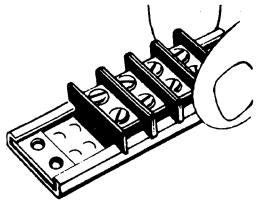
- Durable, tough nylon on flexible back—bends without breaking
- Interchangeable with all standard terminal blocks
- Two basic parts replace dozens of sizes to solve inventory problems
- Size #6 and size #8 blocks accept as many as three levels of double FASTON receptacles
- Predrilled holes allow quick mounting on flat or curved surfaces
- Screws available separately for use with blocks without screws
- Easy add-on capability
- Recognized under the Component Program of Underwriters Laboratories Inc., File No. E60677
- Certified by Canadian Standards Association, File No. LR 52535-1



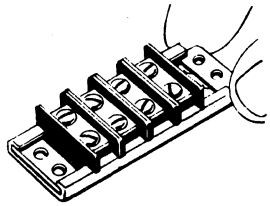
3 EASY STEPS



SNIP IT!



SLIDE IT!



SNAP IT!

IT'S READY TO GO!

Part Numbers #6 (Blue)	Part Numbers #8 (Yellow)	Description
1-604102-1	1-604152-1	One block assembly on tape with nickel-plated brass screws (100-block dispenser carton)
1-604100-1	1-604150-1	One block assembly on tape without screws (100-block dispenser carton)
601983-2*	—	One screw, 6-32 x 5/16, nickel-plated brass
—	601981-5**	One screw, 8-32 x 5/16, nickel-plated brass
—	1-601806-1	One track, 36 [914.4] long (accommodates 60 positions, 2 end stops)
1-601805-1	—	One track, 36 [914.4] long (accommodates 80 positions, 2 end stops)
604111-1	604161-1	One end stop (2 required per assembly)
—	604199-4	One flanged track, for marker identification, 36 [914.4] long (accommodates 60 positions, 2 end stops)
603817-4	—	One flanged track, for marker identification, 36 [914.4] long (accommodates 80 positions, 2 end stops)
604008-1	604008-1	One cutting tool (track or tape)
601804-8	—	One #6 kit consisting of 1 ea. P/N 1-604102-1, 100-block assembly; 25 ea. P/N 604111-1, end stops; 2 ea. P/N 1-601805-1, tracks
604007-1	—	One #6 kit consisting of 1 ea. P/N 1-604102-1, 100-block assembly; 50 ea. P/N 604111-1, end stops; 7 ea. 7.25 [184.15] flanged tracks
—	604336-1	One #8 kit consisting of 1 ea. P/N 1-604152-1, 100-block assembly; 50 ea. P/N 604161-1, end stops; 8 ea. 9.5 [241.3] tracks

* Use with Part No. Series 604100, also when more than 4 levels of tabs and/or terminals are installed.
**Use with Part No. Series 604150, also when more than 4 levels of tabs and/or terminals are installed.
Note: When cutting track to required length, use number of positions plus two positions for end stops.

Electrical Ratings	#6	#8
Amps, max.	15*	30
Volts, max.	300	600
Wire range AWG [mm²]	22-14 [0.3-2]	22-10 [0.3-6]
Breakdown voltage, rms Line-to-line	6000	6000
Breakdown voltage, rms Line-to-ground	6000	6000
Operating Temperature	105°C max.	105°C max.

*Known as 20 amp block in industry

Accessory Tabs

See Page No. 10053

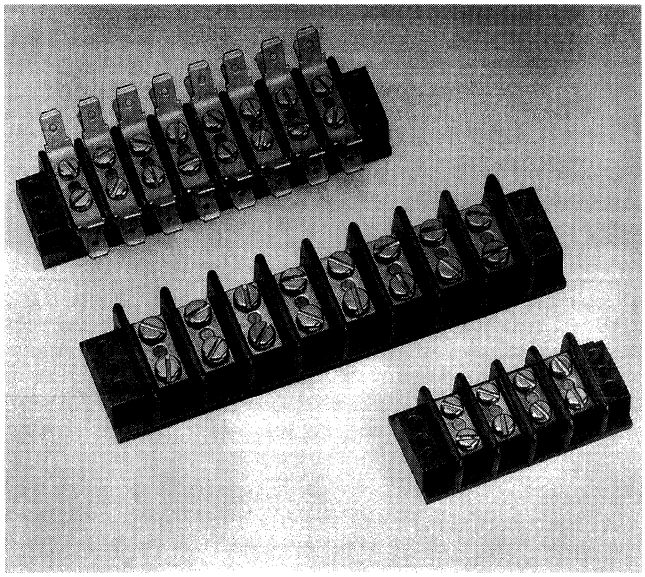
SOURCE: Catalog 82052

Specifications subject to change.

1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

Terminal Blocks



Product Facts

- Breakage-resistant thermoset injection molding
- Completely cured material knock-out plugs for easy through-connections eliminate need for separate "feedthru" styles
- Stronger barriers on base occupying no more space than conventional blocks
- Built-in insulation with internally-molded plugs
- Eliminates separate base-insulator strips
- Molded-in tabs for positive positioning of contact strips even under severe operating conditions
- Skirted base for longer line-to-ground clearance than comparable size blocks
- Totally customized blocks available through wide selection of terminal mounting tabs
- Accepts virtually every electrical terminal on the market today
- Recognized under the Component Program of Underwriters Laboratories Inc., File No. E60677

6-32 Screw Terminal Blocks with 6-32 x 1/4 [6.35] Screws

Note: 14 Pos. Block Dim. (Typ.)—6.906 [175.41] L x 1.125 [28.58] W x .312 [7.92] H

8-32 Screw Terminal Blocks with 8-32 x 5/16 [7.87] Screws

Note: 14 Pos. Block Dim. (Typ.)—8.843 [224.61] L x 1.312 [33.32] W x .656 [16.66] H

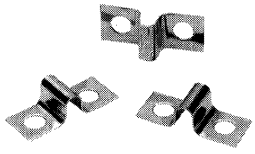
No. of Twin Terminal Positions	Part Numbers	
	With 6-32 x 1/4 Size Screws	With 8-32 x 5/16 Size Screws
2	601716-2	601717-2
4	601716-4	601717-4
6	601716-6	601717-6
8	601716-8	601717-8
10	1-601716-0	1-601717-0
12	1-601716-2	1-601717-2
14	1-601716-4	1-601717-4

Electrical Ratings

	6-32 Screw Terminal Block	FASTON Tab Block	8-32 Screw Terminal Block
Amperes	15	15	30
Breakdown RMS Line-to-line	7,000	3,000	9,000
Breakdown RMS Line-to-ground*	9,000	8,500	9,500
Maximum Wire Size	#12 AWG	#12 AWG	#10 AWG

*Breakdown voltage "Line-to-ground" is flashover and not leakage through board.

Accessory Tabs



Jumper Tabs

Part Numbers:
601985-2 (for 6-32 Screw Block)
604591-1 (for 8-32 Screw Block)

SOURCE: Catalog 82051

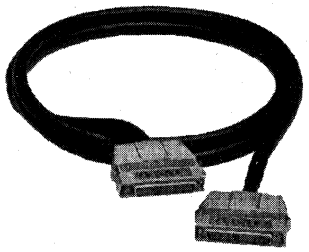
Specifications subject to change.

1-800-522-6752
Product Information Center/ AMP FAX Service

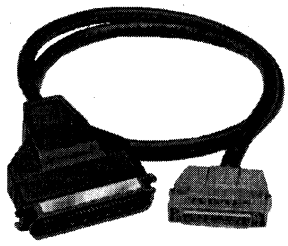
1-800-722-1111
Tooling/Technical Assistance Center

Value Added Cable Assemblies

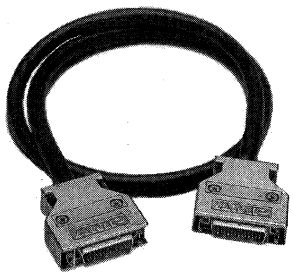
AMPLIMITE .050 Series Cable Assemblies Series III



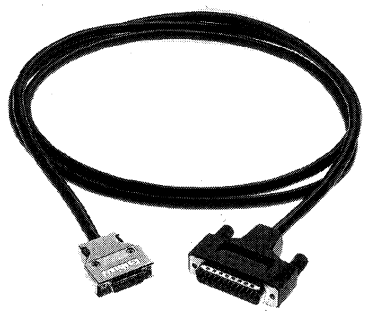
SCSI-2



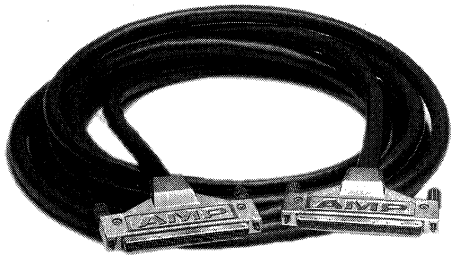
SCSI-1 to SCSI-2



RS-232 (Alternate)



RS-232 (Alternate) to RS-232



IPI-2 and HIPPI

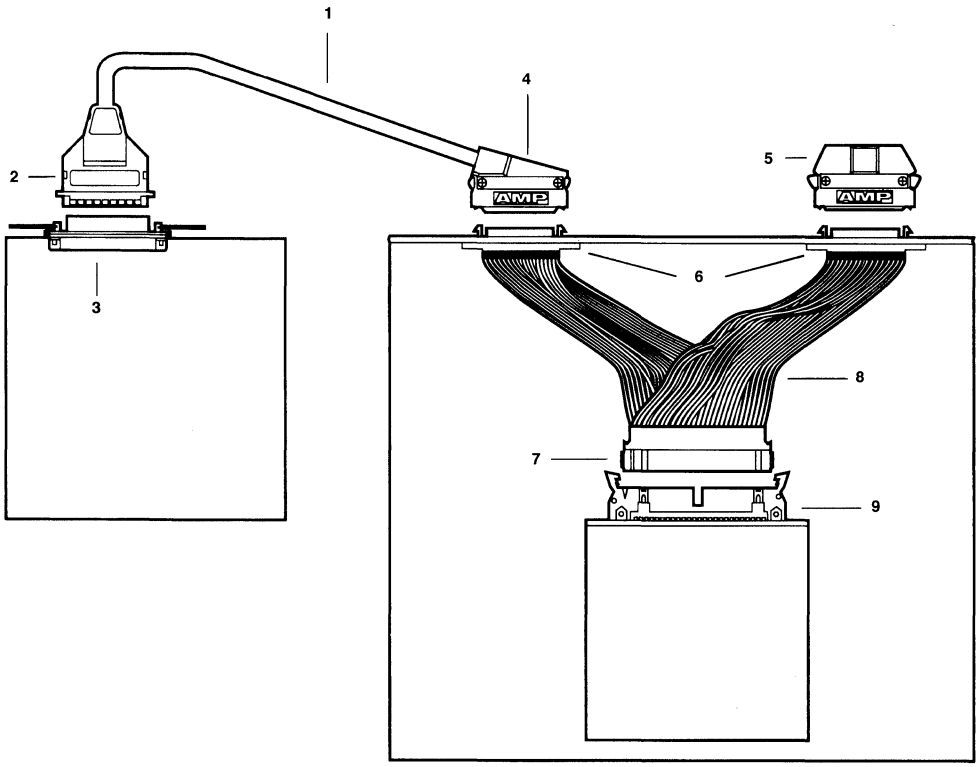
Application	Assembly	Part Numbers		
		2 feet	2 meters	3 meters
SCSI-2	50 pos. .050 Series Plug to 50 pos. .050 Series Plug	750254-1	750254-2	750254-3
SCSI-2*	68 pos. .050 Series Plug to 68 pos. .050 Series Plug	750732-3	750732-2	750732-4
SCSI-1 to SCSI-2	50 pos. CHAMP Conn. to 50 pos. .050 Series Plug	750342-3	750342-5	—
RS-232 (Alternate)	26 pos. .050 Series Plug to 26 pos. .050 Series Plug	750255-1	750255-2	750255-3
RS-232 to RS-232 Alt.	Std. 25 pos. AMPLIMITE Plug to 26 pos. .050 Series Plug	750257-1	750257-2	—

Application	Assembly	Part Numbers		
		5 meters	15 meters	25 meters
IPI-2 and HIPPI	100 pos. .050 Series Plug to 100 pos. .050 Series Plug	749755-2	749755-3	749755-4

*This version has spring latches. Consult AMP for availability of jackscrew version.
Note: .050 centerline ribbon cable assemblies are available in single or double ended versions. These assemblies are made using AMPLIMITE .050 Series panel mount connectors, AMPLIMITE .050 Series all-plastic connectors and AMP-LATCH Novo receptacles. Consult AMP.
SCSI—Small Computer Systems Interface
HIPPI—High Performance Parallel Interface
IPI—Intelligent Peripheral Interface

AMPLIMITE .050 Series
Cable Assemblies
Series III
(Continued)

SCSI-1 to SCSI-2 Application



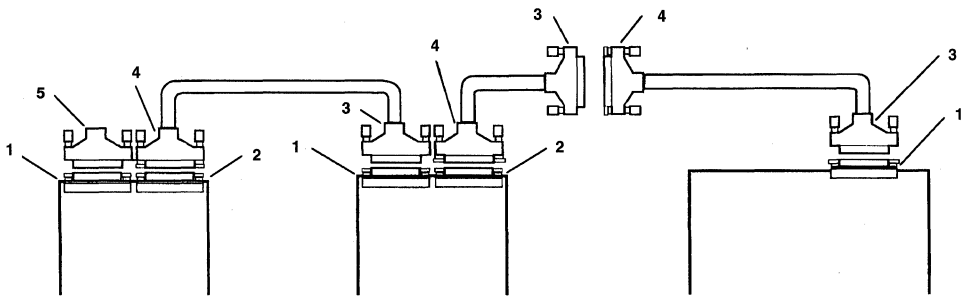
1. SCSI Transition Cable Assembly
2. Shielded CHAMP Plug Connector
3. Shielded CHAMP pcb Connector
4. Shielded AMPLIMITE .050 Series Plug with Backshell
5. Shielded AMPLIMITE .050 Series Termination Connector
6. Shielded AMPLIMITE .050 Series, Panel-Mount Receptacles
7. AMP-LATCH Novo Receptacle
8. Unshielded AMP-LATCH to Shielded AMPLIMITE .050 Series Daisy Chain Assembly
9. AMP-LATCH Universal Ejection Style Pin Header

SOURCE: Catalog 82068

Specifications subject to change.
1-800-522-6752 Product Information Center/ AMP FAX Service
1-800-722-1111 Tooling/Technical Assistance Center

AMPLIMITE .050 Series
Cable Assemblies
Series III
(Continued)

Typical IPI-2 and HIPPI Application



Using AMPLIMITE .050 Series Shielded Board-Mount and Cable Connectors and Terminators

1. Shielded Board-Mount Right-Angle Receptacle with Female Screwlocks
2. Shielded Board-Mount Right-Angle Plug with Male Screwlocks
3. Cable Connectors, Shielded Plug with Backshell and Male Jackscrews
4. Cable Connector, Shielded Receptacle with Backshell and Female Jackscrews
5. Shielded Terminator

Compatible Round Jacketed Cables (for AMPLIMITE .050 Series Connectors)

Chart lists round jacketed cables qualified for use with AMPLIMITE .050 Series cable connectors, see Section 2. Contact cable manufacturers for current specifications and to determine compatibility with SCSI standards.

Manufacturer	Impedance Differential/ Single-Ended	Number of Conductors	Conductor O.D.	AWG	Cable O.D.	Part Number
Astro	122/72	50	**.030-.032** [0.72-0.81]	28	**.410** [10.41]	52-107-B
Astro	137/83	50	**.033-.035** [0.84-0.89]	28	**.410** [10.41]	52-107-C
Astro	140/88	50	**.034-.036** [0.86-0.91]	28	**.430** [10.92]	52-552-E
Belden	117/77	50	**.033-.035** [0.84-0.89]	28	**.420** [10.67]	1401A
Belden	117/77	50	**.033-.035** [0.84-0.89]	28	**.480** [12.19]	1403A
Berk-Tek, Inc.	153/100	50	**.034-.036** [0.86-0.91]	30 & 28	**.430** [10.92]	270288
Berk-Tek, Inc.	134/87	50	**.034-.036** [0.86-0.91]	28	**.440** [11.18]	270287
Berk-Tek, Inc.	102/66	50	**.029-.031** [0.74-0.79]	28	**.385** [9.78]	271210
C&M Corp.	—	50	**.033-.035** [0.84-0.89]	28	—	62327
C&M Corp.	100/	50	**.031-.033** [0.74-0.84]	28	**.430** [10.92]	16349
C&M Corp.	130/88	50	**.033** [0.84]	28	**.420** [10.67]	63281
Furakawa	100/	50	**.029** [0.74]	28	**.327** [8.31]	OAEVCSAB-25P
Fujikura	130/88	50	**.033-.035** [0.84-.089]	28	**.420** [10.67]	KEFV-SLA+SLBAWG28x25P
Fujikura	130/88	68	**.033-.035** [0.84-.089]	28	**.490** [12.45]	KEFV-SLA+SBAWG28x34P
Hitachi[1]	109/70	50	**.026** [0.66]	28	**.335** [8.51]	SP23-30223YA
Hitachi[1]	130/79	50	**.031** [0.79]	28	**.394** [10.01]	SP23-29145YB
Hitachi	92/60	50	**.023** [0.58]	28	**.312** [7.92]	8373
Hitachi	112/77	50	**.028** [0.71]	28	**.337** [8.56]	8331
Hitachi	123/80	50	**.034** [0.86]	28	**.420** [10.67]	8213
Hitachi	123/106	50	**.029** [0.74]	28	**.344** [8.74]	8343
Hitachi	126/85	50	**.035** [0.89]	28	**.435** [11.05]	8406
Hitachi	132/87	50	**.034** [0.86]	28	**.416** [10.57]	8329
Hitachi	132/87	50	**.034** [0.86]	28	**.435** [11.05]	8412
Hitachi	132/87	50	**.034** [0.86]	28	**.416** [10.57]	8360
Hitachi	141/90	50	**.035** [0.89]	28	**.420** [10.67]	8212
Hitachi	92/60	68	**.023** [0.58]	28	**.350** [8.89]	8372
Hitachi	115/66	68	**.032** [0.81]	28	**.440** [11.18]	8341
Hitachi	123/80	68	**.035** [0.89]	28	**.465** [11.81]	8385
Hitachi	141/90	68	**.035** [0.89]	28	**.436** [11.07]	8380
Hitachi	126/85	50	**.034-.036** [0.86-0.91]	28	**.410** [10.41]	D2807
Hitachi	141/90	50	**.034-.036** [0.86-0.91]	28	**.410** [10.41]	N2807
Madison Cable	106/68	50	**.029-.031** [0.74-0.79]	28	**.370** [9.40]	50SDK00025 (Black) 50SDK00026 (Gray)
Madison Cable	106/68	50	**.029-.031** [0.74-0.79]	28	**.360** [9.14]	50SD08BTIA (Black)
Madison Cable	132/87	50	**.035** [0.89]	28	**.430** [10.92]	50CDK00007 (Black)
Madison Cable	120/77	50	**.034-.035** [0.86-0.89]	28	**.405** [10.29]	50SD09BTIH (Black)
Madison Cable	133/81	50	**.034-.036** [0.86-0.89]	28	**.405** [10.29]	50SD09BTID (Black)
Madison Cable	107/68	68	**.029-.031** [0.74-0.79]	28	**.410** [10.41]	68SDK00025 (Black)
Madison Cable	106/68	20 (Non-twisted)	**.029-.031** [0.74-0.79]	28	**.225** [5.72]	20SDC00008
Madison Cable	106/68	20	**.029-.031** [0.74-0.79]	28	**.260** [6.60]	20SDK00025
Madison Cable	106/68	26	**.029-.031** [0.74-0.79]	28	**.275** [6.98]	26SDK00025
Madison Cable	106/68	28	**.029-.031** [0.74-0.79]	28	**.280** [7.11]	28SDK00025
Madison Cable	106/68	40	**.029-.031** [0.74-0.79]	28	**.340** [8.64]	40SDK00025 (Black)
Madison Cable	106/68	60	**.029-.031** [0.74-0.79]	28	**.385** [9.78]	60SDK00026 (Gray)
Madison Cable	107/68	80	**.029-.031** [0.74-0.79]	28	**.435** [11.05]	80SDK00025
Madison Cable	108/68	100	**.029-.031** [0.74-0.79]	28	**.470** [11.94]	DOSDK00025 (Black) DOSDK00026 (Gray)
Madison Cable	108/68	120	**.029-.031** [0.74-0.79]	28	**.500** [12.70]	DTSDK000025 (Black) DTSDK00026 (Gray)
Madison Cable	106/68	50	**.029-.031** [0.74-0.79]	28	**.360** [9.14]	SPEC4084-5A
Madison Cable	132/87	50	**.035** [0.89]	28	**.430** [10.92]	SPEC4135
Madison Cable	133/81	50	**.034-.036** [0.86-0.91]	28	**.405** [10.29]	SPEC4099-5A
Montrose	123/76	50	**.033-.035** [0.84-0.89]	28	**.440** [11.18]	CBL7251
Montrose	130/83	50	**.033-.035** [0.84-0.89]	28	**.445** [11.30]	CBL7259
Montrose	147/90	50	**.033-.035** [0.84-0.89] (24 pr) **.032-.034** [0.81-0.86] (1 pr)	30 28	**.440** [11.18]	CBL7203
NEK/Helix	106/	50	**.026-.030** [0.66-0.76]	28	**.370** [9.40]	H11223
NED/Helix	132/85	50	**.034-.036** [0.86-0.91]	28	**.420** [10.67]	J0816-3

Note: These cables are qualified on the mass termination tool only.

SOURCE: Catalog 82068

Specifications subject to change.

1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

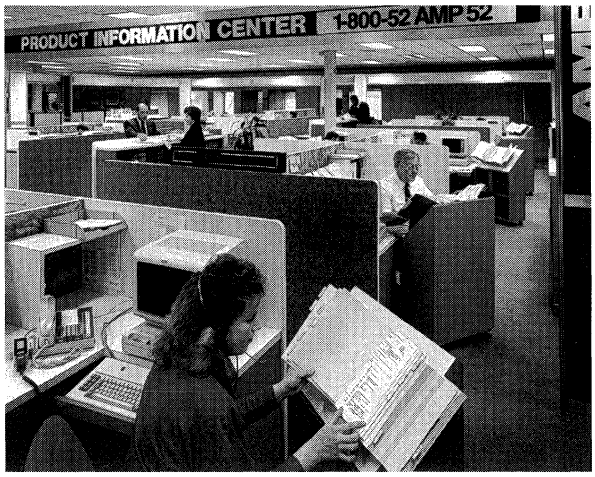
Need Information?
Call the AMP

PRODUCT INFORMATION CENTER

1-800-522-6752

The Product Information Center is staffed with specialists well versed in all AMP products. The Center can provide you with:

- Catalogs
- Technical Support
- Product Samples



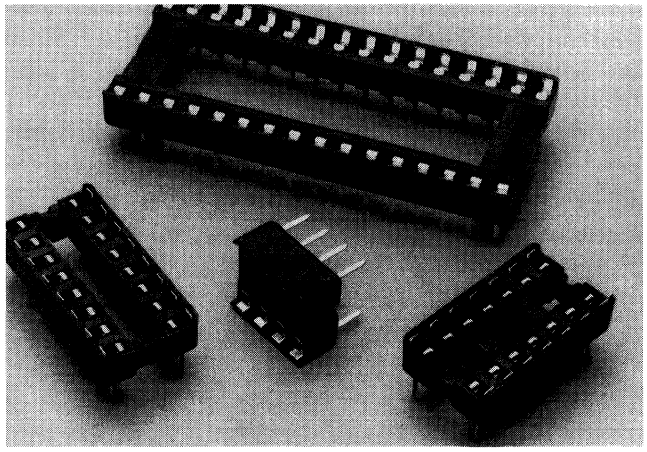
AMP FAX SERVICE

Instant information by FAX 24-hours a day.

- Drawings
- Instruction Sheets (IS#)
- Product Specifications
- Application Specifications
- Latest Revision of Catalog Pages
- AMP Authorized Distributors Locations
- Instructions for AMP FAX Service

See Inside Front Cover for Instructions on "How to Access" AMP FAX SERVICE

DIP Sockets — Solder Tail Dual Leaf (DL), Economy and Standard



Product Facts

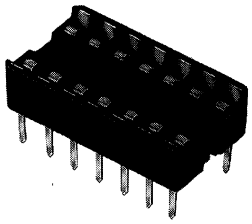
- Low profile — .175 [4.45] max. seating plane above pc board
- Dual wiping contacts
- Face wipe contacts for high reliability and constant, low resistance
- Anti-overstress prevents contact damage
- Large target area with tapered lead-in ramps for easy DIP insertion
- "True closed bottom" design totally prevents solder and contamination from entering contact cavity
- Stackable end-to-end and side-to-side (brickwalling) for high board density
- Housing standoffs and slots facilitate board cleaning
- Family of 6 through 64 positions
- Retention-style tails or straight solder tails
- Visual polarization
- Designed for automatic machine insertion — DIP-to-socket or socket-to-board (tube loaded)
- Tin or gold-plated phosphor bronze or beryllium copper contacts
- Designed to meet EIA RS-415, MIL-S-83734 and stringent computer specifications

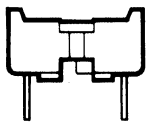
- Recognized under the Component Program of Underwriters Laboratories Inc., File No. E28476
- Certified by Canadian Standards Association, File No. LR 7189

DIP Sockets — DL Standard

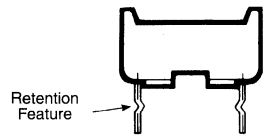
Sockets accept .008—.014 [0.2—0.36] thick IC leads

Note: All socket positions have "True Closed Bottom" design which allows no solder or flux wicking at class 1 conditions of EIA 486.





Sockets with Straight Solder Tails



Sockets with Retention Feature Solder Tails

Note: 24 Pos. Housing Dim. (Typ.)—1.195 [30.35] L x .394 [10.01] W x .210 [5.33] H

No. of Pos.	Sockets with Straight Solder Tails[1]				Sockets with Retention Solder Tails[1]			
	Beryllium Copper		Phosphor Bronze		Beryllium Copper		Phosphor Bronze	
	Tinned	.000030 [0.00076][2] Gold Plate	Tinned	.000015 [0.00038][2] Gold Plate	Tinned	.000030 [0.00076][2] Gold Plate	Tinned	.000015 [0.00038][2] Gold Plate
6[3]	2-641296-1	2-641296-2	2-641296-3	2-641296-4	2-641259-1	2-641259-2	2-641259-3	—
8[3]	2-640463-1	2-640463-2	2-640463-3	2-640463-4	2-641260-1	2-641260-2	2-641260-3	2-641260-4
14	2-641599-1	2-641599-2	2-641599-3	2-641599-4	2-641609-1	2-641609-2	2-641609-3	2-641609-4
16	2-641600-1	2-641600-2	2-641600-3	2-641600-4	2-641610-1	2-641610-2	2-641610-3	2-641610-4
18	2-641601-1	2-641601-2	2-641601-3	2-641601-4	2-641611-1	2-641611-2	2-641611-3	—
20	2-641602-1	2-641602-2	2-641602-3	2-641602-4	2-641612-1	2-641612-2	2-641612-3	2-641612-4
22	2-644105-1	—	2-644105-3	—	—	—	—	—
22	2-641603-1	—	2-641603-3	—	—	—	2-641613-3	—
24	2-641932-1	2-641932-2	2-641932-3	2-641932-4	2-641933-1	—	2-641933-3	2-641933-4
24	2-382471-1	—	2-382471-3	—	—	—	—	—
24	2-641604-1	2-641604-2	2-641604-3	2-641604-4	2-641614-1	2-641614-2	2-641614-3	2-641614-4
28	2-382571-1	—	2-382571-3	—	—	—	—	—
28	2-641605-1	2-641605-2	2-641605-3	2-641605-4	2-641615-1	2-641615-2	2-641615-3	2-641615-4
32	See Page 11003							
40	2-641606-1	2-641606-2	2-641606-3	2-641606-4	2-641616-1	2-641616-2	2-641616-3	2-641616-4
42	2-382374-1	2-382374-2	2-382374-3	—	—	—	—	—
48	2-643574-1	2-643574-2	2-643574-3	2-643574-4	2-643576-1	2-643576-2	2-643576-3	2-643576-4
64	643575-1	643575-2	643575-3	643575-4	643577-1	643577-2	643577-3	643577-4

[1] ONLY sockets with straight solder tails are recommended for automatic insertion. All parts are packaged in plastic tubes. Sockets with retention feature are packaged in plastic tubes for handling and storage convenience only.
[2] Gold thickness in contact area; tin-lead plate on solder tails.
[3] Closed frame design.

SOURCE: Catalog 82172

See Appendix for IC Socket Selection Guide

Specifications subject to change.

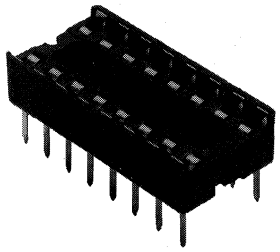
1-800-522-6752
Product Information Center/ AMP FAX Service

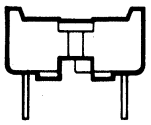
1-800-722-1111
Tooling/Technical Assistance Center

DIP Sockets — DL Standard, Over-the-Component (OTC) Style

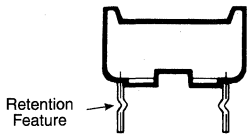
Sockets accept .008—.014 [0.2—0.36] thick IC leads

Note: All socket positions have "True Closed Bottom" design which allows no solder or flux wicking at class 1 conditions of EIA 486.





Sockets with Straight Solder Tails



Sockets with Retention Feature Solder Tails

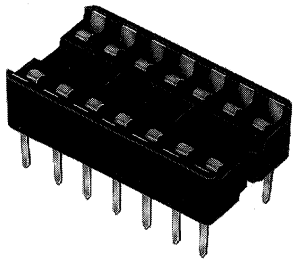
Note: 20 Pos. Housing Dim. (Typ.)—.995 [25.27] L x .494 [12.55] W x .210 [5.33] H

No. of Pos.	Sockets with Straight Solder Tails				Sockets with Retention Solder Tails		
	Beryllium Copper		Phosphor Bronze		Beryllium Copper		Phosphor Bronze
	Tinned	.000030 [0.00076][1] Gold Plate	Tinned	.000015 [0.00038][1] Gold Plate	Tinned	.000030 [0.00076][1] Gold Plate	Tinned
16	2-644100-1	—	2-644100-3	—	—	—	—
18	—	—	2-382060-3	—	—	—	—
20	—	—	2-382515-3	—	—	—	—
28	2-382415-1	—	2-382415-3	—	—	—	—
32	2-644018-1	2-644018-2	2-644018-3	2-644018-4	2-382189-1	2-382189-2	2-382189-3
40	—	—	2-382153-3	—	—	—	—

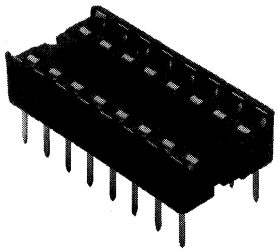
[1] Gold thickness in contact area with tin-lead plate on solder tails. All parts packaged in plastic tubes.

DIP Sockets — DL Economy

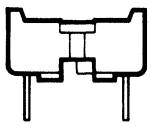
Sockets accept .008—.014 [0.2—0.36] thick IC leads



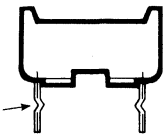
Ladder-Style Socket



Over-the-Component (OTC)-Style Socket



Sockets with Straight Solder Tails



Sockets with Retention Feature Solder Tails

Note: 24 Pos. Housing Dim. (Typ.)—1.195 [30.35] L x .394 [10.01] W x .210 [5.33] H

No. of Pos.	Ladder Style[1]		OTC Style[1]	
	Straight Solder Tails	Retention Solder Tails	Straight Solder Tails	Retention Solder Tails
6[2]	2-641296-5	—	—	—
8[2]	2-640963-5	2-641260-5	—	—
14	2-641599-5	2-641609-5	—	—
16	2-641600-5	2-641610-5	2-644100-5	—
18	2-641601-5	2-641611-5	—	—
20	2-641602-5	2-641612-5	2-382515-5	—
22	2-644105-5	—	—	—
22	2-641603-5	—	—	—
24	2-641932-5	—	—	—
24	2-382471-5	—	—	—
24	2-641604-5	—	—	—
28	2-382571-5	—	—	—
28	2-641605-5	2-641615-5	2-382415-5	—
32	—	—	2-644018-5	2-382189-5
40	2-641606-5	2-641616-5	—	—
42	2-382374-5	—	—	—
48	2-643574-5	—	—	—
64	643575-5	—	—	—

[1] All parts packaged in plastic tubes.
[2] Solid body (not ladder style)

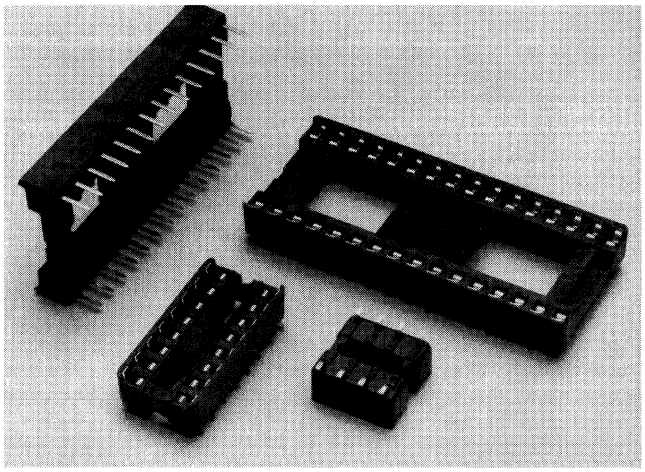
SOURCE: Catalog 82172

Specifications subject to change.
1-800-522-6752 Product Information Center/ AMP FAX Service
1-800-722-1111 Tooling/Technical Assistance Center

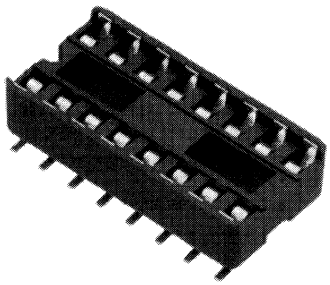
DIP Sockets — DL Surface Mount and Surface Mount Compatible

Product Facts

- Dual wiping, dual leaf contact design for high reliability and constant low resistance
- Anti-overstress prevents contact damage
- Sealed "true closed bottom" inhibits solder wicking and flux contamination
- Robotic compatibility facilitates automatic assembly-vacuum pick-up
- Choice of tin- or gold-plated contacts for wider versatility
- Stable and co-planar solder tails yield reliable surface mounting to pc board
- High temperature plastic and contact material are compatible with VPR and IR soldering
- Recognized under the Component Program of Underwriters Laboratories Inc., File No. E28476
- Certified by Canadian Standards Association, File No. LR 7189



Sockets accept .008—.014 [0.2—0.36] thick IC leads



Note: 24 Pos. Housing Dim. (Typ.)—1.195 [30.35] L x .694 [17.63] W x .210 [5.33] H

No. of Pos.	Phosphor Bronze				Beryllium Copper	
	Surface Mount[1]		Through-Hole[1,2]		Surface Mount[1]	Through-Hole[1,2]
	Tinned	Gold Plate[3]	Tinned	Gold Plate[3]	Tinned	Tinned
8	2-382401-3	2-382401-4	2-382462-3	2-382462-4	2-382401-1	2-382462-1
14	2-382402-3	2-382402-4	2-382463-3	2-382463-4	2-382402-1	2-382463-1
16	2-382403-3	2-382403-4	2-382464-3	2-382464-4	2-382403-1	2-382464-1
18	2-382404-3	—	2-382557-3	—	2-382404-1	2-382557-1
20	2-382405-3	2-382405-4	2-382465-3	2-382465-4	2-382405-1	2-382465-1
24	2-382408-3	2-382408-4	2-382466-3	2-382466-4	2-382408-1	2-382466-1
28	—	—	—	—	2-382636-1	—
28	2-382409-3	2-382409-4	2-382467-3	2-382467-4	2-382409-1	2-382467-1
32	2-382424-3	2-382424-4	2-382470-3	2-382470-4	2-382424-1	2-382470-1
40	2-382411-3	2-382411-4	2-382468-3	2-382468-4	2-382411-1	2-382468-1

[1]All parts packaged in plastic tubes.
[2]Through-hole sockets are compatible with surface mount soldering practices.
[3]Two .000015 [0.00038] min. thick gold stripes in contact area with tin-lead (93/7) on solder tails and nickel on balance of contact.

SOURCE: Catalog 82172

Specifications subject to change.

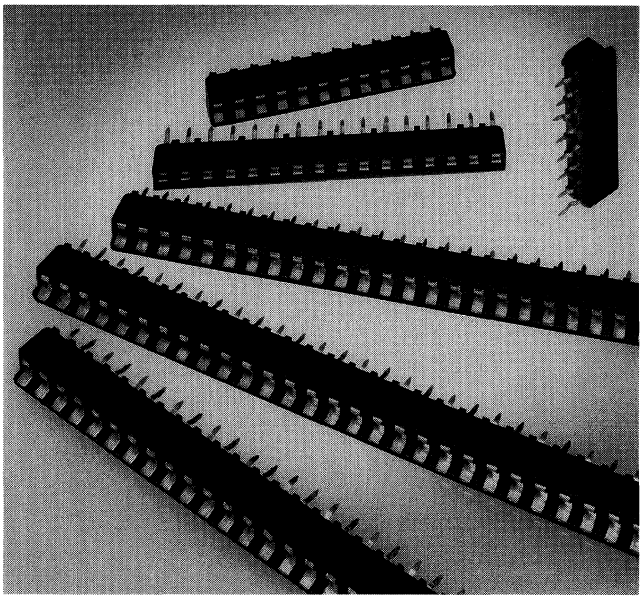
1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

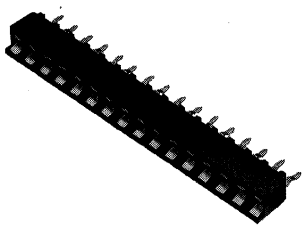
SIP Sockets — (DIPLOMATE)
Solder Tail Dual Leaf (DL)

Product Facts

- Low profile — .210 [5.33] max. seating plane above pc board
- Dual wiping contacts
- Face wipe contacts for high reliability and constant, low resistance
- Anti-overstress prevents contact damage
- Large target area with tapered lead-in ramps for easy SIP insertion
- "True closed bottom" design inhibits solder wicking and flux contamination
- Stackable end-to-end and side-to-side (brickwalling) for high board density
- Housing standoffs and slots facilitate board cleaning
- Family of 3 through 30 positions
- Retention-style solder tails
- Visual polarization
- Meets the material requirements of Table 23.1 of UL 1410 Standard for Television Receivers and Video Products
- Tin or gold-plated beryllium copper or tin-plated phosphor bronze contacts
- Designed to meet EIA RS-415, MIL-S-83734 and stringent computer specifications
- Recognized under the Component Program of Underwriters Laboratories Inc., File No. E28476
- Certified by Canadian Standards Association, File No. LR 7189



Sockets accept .008-.014 [0.2-0.36] thick x .030 [0.76] max. wide rectangular IC leads



Note: 14 Pos. Housing Dim. (Typ.)—1.395 [35.43] L x .154 [3.91] W x .210 [5.33] H

No. of Pos	Straight Solder Tail			Retention Solder Tail			Package Quantities		
	Beryllium Copper		Phosphor Bronze	Beryllium Copper		Phosphor Bronze			
	Tinned	.000030 [0.00076] Gold Plate	Tinned	Tinned	.000030 [0.00076] Gold Plate	Tinned	Qty. Per Tray	Trays Per Box	Total Qty. Per Box
3	382437-1	382437-2	382437-3	—	—	—	740	4	2960
4	382438-1	—	—	—	—	—	560	4	2240
5	382439-1	—	—	—	—	—	440	4	1760
6	382440-1	—	382440-3	—	—	—	360	4	1440
7	382441-1	—	382441-3	—	—	—	320	4	1280
8	643640-1	643640-2	643640-3	643640-6	—	643640-8	280	4	1120
9	643641-1	643641-2	643641-3	643641-6	—	643641-8	240	4	960
10	643642-1	643642-2	643642-3	643642-6	—	643642-8	220	4	880
11	643643-1	643643-2	643643-3	643643-6	—	643643-8	200	4	800
12	643644-1	643644-2	643644-3	643644-6	643644-7	643644-8	180	4	720
13	643645-1	643645-2	643645-3	643645-6	—	—	160	4	640
14	643646-1	643646-2	643646-3	643646-6	643646-7	643646-8	160	4	640
15	643647-1	—	643647-3	643647-6	—	643647-8	140	4	560
16	643648-1	643648-2	643648-3	643648-6	—	643648-8	140	4	560
17	643649-1	643649-2	643649-3	643649-6	—	643649-8	120	4	480
18	643650-1	—	643650-3	643650-6	—	643650-8	120	4	480
19	—	—	643651-3	—	—	643651-8	100	4	400
20	643652-1	643652-2	643652-3	643652-6	643652-7	643652-8	100	4	400
21	643653-1	—	643653-3	643653-6	643653-7	643653-8	100	4	400
22	643654-1	643654-2	643654-3	643654-6	—	643654-8	100	4	400
23	—	—	—	—	643655-7	643655-8	80	4	320
24	—	643656-2	643656-3	643656-6	—	—	80	4	320
25	643657-1	643657-2	—	643657-6	643657-7	—	80	4	320
28	—	—	643660-3	—	—	643660-8	80	4	320
29	—	—	643661-3	—	—	—	60	4	240
30	643662-1	—	643662-3	—	—	—	60	4	240

SOURCE: Catalog 82172

Specifications subject to change.

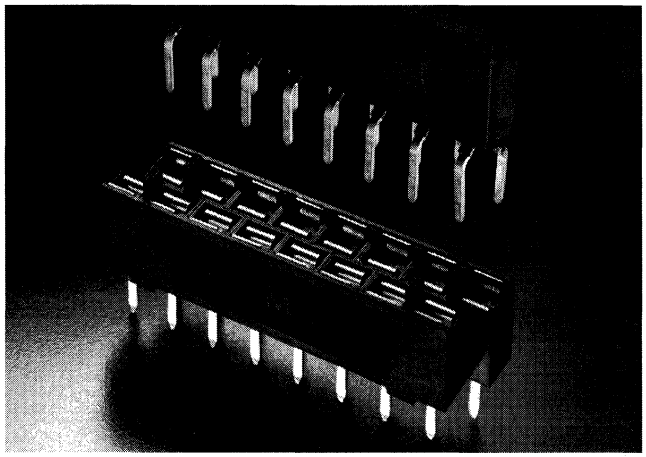
1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

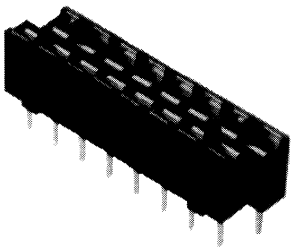
ZIP Sockets — (DIPLOMATE)
ZP Solder Tail Dual Leaf (DL)

Product Facts

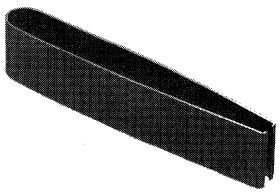
- Proven Dual Leaf (DL) contact design
- Dual wiping contacts
- IC package insertion stop prevents package over-insertion
- Large lead-in for easy insertion
- Anti-overstress prevents contact damage
- .015 [0.38] pc board stand-offs for undersocket cleaning clearance
- Solder tails are "true positioned" for automatic insertion into the pc board
- "True closed bottom" design inhibits solder wicking and flux contamination
- Stackable end-to-end and side-to-side (brickwalling) for high board density
- Family of 16 through 40 positions
- Recognized under the Component Program of Underwriters Laboratories Inc., File No. E28476
- Certified by Canadian Standards Association, File No. LR 7189



Sockets accept .008–.014 [0.2–0.36] thick x .030 [0.76] max. wide rectangular IC leads



ZIP Device Extraction Tool



Note: 20 Pos. Housing Dim. (Typ.)—1.045 [26.54] L x .194 [4.93] W x .225 [5.72] H

No. of Pos.	Phosphor Bronze		Package Qtys.	
	Tinned	.000015 [0.00038][1] Gold Plate	Tube	Box
16	2-382006-3	2-382006-4	26	6500
20	2-382007-3	2-382007-4	21	5250
24	2-382008-3	2-382008-4	17	4250
28	2-382009-3	2-382009-4	15	3750
40	2-382040-3	—	10	2500

[1] Gold thickness in contact area with tin plating on solder tails.

SOURCE: Catalog 82172

Specifications subject to change.

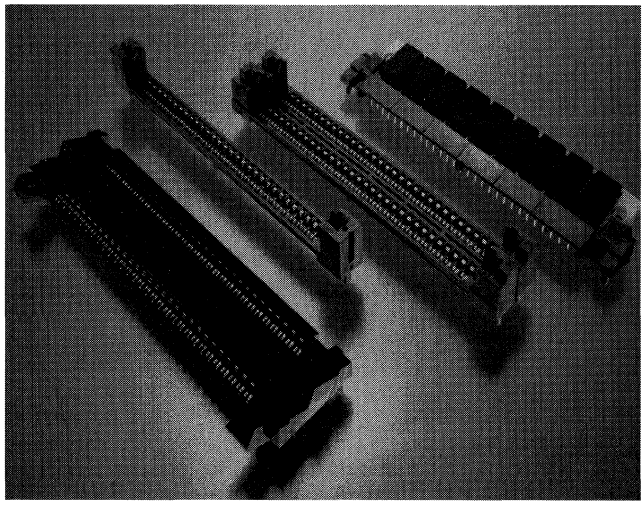
1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

SIMM Sockets — (DIPLOMATE)

Product Facts

- Various circuit sizes available
- Low overall and mated height profiles
- Redundant contact system
- High normal force interface
- Contact anti-overstress design
- Closed bottom design
- Standoffs for flux removal
- Accepts .050±.003 [1.27±0.08] module thicknesses
- Heat resistant housing material
- Simple insertion/extraction of board
- Designed for robotic assembly methods
- Gold plating option
- Provides high density packaging
- Allows for module upgrading
- Low applied cost
- Recognized under the Component Program of Underwriters Laboratories Inc., File No. E28476
- Certified by Canadian Standards Association, File No. LR 7189



Standard Vertical

Note: 30 Pos. Housing Dim. (Typ.)—Single Row, 3.800 [96.52] L x .270 [6.86] W x .510 [12.95] H;
Dual Row, 3.800 [96.52] L x .570 [14.48] W x .510 [12.95] H

No. of Pos.[1]	Single Row		Dual Row	
	Loose Piece		.300 [7.62] CL	
	Tin[2]	Gold[3]	Tin[2]	Gold[3]
22	643922-1	643922-2	—	—
30	643930-1	643930-2	2-382230-1[4]	2-382230-2[4]
35	643935-1	—	—	—
42	643942-1	—	—	—

[1] Other sizes and variations can be made available upon request.
[2] Bright tin-lead plate
[3] .000030 [0.00076] thick gold plate on the contact area and tin-lead plate on the solder tails.
[4] Packaged in slide tube for robotic assembly.

Memory Module Extraction Tool
Part No. 382264-1

Low Profile 27° (Angled) Sockets mount on .400 [10.16]* (single row versions) or .500 [12.70] (dual row versions) row-to-row centers

Note: 30 Pos. Housing Dim. (Typ.)—Single Row, 3.800 [96.52] L x .545 [13.84] W x .306 [7.77] H;
Dual Row, 3.800 [96.52] L x .963 [24.46] W x .306 [7.77] H

No. of Pos.[1]	Single Row		Dual Row	
	Tin[2]	Gold[3]	Tin[2]	Gold[3]
30	2-382030-1	2-382030-2	2-382130-1	2-382130-2
35	382035-1	—	—	—
42	382042-1	382042-2	—	—

[1] Other sizes and variations can be made available upon request.
[2] Bright tin-lead plate.
[3] .000030 [0.00076] thick gold plate on the contact area and tin-lead plate on the solder tails.

Memory Module Extraction Tool
Part No. 382264-1

*When mounted on .400 [10.16] centerlines, all modules in front of the one to be removed must be removed first.

SOURCE: Catalog 82172

Specifications subject to change.

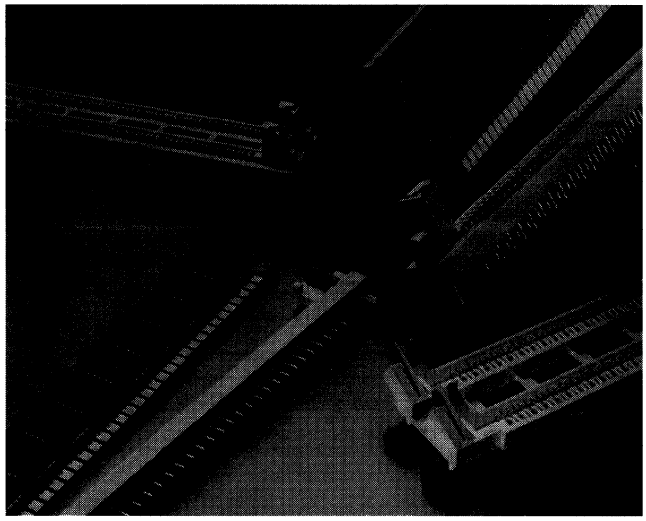
1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

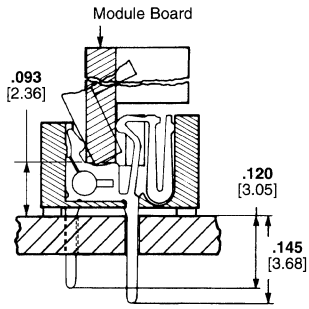
SIMM Sockets — (MICRO-EDGE) with Plastic Latches

Product Facts

- Positive wipe occurs on each pad during insertion of module
- Redundant contact system
- Contact anti-overstress design
- Very low insertion force
- Free lateral movement of contacts in the housing
- Designed for robotic assembly methods
- Heat resistant housing materials
- Provides high density packaging
- Positive polarization of module
- Anti-overstress of latches helps to prevent breakage
- Recognized under the Component Program of Underwriters Laboratories Inc., File No. E28476
- Certified by Canadian Standards Association, File No. LR 7189
- Free 3D and 2D CAD images— See page 56



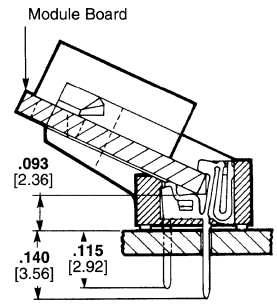
.050 [1.27] Centerline
Vertical Single Row



Note: 68 Pos. Housing Dim. (Typ.)—4.350 [110.49] L x .290 [7.37] W x .500 [12.70] H

No. of Pos.	Part Numbers	
	Tin Plate	Gold Plate
40	821918-2	821919-2
64	821824-6	821825-6
68	821824-7	821825-7
72	821824-8	821825-8
80	821824-9	821825-9

.050 [1.27] Centerline
Low Profile (25°) Single Row (Standard Footprint)



Note: 68 Pos. Housing Dim. (Typ.)—4.350 [110.49] L x .290 [7.37] W x .500 [12.70] H

No. of Pos.	Part Numbers	
	Tin Plate	Gold Plate
64	821947-5	821950-5
68	821947-6	821950-6
72	821947-7	821950-7
80	821947-8	821950-8

SOURCE: Catalog 82172

Specifications subject to change.

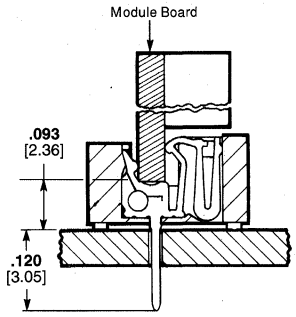
1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

SIMM Sockets — (MICRO-EDGE) with Plastic Latches
(Continued)

.100 [2.54] Centerline

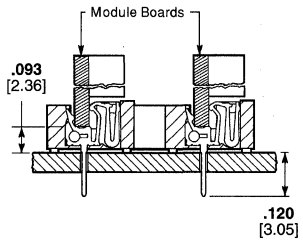
Vertical Single Row



Note: 35 Pos. Housing Dim. (Typ.)—4.300 [109.22] L x .290 [7.37] W x .500 [12.70] H

No. of Pos.	Part Numbers	
	Tin Plate	Gold Plate
22	821828-1	821829-1
30	821828-2	821829-2
35	821828-3	821829-3
40	821828-4	821829-4
42	821828-5	821829-5

Vertical Dual Row (.100 x .300 [2.54 x 7.62] Spacing)

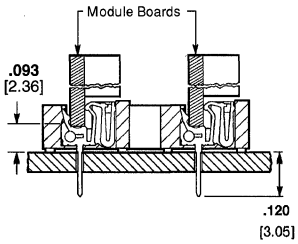


Note: 30 Pos. Housing Dim. (Typ.)—3.800 [96.52] L x .590 [14.99] W x .500 [12.70] H

No. of Pos.	Tin Plate	Gold Plate
30	821885-2	821893-2

Notes: Other sizes can be made available. Contact AMP.

Vertical Dual Row (.100 x .400 [2.54 x 10.16] Spacing)

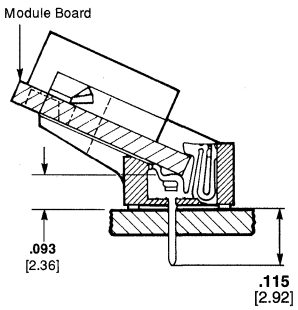


Note: 30 Pos. Housing Dim. (Typ.)—3.800 [96.52] L x .690 [17.53] W x .500 [12.70] H

No. of Pos.	Tin Plate	Gold Plate
30	821830-2	821831-2

Notes: Other sizes can be made available. Contact AMP.

Low Profile (25°) Single Row

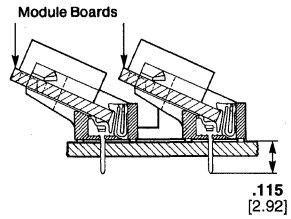


Note: 40 Pos. Housing Dim. (Typ.)—4.800 [121.92] L x .290 [7.37] W x .500 [12.70] H

No. of Pos.	Tin Plate	Gold Plate
30	821876-2	821877-2
40	821876-4	821877-4
42	821876-5	821877-5

Notes: Other sizes can be made available. Contact AMP.

Low Profile Dual Row



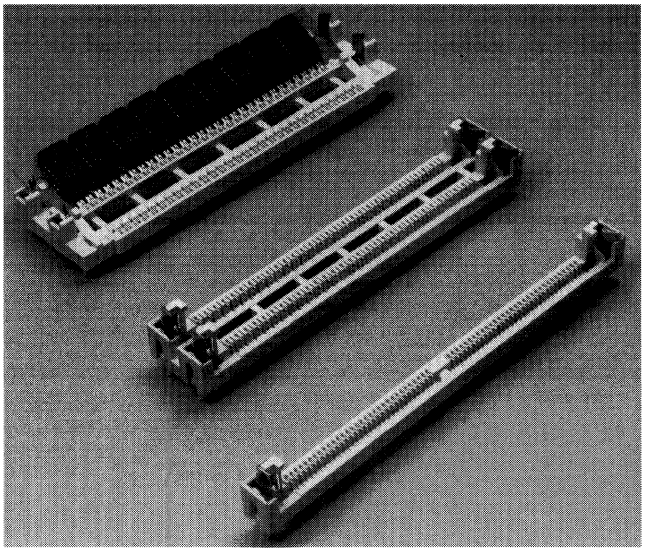
Note: 30 Pos. Housing Dim. (Typ.)—3.800 [96.52] L x .790 [20.07] W x .500 [12.70] H

No. of Pos.	Tin Plate	Gold Plate
30	821832-2	821850-2

Notes: Other sizes can be made available. Contact AMP.

SOURCE: Catalog 82172

SIMM Sockets — (MICRO-EDGE) with Metal Latches

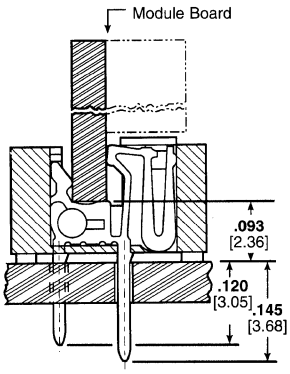


Product Facts

- Metal latches eliminate breakage
- Reliable contact design for durability
- Heat resistant housings withstand hostile environments
- Designed for robotic assembly to facilitate automatic manufacturing operations
- Very low insertion force for easy module insertion
- Positive polarization prevents misinsertion
- Recognized under the Component Program of Underwriters Laboratories Inc., File No. E28476
- Certified by Canadian Standards Association, File No. LR 7189
- Free 3D and 2D CAD images— See page 56

.050 [1.27] Centerline

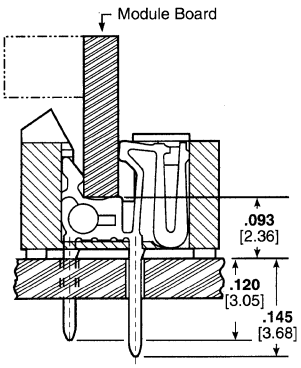
Vertical Single Row (Right Polarization)



Note: 68 Pos. Housing Dim. (Typ.)—4.340 [110.24] L x .290 [7.37] W x .580 [14.73] H

No. of Pos.	Tin Plate		Gold Plate	
	With Fluted Center Post	Without Center Post	With Fluted Center Post	Without Center Post
40	822021-1	822019-1	822032-1	822031-1
64	822021-2	822019-2	822032-2	822031-2
68	822021-3	822019-3	822032-3	822031-3
72	822021-4	822019-4	822032-4	822031-4
80	822021-5	822019-5	822032-5	822031-5

Vertical Single Row (Left Polarization)



Note: 72 Pos. Housing Dim. (Typ.)—4.540 [115.32] L x .290 [7.37] W x .580 [14.73] H

No. of Pos.	Tin Plate	Gold Plate
72	822030-3	821997-3
80	822030-4	821997-4

SOURCE: Catalog 82172

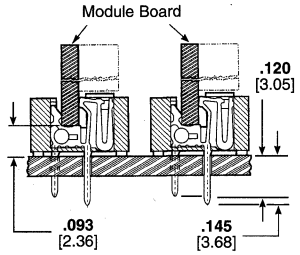
Specifications subject to change.

1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

SIMM Sockets—(MICRO-EDGE) with Metal Latches .050 [1.27] Centerline
(Continued)

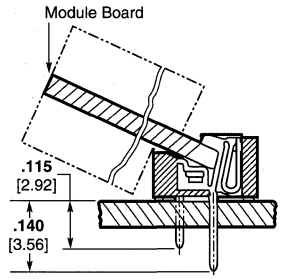
Vertical Dual Row (.100 x .400 [2.54 x 10.16] Spacing)



Note: 68 Pos. Housing Dim. (Typ.)—4.340 [110.24] L x .690 [17.53] W x .500 [12.70] H

No. of Pos.	Tin Plate		Gold Plate	
	With Center Post	Without Center Post	With Center Post	Without Center Post
64	822090-2	822023-2	—	822033-2
68	822090-3	822023-3	—	—
72	822090-4	822023-4	—	822033-4

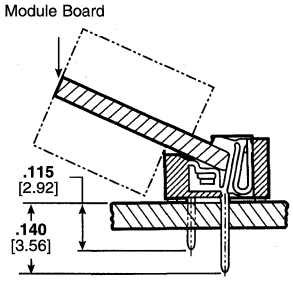
Low Profile (22°) Single Row with Optional Retention Post



Note: 68 Pos. Housing Dim. (Typ.)—4.340 [110.24] L x .290 [7.37] W x .495 [12.57] H

No. of Pos.	Tin Plate		Gold Plate	
	With Center Post	Without Center Post	With Center Post	Without Center Post
64	822134-1	822136-1	822137-1	822138-1
68	822134-2	822136-2	822137-2	822138-2
72	822134-3	822136-3	822137-3	822138-3
80	822134-4	822136-4	822137-4	822138-4

Low Profile (22°) Single Row with Split Retention Post



Note: 68 Pos. Housing Dim. (Typ.)—4.340 [110.24] L x .290 [7.37] W x .495 [12.57] H

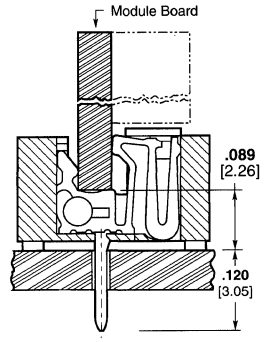
No. of Pos.	Tin Plate	Gold Plate
40	822110-5	822097-5
64	822110-1	822097-1
68	822110-2	822097-2
72	822110-3	822097-3
80	—	822097-4

SOURCE: Catalog 82172

SIMM Sockets — (MICRO-EDGE) with Metal Latches .100 [2.54] Centerline

EADS CD-ROM

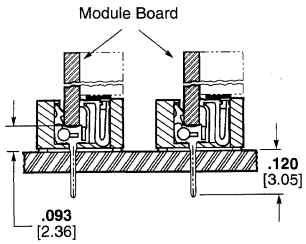
Vertical Single Row



Note: 35 Pos. Housing Dim. (Typ.)—4.290 [108.97] L x .125 [3.18] W x .580 [14.73] H

No. of Pos.	Tin Plate	Gold Plate
22	822056-1	—
30	822056-2	822061-2
35	822056-3	—
40	822056-4	—
42	822056-5	—

Vertical Dual Row (.100 x .300 [2.54 x 7.62] Spacing and .100 x .400 [2.54 x 10.16] Spacing)

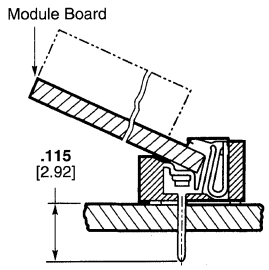


Note: 30 Pos. Housing Dim. (Typ.)—3.790 [96.27] L x .590 [14.99] W x .580 [14.73] H

No. of Pos.	Tin Plate	Gold Plate
30	822058-2[1]	—
	822060-2[2]	822062-2

[1].100 x .300 [2.54 x 7.62] spacing
[2].100 x .400 [2.54 x 10.16] spacing

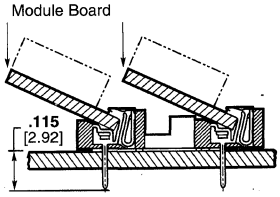
Low Profile (22°) Single Row



Note: 35 Pos. Housing Dim. (Typ.)—4.290 [108.97] L x .290 [7.37] W x .535 [13.59] H

No. of Pos.	Tin Plate	Gold Plate
22	822129-1	822130-1
30	822129-2	822130-2
35	822129-3	822130-3
40	822129-4	822130-4
42	822129-5	822130-5

Low Profile (22°) Dual Row (.100 x .500 [2.54 x 12.70] Spacing)



Note: 30 Pos. Housing Dim. (Typ.)—3.790 [96.27] L x .790 [20.07] W x .535 [13.59] H

No. of Pos.	Tin Plate	Gold Plate
30	822113-2	822132-2
40	822113-4	822132-4

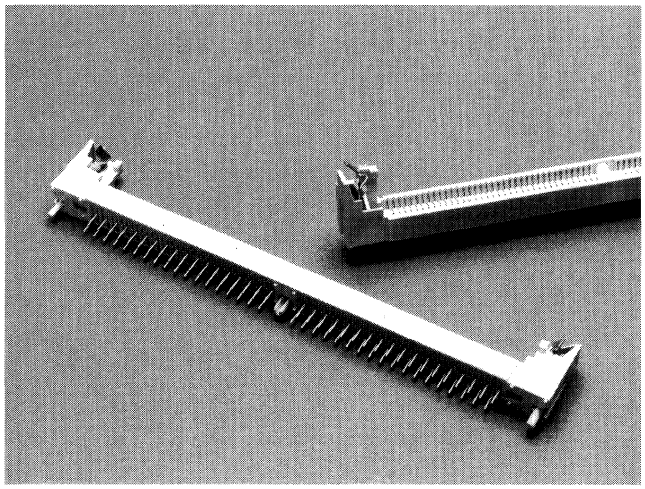
SOURCE: Catalog 82172

Specifications subject to change.
1-800-522-6752 Product Information Center/ AMP FAX Service
1-800-722-1111 Tooling/Technical Assistance Center

SIMM Sockets — SIMM II, Vertical Cam-In

Product Facts

- Metal latch prevents breakage and shaving of latches and reduces customer rework
- Preloaded contacts allow for low insertion force
- Expanded range contact allows use of non-JEDEC boards
- Contact anti-overstress protection prevents the contact from being overstressed
- Reinforced polarizing posts provide additional strength to prevent post breakage
- Pin 1 indicator ensures proper orientation of module board
- Recognized under the Component Program of Underwriters Laboratories Inc., File No. E28476
- Certified by Canadian Standards Association, File No. LR 7189



Single Row Right Polar

Note: 68 Pos. Housing Dim. (Typ.)—4.350 [110.49] L x .315 [8.00] W x .607 [15.42] H

No. of Pos.	Solder Tail Length	
	.085 [2.16]	.095 [2.41]
64	6-382702-4	6-382696-4
68	6-382702-8	6-382696-8
72	7-382702-2	7-382696-2
80	8-382702-0	8-382696-0

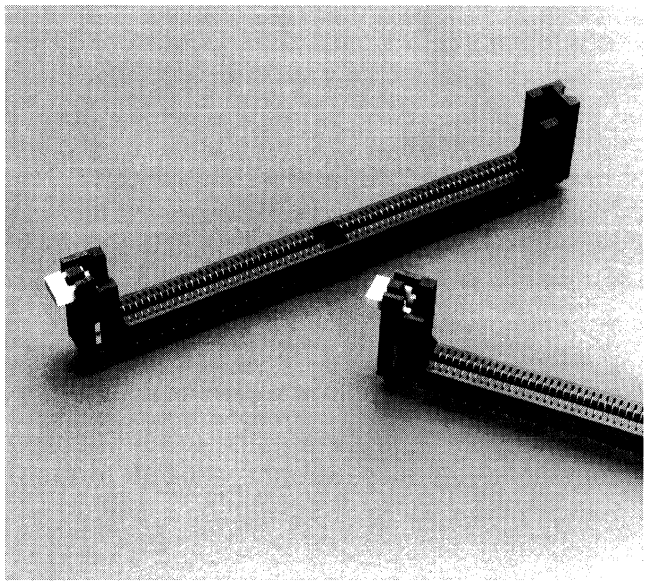
Single Row Left Polar

Note: 68 Pos. Housing Dim. (Typ.)—4.350 [110.49] L x .315 [8.00] W x .607 [15.42] H

No. of Pos.	Solder Tail Length	
	.095 [2.41]	.120 [3.05]
64	6-382698-4	6-382700-4
68	6-382698-8	6-382700-8
72	7-382698-2	7-382700-2
80	8-382698-0	8-382700-0

SOURCE: Catalog 82172

SIMM Sockets — SIMM II, Full Force, .050 [1.27] Centerline



Product Facts

- Direct insert allows for vertical insertion of module boards and allows extraction of module from middle without removing all other modules in front of it
- Pin 1 rib prevents misinsertion of the module board
- Polarizing posts provide proper orientation of the connector to the motherboard
- LIFT mechanism provides ease of extracting the module board
- High temperature housing withstands IR and VPR soldering methods
- Recognized under the Component Program of Underwriters Laboratories Inc., File No. E28476
- Certified by Canadian Standards Association, File No. LR 7189

Single Row

Note: 72 Pos. Housing Dim. (Typ.)—4.550 [115.57] L x .295 [7.49] W x .814 [20.68] H

No. of Pos.	Extraction Lever Position			
	None	Right		Left
	Gold Plate	Tin Plate	Gold Plate	Tin Plate
64	—	6-382555-4	6-382531-4	6-382574-4
64	—	6-382556-4[1]	—	—
72	—	7-382555-2	7-382531-2	7-382574-2
72	—	7-382556-2[1]	—	—
80	8-382683-0	—	8-382531-0	—
100	—	—	382531-1	—

[1]Tube loaded.

SOURCE: Catalog 82172

Specifications subject to change.

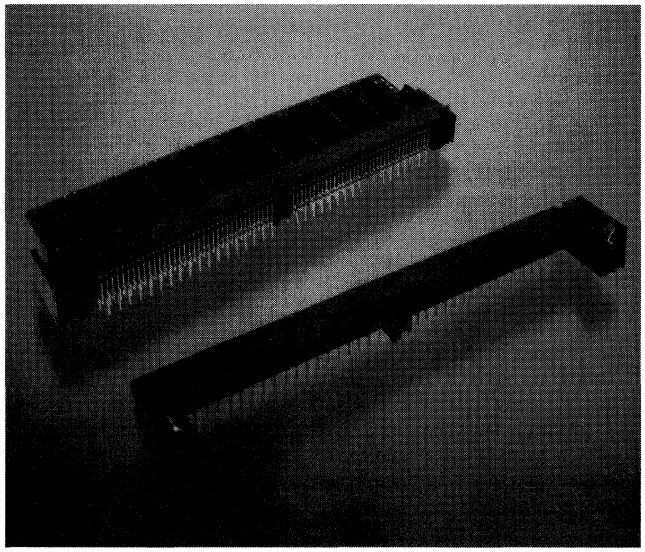
1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

SIMM Sockets — SIMM II Right-Angle

Product Facts

- Accepts module boards in a thickness range of .047-.054 [1.19-1.37] to allow the use of JEDEC standard boards
- Polarized posts on socket provide a means of properly orienting the socket on the pc board
- Pin 1 indicator in the socket orients the module board to the socket
- .050 [1.27] centerline sockets offer three profile heights — .125 [3.18], .160 [4.06] and .250 [6.35] to allow the use of single- and dual-sided boards, and the placement of components beneath the module board if required
- Very low insertion force for easy module insertion
- Anti-overstress latches prevent breakage from improper use
- Center post on .050 [1.27] product provides retention in the pc board through the soldering process
- Recognized under the Component Program of Underwriters Laboratories Inc., File No. E28476
- Certified by Canadian Standards Association, File No. LR 7189



.050 [1.27] Centerline

Note: 72 Pos. Housing Dim. (Typ.)—.160 [4.06] Height, 4.550 [115.57] L x .607 [15.42] W x .339 [8.61] H

No. of Pos.	.125 [3.18] Height[1]		.160 [4.06] Height[2]		.250 [6.35] Height[2]	
	Tin Plate	Gold Plate	Tin Plate	Gold Plate	Tin Plate	Gold Plate
40	4-382480-0	4-382481-0	4-382482-0	4-382483-0	4-382486-0	4-382487-0
68	6-382480-8	6-382481-8	6-382482-8	6-382483-8	6-382486-8	6-382487-8
72	7-382480-2	7-382481-2	7-382482-2	7-382483-2	7-382486-2	7-382487-2
80	8-382480-0	8-382481-0	8-382482-0	8-382483-0	8-382486-0	8-382487-0
84	8-382480-4	8-382481-4	8-382482-4	8-382483-4	8-382486-4	8-382487-4

[1] Has plastic latches (plastic latches extend .707 [17.96] from back of housing).
[2] Has metal latches.

.100 [2.54] Centerline

Note: 30 Pos. Housing Dim. (Typ.)—3.800 [96.52] L x .607 [15.42] W x .429 [10.90] H

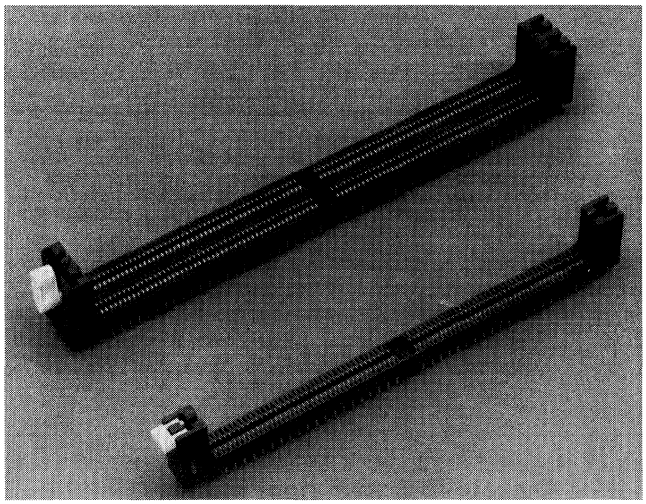
No. of Pos.	Part Numbers	
	Tin Plate	Gold Plate
30	3-382488-0	3-382489-0
35	3-382488-5	3-382489-5

SOURCE: Catalog 82172

SIMM Sockets — Dual Read-Out (DIMM)

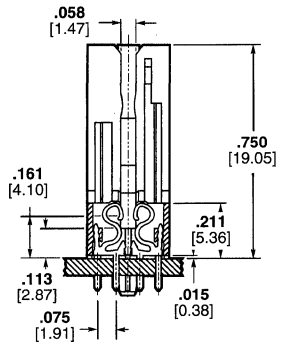
Product Facts

- Increased lead-in geometry to reduce insertion force
- Built-in module extraction feature
- Module stabilization features
- Gold-gold contact system
- .050 x .075 [1.27 x 1.91] hole pattern
- Cleaning channels and slots
- Sizes up to 100 positions
- Single and dual housings available
- Accepts modules from .600 [15.24] up to 2.000 [50.8] high
- .300 [7.62] module centers (row-to-row spacing)
- .600 [15.24] housing centers for dual housing systems
- Accepts .050±.004 [1.27±0.01] thick modules
- Full force wipe with insertion of module
- Socket polarized to accept module orientation
- Automatic insertion capability
- Socket-to-board hold-down features
- Recognized under the Component Program of Underwriters Laboratories Inc., File No. E28476
- Certified by Canadian Standards Association, File No. LR 7189



.050 [1.27] Centerline

Single Row

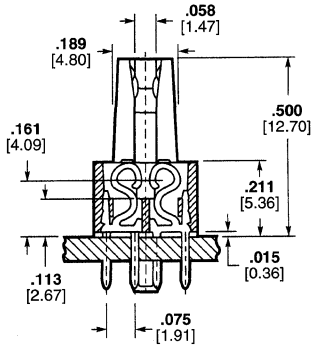


Note: 68 Pos. Housing Dim. (Typ.)—4.350 [110.49] L x .297 [7.54] W x .750 [19.05] H

No. of Pos.	No Center Key			.062 [1.57] Center Key
	Extractor Left	Extractors Left/Right	No Extractors	Extractor Left
52	5-382617-2	5-382781-2	5-382784-2	5-382759-2
64	6-382617-4	6-382781-4	6-382784-4	6-382759-4
68	6-382617-8	6-382781-8	6-382784-8	6-382759-8
72	7-382617-2	7-382781-2	7-382784-2	7-382759-2
80	8-382617-0	8-382781-0	8-382784-0	8-382759-0
100	382617-1	382781-1	382784-1	382759-1

.050 [1.27] Centerline

Single Row
High Air Flow



Note: 68 Pos. Housing Dim. (Typ.)—4.350 [110.49] L x .297 [7.54] W x .500 [12.70] H

No. of Pos.	Keying		
	No Key	.062 [1.57] Center	2 mm Left Center
52	5-382762-2	5-382790-2	5-382765-2
56	—	—	5-382765-6
64	6-382762-4	6-382790-4	6-382765-4
68	6-382762-8	6-382790-8	6-382765-8
72	7-382762-2	7-382790-2	7-382765-2
80	8-382762-0	8-382790-0	8-382765-0
100	382762-1	382790-1	382765-1

SOURCE: Catalog 82172

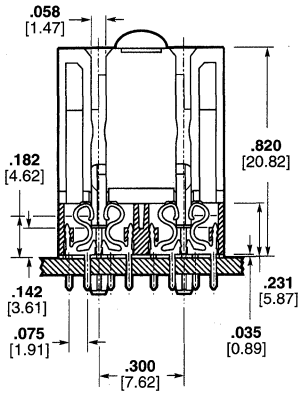
Specifications subject to change.

1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

SIMM Sockets — Dual Read-Out (DIMM) .050 [1.27] Centerline

Dual Row

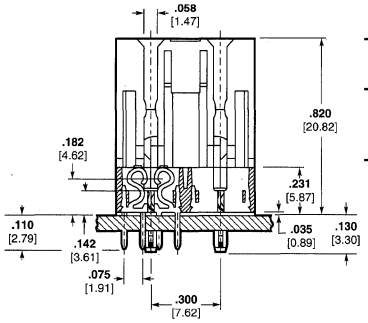


Note: 72 Pos. Housing Dim. (Typ.)—4.550 [115.57] L x .597 [15.16] W x .820 [20.82] H

No. of Pos.[1]	Part Numbers
64	6-382580-4
68	6-382580-8
72	7-382580-2
80	8-382580-0
100	382580-1
100	382813-1[2]

[1] Number of positions per row.
[2] Housing material is high temperature LCP

Video Card Extender



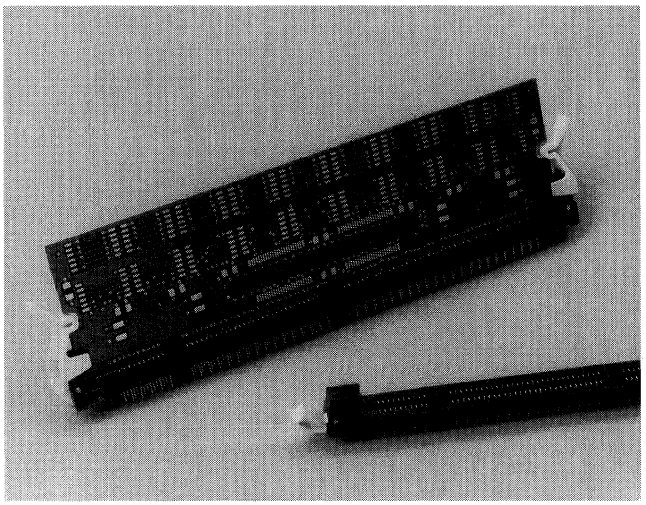
Note: 144 Pos. Housing Dim. (Typ.)—2.400 [60.96] L x .597 [15.16] W x .820 [20.82] H

No. of I/O	Housing Material	Part Numbers
144	LCP	382610-1
	High Temp. LCP	382815-1

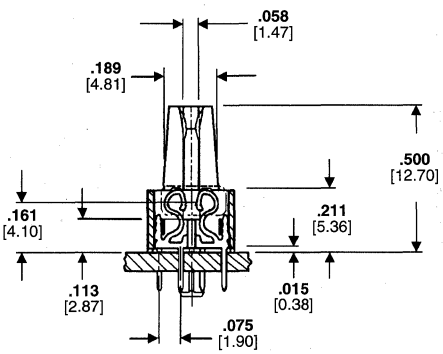
SIMM Sockets — 8 Byte Dual In-Line Memory Module (DIMM)

Product Facts

- Sockets Dual Read-Out SIMM boards
- Increased lead-in geometry to reduce insertion force
- Enhanced built-in lever-type module extractors
- Module stabilization features
- Gold-gold contact system
- .050 x .075 [1.27 x 1.91] hole pattern
- Cleaning channels and slots
- Full force wipe with insertion of module
- Multiple keying possibilities
- Positive retention feature available
- Automatic insertion capability
- Socket-to-board hold-down features
- Recognized under the Component Program of Underwriters Laboratories Inc., File No. E28476
- Certified by Canadian Standards Association, File No. LR 7189



Socket with Standard Extractors



Note: Housing Dim. (Typ.)—5.550 [140.97] L x .297 [7.54] W x .500 [12.70] H

Module Keying Configuration	Key No. 1	Key No. 2	Extraction Lever Position	
			Both Ends	Right End Only
Std. DRAM, 5 Volt	Detail A	Detail B	382830-1	382826-1
Sync. DRAM, 5 Volt	Detail B	Detail B	382830-2	382826-2
Non-Std. DRAM, 5 Volt	Detail C	Detail B	382830-3	382826-3
Std. DRAM, 3.3 Volt	Detail A	Detail A	382830-4	382826-4
Sync. DRAM, 3.3 Volt	Detail B	Detail A	382830-5	382826-5
Non-Std. DRAM, 3.3 Volt	Detail C	Detail A	382830-6	382826-6
Std. DRAM, X.X Volt	Detail A	Detail C	382830-7	382826-7
Sync. DRAM, X.X Volt	Detail B	Detail C	382830-8	382826-8
Non-Std. DRAM, X.X Volt	Detail C	Detail C	382830-9	382826-9

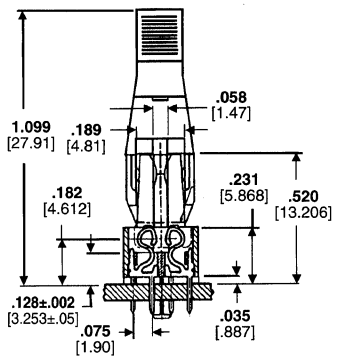
Note: Order customer drawings for module keying configurations.

SOURCE: Catalog 82172

Specifications subject to change.
1-800-522-6752 Product Information Center/ AMP FAX Service
1-800-722-1111 Tooling/Technical Assistance Center

SIMM Sockets — 8 Byte Dual In-Line Memory Module (DIMM)
(Continued)

Socket with Module-Locking Extractors



Note: Housing Dim. (Typ.)—5.550 [140.97] L x .297 [7.54] W x 1.099 [27.91] H

Module Keying Configuration	Key No. 1	Key No. 2	Part No.
Std. DRAM, 5 Volt	Detail A	Detail B	382824-1
Sync. DRAM, 5 Volt	Detail B	Detail B	382824-2
Non-Std. DRAM, 5 Volt	Detail C	Detail B	382824-3
Std. DRAM, 3.3 Volt	Detail A	Detail A	382824-4
Sync. DRAM, 3.3 Volt	Detail B	Detail A	382824-5
Non-Std. DRAM, 3.3 Volt	Detail C	Detail A	382824-6
Std. DRAM, X.X Volt	Detail A	Detail C	382824-7
Sync. DRAM, X.X Volt	Detail B	Detail C	382824-8
Non-Std. DRAM, X.X Volt	Detail C	Detail C	382824-9

Note: Order customer drawings for module keying configurations.

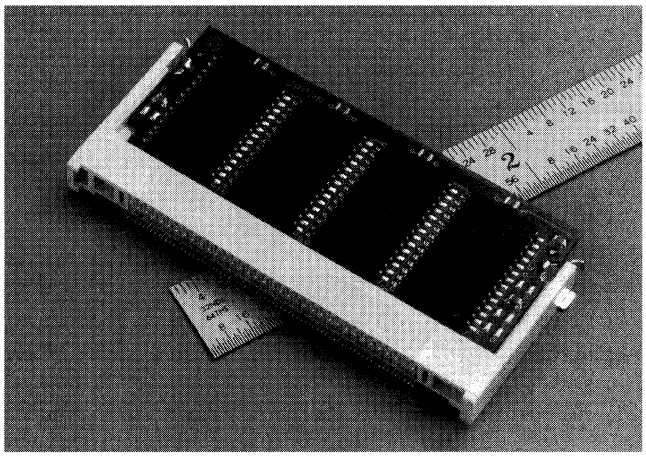
SIMM Sockets—Mini Memory Module (M3), Surface Mount (DIMM)

Product Facts

- Surface mount
- Half the board space as standard SIMM
- Right-angle configuration
- Low profile — only 5.5 mm height above pc board
- Keying feature reduces mating errors
- Cam-in loading

72-Position Staggered Dual Row

Part No.	
177827-1	3.3V Gold
177827-2	3.3V Tin
177827-3	5.0V Gold
177827-4	5.0V Tin

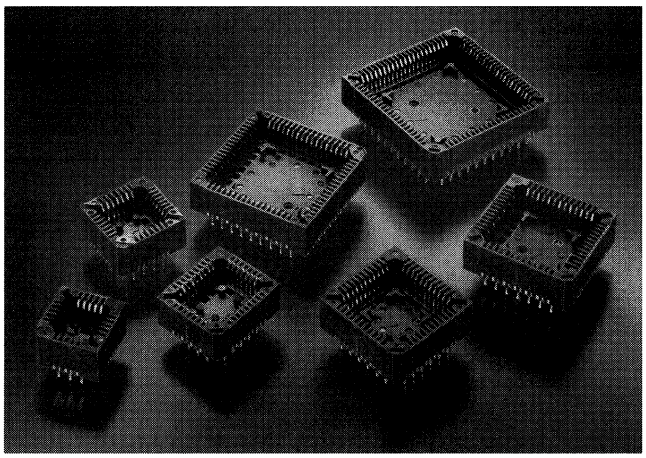


PLCC Sockets — High Pressure Tin (HPT) with Solder Tails

Product Facts

- Positive locking contact design prevents package "popout"
- High normal force contacts — above 200 grams to provide optimum mating and retention of PLCC s and maintain reliable interconnection
- Post-plated contacts
- Staggered solder tail heights permit easy insertion into pc board
- Rigid solder tails protect against damage in handling and insertion
- Single-piece housing for easy removal

- Visual aids for registration
- Holes for drainage
- Standoffs provide clearance for heat dissipation and cleaning
- Bottom loaded contacts for inspection and repair
- Accepts JEDEC PLCC s — MS-018
- Recognized under the Component Program of Underwriters Laboratories Inc., File No. E28476
- Certified by Canadian Standards Association, File No. LR7189
- Free 3D and 2D CAD images— See page 56



SOURCE: Catalog 82172

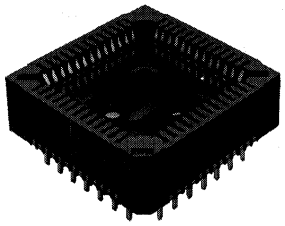
Specifications subject to change.

1-800-522-6752
Product Information Center/ AMP FAX Service

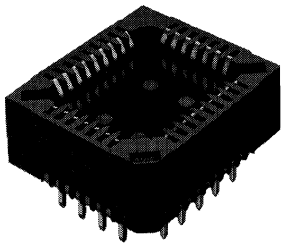
1-800-722-1111
Tooling/Technical Assistance Center

PLCC Sockets — High Pressure Tin (HPT) with Solder Tails
(Continued)

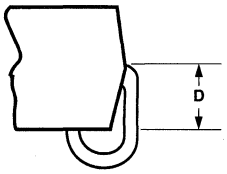
EADS CD-ROM



Square



Rectangular



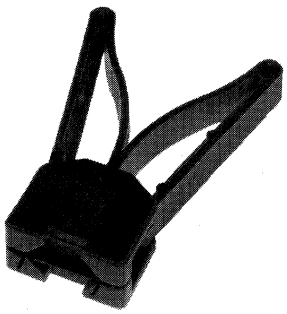
Note: 44 Pos. Housing Dim. (Typ.)—.885 [22.44] L x .870 [22.10] W x .360 [9.14] H

No. of Pos.	Package Configuration	PLCC Dim. D		With Plastic Polarizing Pin
		.055 – .075 [1.40 – 1.91]	.070 – .090 [1.78 – 2.29]	
20	Square	821815-1	—	—
28	Square	821581-1	821581-3	—
32	Rectangular	821665-1	—	822147-1
44	Square	821575-1	821575-3	822148-1
52	Square	821551-1	821739-3	—
68	Square	821574-1	821574-3	822149-1
84	Square	821573-1	821573-3	822150-1

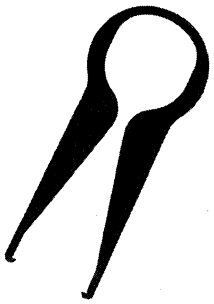
Note: Tube packaged part numbers available upon request.

Extraction Tools

The extraction tools provide a quick and easy method of removing the chip carriers from solder tail sockets.



A



B

Socket Type	No. of Pos.	Tool Style	Tool Part No.
Square	20	B	821903-6
Square	28	B	821903-5
Rectangular	32	B	821903-1
Square	44	A	821591-1
Square	52	A	821648-1
Square	68	A	821566-1
Square	84	A	822268-1
Square	28	A	821900-1
Rectangular	32	A	821980-1

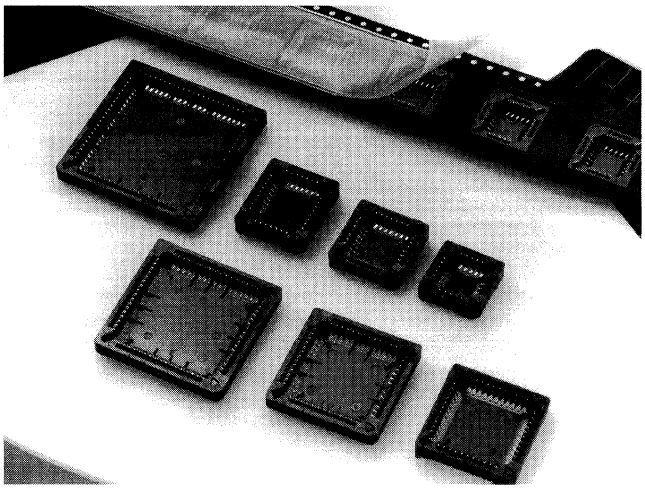
SOURCE: Catalog 82172

Specifications subject to change.
1-800-522-6752 Product Information Center/ AMP FAX Service
1-800-722-1111 Tooling/Technical Assistance Center

PLCC Sockets — Low Profile, Surface Mount

Product Facts

- Low Profile — only .185 [4.7] max. for high density pc board stacking
- Compatible footprint allows for socket or direct mounting
- Housing slots accept extraction tool for easy PLCC removal
- Pin 1 indicator and corner chamfer for PLCC orientation
- Available with or without polarizing pins, loose piece or tape mounted
- High normal force contacts prevent fretting corrosion
- Plastic standoffs provide clearance for heat dissipation and cleaning operations
- Polyphenylene sulfide housings will withstand high temperature soldering
- Open bottom housing for convenient placement of socket on pattern, 100% inspection of solder joint, solder joint repair without housing removal, and penetration of heat source to the solder pad and surface mount contact
- Top contact slots allow test probing with PLCC device in place
- Recognized under the Component Program of Underwriters Laboratories Inc., File No. E28476
- Certified by Canadian Standards Association, File LR 7189A-97
- Free 3D and 2D CAD images— See page 56



Square Sockets — 20, 28, 44, 52, 68 and 84

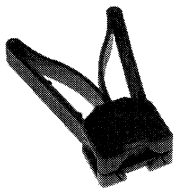
Extraction Tools

No. of Pos.	Part Number
20	822011-1
28	822045-1
44	821981-1
52	822049-1
68	822026-1
84	822268-1

Note: 44 Pos. Housing Dim. (Typ.)—.865 [21.97] L x .865 [21.97] W x .180 [4.57] H

No. of Pos.	Standard			Low Insertion Force		
	Without Locating Posts	With Locating Posts	Tape Mounted Without Locating Posts	Without Locating Posts	With Locating Posts	Tape Mounted Without Locating Posts
20	822014-3	822065-4	822050-3	822269-1	822270-1	3-822269-1
28	822039-3	822066-4	822071-3	822271-1	822272-1	3-822271-1
32	See below					
44	821979-3	822068-4	822035-3	822275-1	822276-1	3-822275-1
52	822041-3	822069-4	822072-1	822277-1	822278-1	3-822277-1
68	822029-3	822070-4	822073-3	822279-1	822280-1	3-822279-1
84	822151-1	822152-1	822180-1	822281-1	822282-1	3-822281-1

Extraction Tool Part No. 821980-1 (for 32 Pos. only)



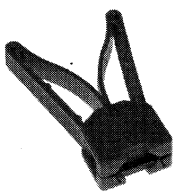
All Purpose Tool Part No. 822154-1

Rectangular Socket — 32 Positions

Note: 32 Pos. Housing Dim. (Typ.)—.765 [19.43] L x .665 [16.89] W x .140 [3.56] H

No. of Pos.	Standard			Low Insertion Force		
	Without Locating Posts	With Locating Posts	Tape Mounted Without Locating Posts	Without Locating Posts	With Locating Posts	Tape Mounted Without Locating Posts
32	821977-1	822067-2	822034-1	822273-1	822274-1	3-822273-1

Extraction Tool Part No. 821980-1



All Purpose Tool Part No. 822154-1

SOURCE: Catalog 82172

Specifications subject to change.

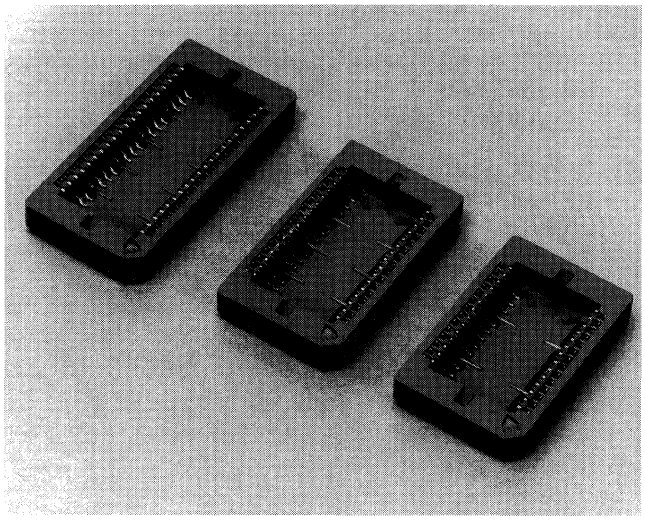
1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

PLCC Sockets — Low Profile SOJ-Style Surface Mount Sockets

Product Facts

- Low insertion force
- Single-piece, low profile (under .185 [4.70]) polyphenylene sulfide housing will withstand vapor phase or infrared soldering temperatures and prevents flux and solvent entrapment
- High normal force contacts prevent fretting corrosion
- Plastic standoffs provide clearance for heat dissipation and cleaning operations
- Open bottom housing permits:
  - — Easy placement of socket on footprint pattern
  - — 100% inspection of solder joint
  - — Solder joint repair without removing housing
  - — Heat sources penetrate to the solder pad and surface mount contact
- Slots to accept PLCC extraction tool
- Contacts can be probed with PLCC device in place
- Pin 1 indicator
- Footprint compatible for socket or direct attachment
- Recognition under the Component Program of Underwriters Laboratories Inc. pending
- Certification by Canadian Standards Association pending



.400 [10.16] Centerline

Note: 32 Pos. Housing Dim. (Typ.)—1.115 [28.32] L x .646 [16.41] W x .185 [4.70] H

No. of Pos.	Without Locating Pins		With Locating Pins
	Tube Packaged	Tape Mounted	Tube Packaged
28	822361-2	3-822361-2	822363-2
32	822362-2	3-822362-2	822364-2
40	822265-2	3-822265-2	822267-2
42	822378-1	3-822378-1	—
44	822393-1	3-822393-1	—

.300 [7.62] Centerline

Note: 32 Pos. Housing Dim. (Typ.)—1.115 [28.32] L x .546 [13.87] W x .180 [4.57] H

No. of Pos.	Without Locating Pins	
	Tube Packaged	Tape Mounted
28	822372-1	3-822372-1
32	822374-1	3-822374-1

Extraction Tool

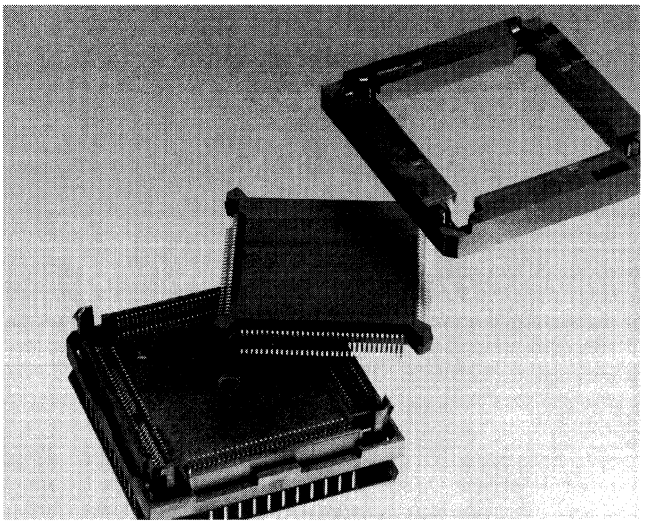
This tool is designed to remove plastic leaded chip carriers from AMP Low Profile Surface Mount Sockets, including the 40-position SOJ-style shown here. The tool is contoured for insertion into either of two extraction cavities on the chip carrier socket.

Part No. 822154-1

SOURCE: Catalog 82172

Specifications subject to change.
1-800-522-6752 Product Information Center/ AMP FAX Service
1-800-722-1111 Tooling/Technical Assistance Center

PQFP Sockets (MICRO-PITCH) — Standard



Product Facts

- .025 [0.64] centerline for high density, low cost packaging
- Low profile permits even higher density packaging with only .375 [9.53] maximum height pc boards
- High normal force and positive engagement insures reliable service to minimize field failures
- Protective cover separates and safeguards IC leads during handling and insertion
- Closed-bottom housing aids in prevention of solder bridging between contacts
- Contacts absorb mating and reaction forces for board and housing protection
- Economical design makes socketing of semi-conductor devices more attractive
- .020 [0.51] minimum wipe contact insures reliability of tin-to-tin interface
- High temperature materials
- Sockets can be spaced a minimum of .150 [3.81] from each other

Pneumatic Insertion Tools

100 Pos. Part No. 768420-1

132 Pos. Part No. 768421-1

Hand Insertion Tools

100 Pos. Part No. 822253-1

132 Pos. Part No. 822253-2

164 Pos. Part No. 822253-3

Extraction Tool

Part No. 822254-1

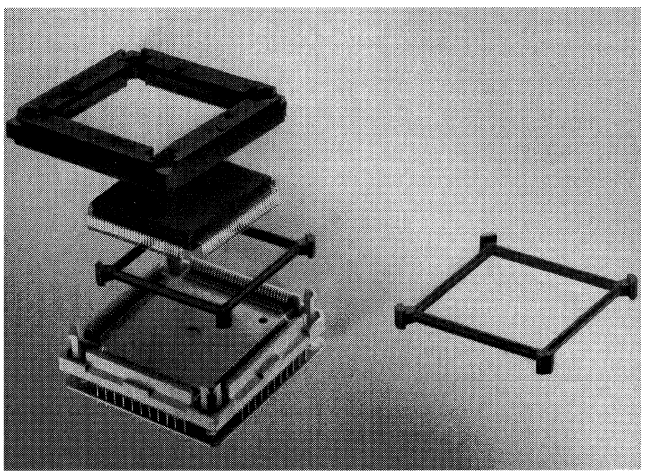
Note: 132 Pos. Housing Dim. (Typ.)—1.340 [34.04] L x 1.340 [34.04] W x .375 [9.53] H

No. of Pos.	Conventional AMP Sockets		Replacement for 3M TEXTOOL Sockets	
	Housing Sub-Assembly	Cover	Housing Sub-Assembly	Cover
100	821949-4[1]	821939-1	822064-4[2]	821939-1
132	821949-5[1]	821942-1	822064-5[2]	821942-1
164	822064-6[2]	822111-1	—	—

[1]Conventional footprint, order customer drawing.
[2]Reverse footprint, order customer drawing.

PQFP Sockets (MICRO-PITCH)— CQFP Converter

Converter for Ceramic Quad Flat Packs (CQFP)



Product Facts

- Converts ceramic package to outline configuration of a Plastic Quad Flat Pack
- Firmly holds and protects CQFP in MICRO-PITCH cover for ease of handling and testing

Note: 132 Pos. Housing Dim. (Typ.)—1.100 [27.94] L x 1.100 [27.94] W x .128 [3.25] H

No. of Pos.	CQFP MICRO-PITCH Converter Part No.	Use with MICRO-PITCH Socket	
		Housing Sub-Assembly Part No.	Cover Part No.
132	822054-2	821949-5	821942-1

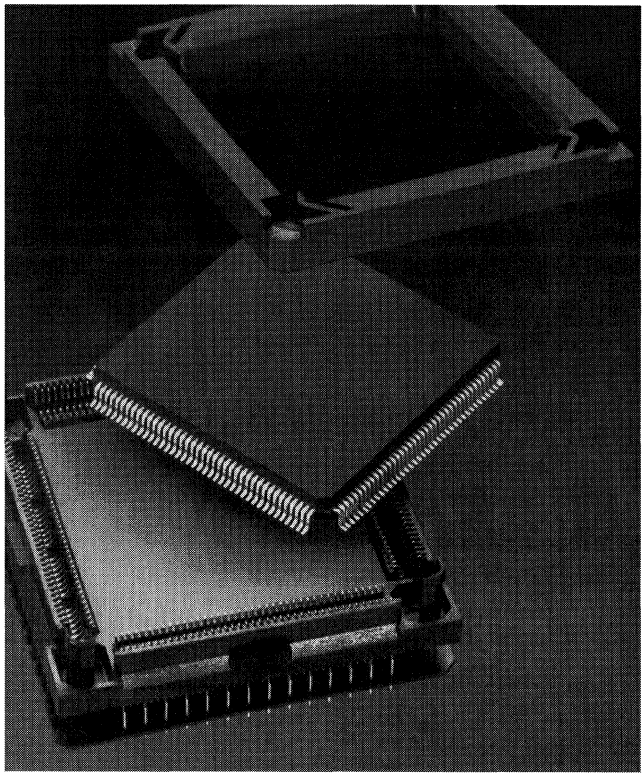
SOURCE: Catalog 82172

Specifications subject to change.
1-800-522-6752 Product Information Center/ AMP FAX Service
1-800-722-1111 Tooling/Technical Assistance Center

PQFP Sockets (MICRO-PITCH)

METRIC

JEDEC (EIAJ) Metric Quad Flat Pack IC's



Product Facts

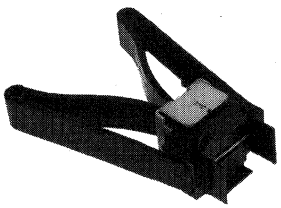
- Closed bottom design prevents solder wicking and bridging
- Standoffs facilitate flushing of solder fluxes from under socket
- Horizontal normal force reduces the stress on latches
- Contact wiping removes oxides from package leads
- High pressure tin contacts provide high normal force to assure interface reliability
- Molded separation ribs assure contact to lead alignment
- Components molded of high temperature materials
- Mechanical and visual polarization allows pin #1 alignment
- Cover provides means for handling and testing bumperless packages
- Cover secures device for handling regardless of corner configuration
- Socket design is not sensitive to package standoff dimension
- Socketing eases prototype evaluation
- Socketing provides repairability in the field
- Socketing enables equipment configuration at the manufacturing level
- Socketing eliminates device damage problems due to SMT temperatures
- Socketing allows field updating
- Socketing utilizes conventional through-hole soldering processes
- Socket design is compatible with robotic assembly

Note: Housing Dim. (Typ.)—38.2 [1.504] L x 38.2 [1.504] W x 9.5 [.374] H

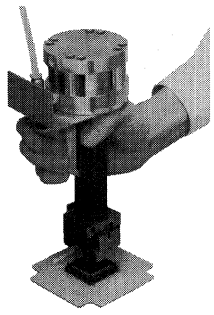
No. of Pos.	Part Numbers	
	Housing Sub-Assembly	Cover
144	822114-3	822115-3
160	822114-4	822115-4

Packaging Quantities:
Cover shipped separately in antistatic tubes, 14 pcs./tube
Housing Assembly shipped in antistatic tubes, 14 pcs./tube

Extraction Tool
Part No. 822254-1



Hand Insertion Tool
Part No. 822253-4

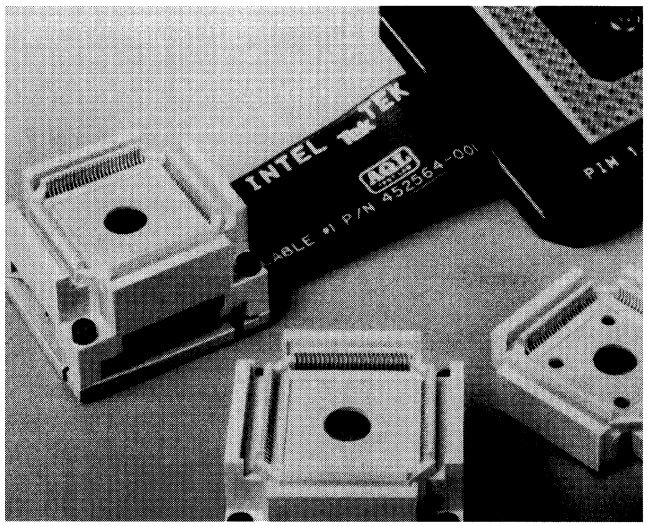


Pneumatic Insertion Tool
Part No. 768422-1

SOURCE: Catalog 82172

PQFP Sockets (MICRO-PITCH)
(Continued)

Emulator Adapter and Plug Assembly

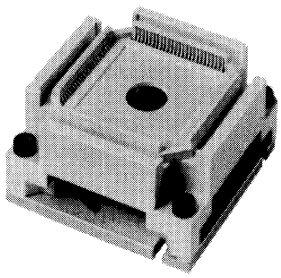


Product Facts

- **Provides transition interface to AMP MICRO-PITCH sockets**
- **Compatible with Intel In-Circuit Emulators with PQFP target-adapter cable**
- **100- and 132-position adapters**
- **.025 [0.64] contact centerline**
- **.020 [0.51] contact wipe ensures clean contact interface**
- **Internal keying and polarization to ensure proper mating**
- **100- and 132-position plug assemblies available for custom application needs**

Emulator Adapter Kit[1]

Note: Emulator adapter is shown mated with MICRO-PITCH socket for reference purposes.



[1]Kit Includes:

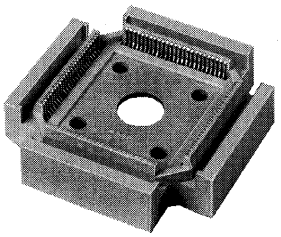
1 Housing Assembly
1 Cover Plate
4 Screws

Note: 100 Pos. Housing Dim. (Typ.)—1.235 [31.37] L x 1.250 [31.75] W x .950 [24.13] H

No. of Pos.	Part Numbers
100	821959-1
132	821959-2

Notes: 1. Insertion/extraction tools are not required for assembly or disassembly.
2. The latching system of the MICRO-PITCH socket is not functional when adapters are used. The adapter housing is self-locking to the socket contacts.

Emulator Plug Assembly



Note: 100 Pos. Housing Dim. (Typ.)—1.235 [31.37] L x 1.235 [31.37] W x .278 [7.06] H

No. of Pos.	Part Numbers
100	821960-1
132	821960-2

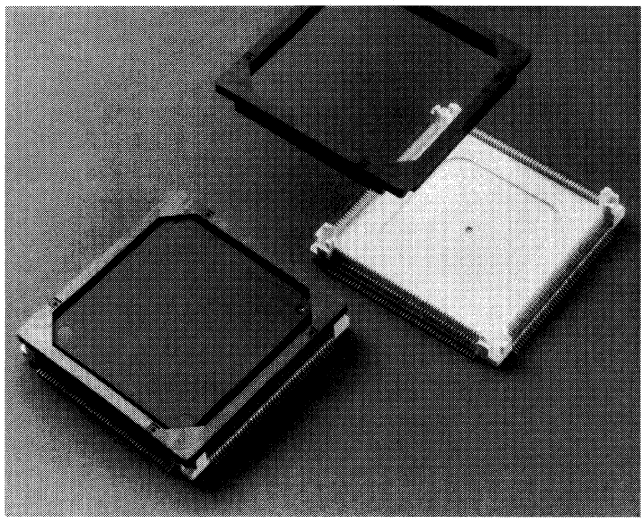
SOURCE: Catalog 82172

Specifications subject to change.

1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

PQFP Sockets (MICRO-PITCH) — 196-Position Surface Mount



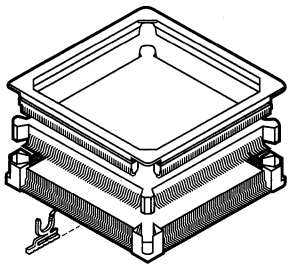
Product Facts

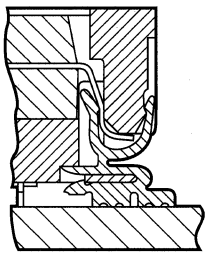
- Accepts JEDEC-approved PQFPs with preformed, gull-wing leads
- Low profile
- Surface mount/multiple footprint options
- Reliable electrical contact

Part Numbers	Footprints
824000-7	IPC (Device)
1-824000-1	Dual
824000-3	Outboard

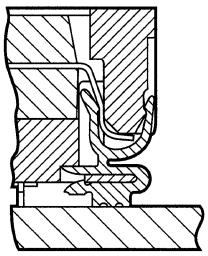
Three standard contact options are offered to address IPC compatible and/or solder joint inspectability requirements.

Contact Styles

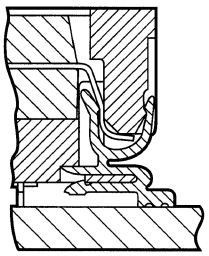




Part No. 1-824000-1



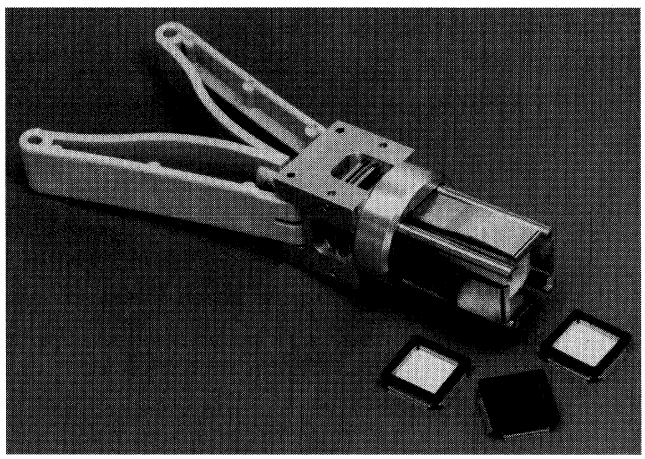
Part No. 824000-7



Part No. 824000-3

PQFP Sockets (MICRO-PITCH) — 80-Position/.65 mm Surface Mount

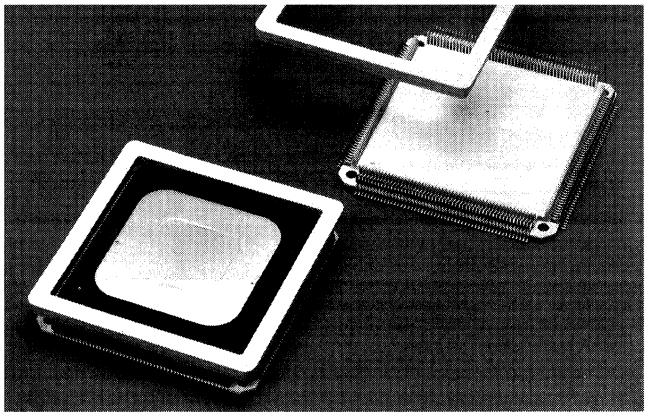
Part No. 824073-1



Product Facts

- Accepts JEDEC-approved, Metric PQFP's with preformed, gull-wing leads
- Extremely low profile
- Compatible with all standard surface mount techniques
- Reliable, gas-tight electrical contact
- Height—.189 [4.80] above board

PQFP Sockets (MICRO-PITCH) — 208 Position Surface Mount Socket



Product Facts

- **Accepts JEDEC-approved PQFPs with preformed, gull-wing leads**
- **Low profile**
- **Surface mount/multiple footprint options**
- **Reliable electrical contact**

Measuring only 5.45 [0.214] above the printed circuit board, this new production socket is designed for JEDEC-approved Plastic Quad Flat Packs (PQFP) with preformed gull-wing leads on 0.5 [0.0197] centerlines.

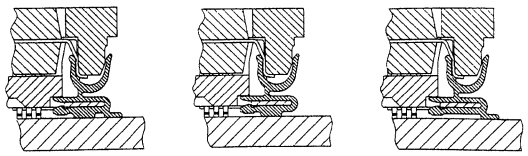
Installation consists of orienting the IC package onto the socket base and using an insertion tool to seat the cover. Insulating barriers in the socket assure accurate lead placement.

Once in place, the cover provides package retention. Extraction tools are available for removal of the cover.

Thermal expansion/contraction differences between the package and the printed circuit board are accommodated by the contact design.

The use of this socket greatly reduces, or eliminates many production costs incurred by direct attachment of the PQFP device.

Contact Styles



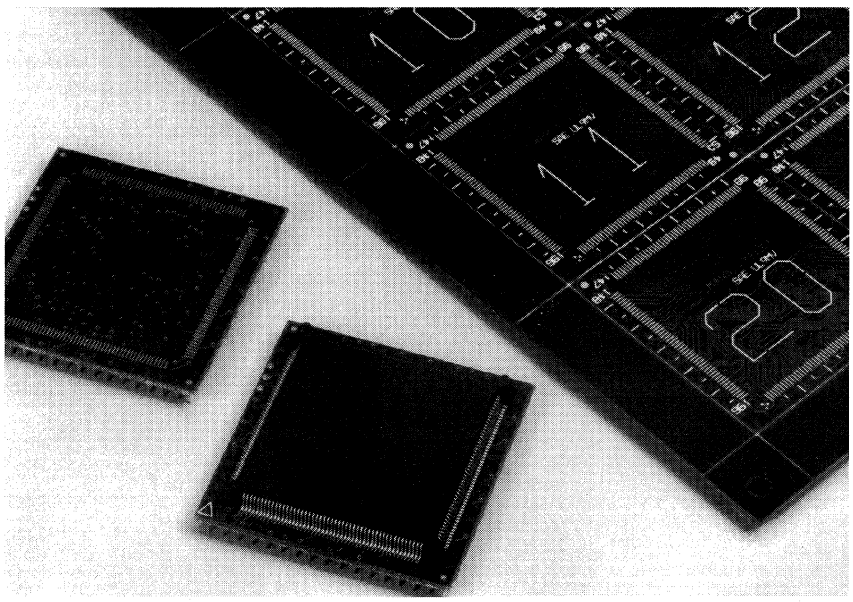
Part No. 824160-1 **Part No. 824160-2** **Part No. 824160-3**

Part Numbers	Footprints
824160-1	Dual
824160-2	IPC (Device)
824160-3	Outboard

Three standard contact options are offered to address IPC compatible and/or solder joint inspectability requirements.

PQFP Sockets — PQFP to PGA Socket Adapters

For i486 SX and i486 DX Devices



Product Facts

- **Allows conversions to less costly PQFP devices**
- **Adapters available for 486 SX and 486 DX devices**
- **Provides both mechanical and solder connections of pins into the pc board**
- **Gold plated brass pins per QQ-B-626 (other platings are available)**
- **FR-4 glass filled epoxy substrates**
- **Design allows cleaning and 100% inspection of all solder joints**
- **Uses same physical space as ceramic PGA device**
- **Adapters will interface 196 pad PQFP devices to 169 pin PGA footprints**

i486 Device	Part Numbers	Packaging
SX	1-544160-4	Single Piece
	544160-4	20-Piece Panel
DX	1-544163-4	Single Piece
	544163-4	20-Piece Panel

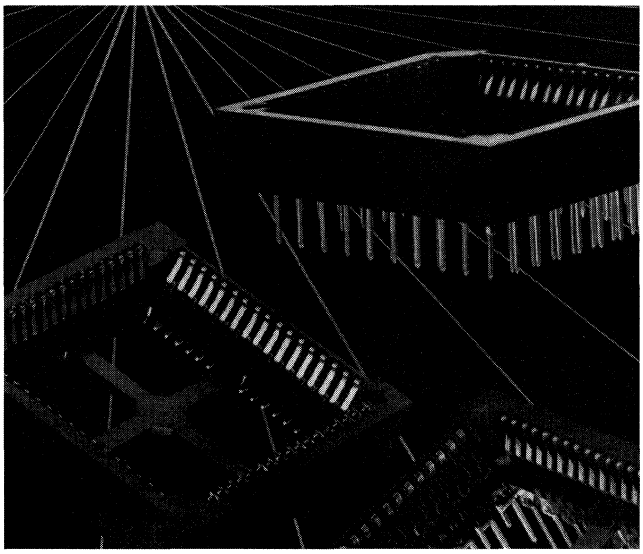
SOURCE: Catalog 82172

Specifications subject to change.

1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

JEDEC Type A Leaded Ceramic Chip Carrier Sockets (Gold-Gold System)



Note: 44 Pos. Housing Dim. (Typ.)—.870 [22.1] L x .870 [22.1] W x .320 [8.13] H

Product Facts

- Accepts JEDEC, Type A, leaded ceramic chip carriers
- Two versions available—solder tail on .100 [2.54] centers and surface mount on .050 [1.27] centers
- Overall height above pc board with ceramic chip carrier installed is .320 [8.13] max.
- Polarized for easy registration
- Easy access probing with chip carrier installed
- Hard gold on surface engages chip carrier with tin-lead plating on solder legs
- Slots accept chip carrier extractor
- Standoffs for cleaning and heat dissipation
- Inner and outer rows of solder tails on different levels to facilitate installation to the pc board
- 100 grams minimum normal force per contact
- Operating temperature of -40°C to +85°C

Gold-Gold System Sockets—Solder Tail

No. of Pos.	Part Numbers
20	641745-2
28	641746-2
44	641747-2
52	641748-2
68	641749-2
84	643066-2

Note: Other sizes can be made available. Contact AMP for information.

Gold-Gold System Sockets—Surface Mount

No. of Pos.	Part Numbers
20	643057-2
28	641444-2
44	641343-2
52	643058-2
68	641345-2
84	643151-2

Note: Other sizes can be made available. Contact AMP for information.

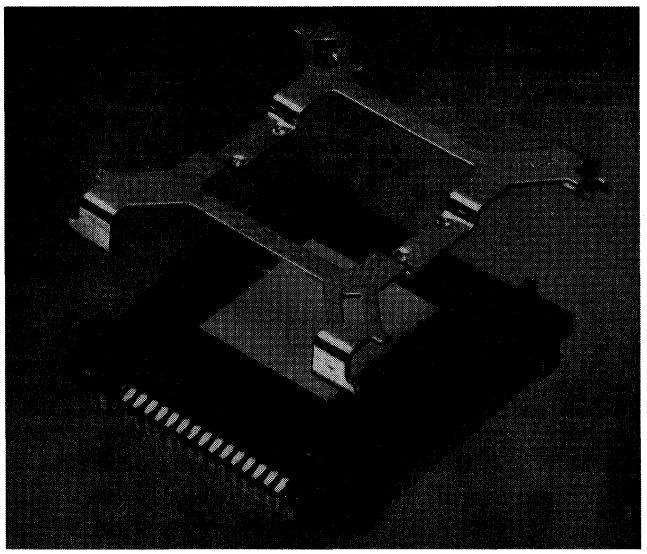
Extraction Tools

Part No. 274321-1
(20 through 52 positions)

Part No. 821509-1
(68 through 84 positions)

LCCC Sockets

Low Height Chip Carrier Sockets



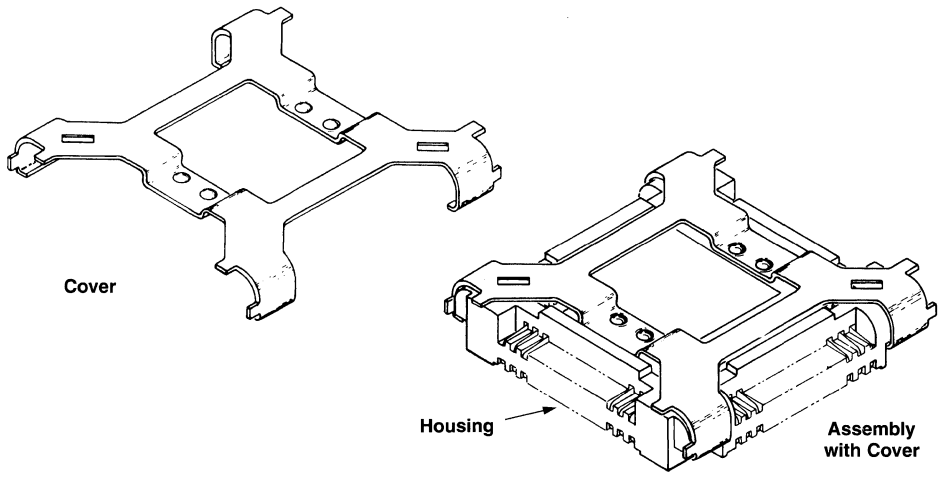
Product Facts

- Accepts JEDEC Type A, Type B and Type D leadless ceramic substrates
- Overall height above pc board with substrate installed — .275 [6.99] max. (44 through 84 positions); .350 [8.89] max. (100 positions)
- Substrate cover is profiled to accommodate heat sinks
- Heat sinks and heat sink/cover assemblies are available for 68-position socket
- Substrate registered by three corner notches
- Contact solder tails on .100 [2.54] square grid
- Solder tail lengths available in .110 [2.79] or .140 [3.56]
- Connector and substrate polarizing features
- Duplex plated contacts
- Easy access probing with substrate installed
- Cover attached with no tools and removed with screw driver
- Simple hand tool available to speed installation to pc board

SOURCE: Catalog 82172

LCCC Sockets
(Continued)

Low Height Chip Carrier Sockets with Solder Tails



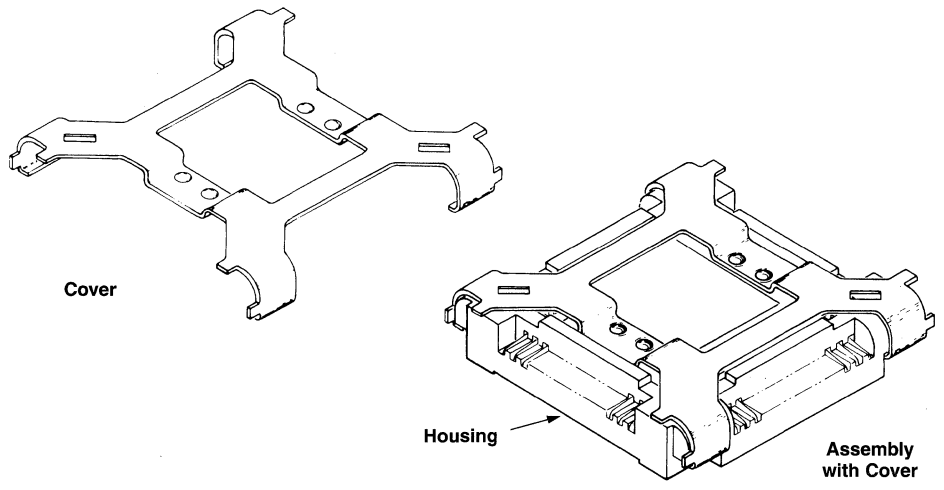
Insertion Tools
Part No. 68382-1
(44 and 52 positions)
Part No. 68381-1
(68 and 100 positions)

Note: 68 Pos. Housing Dim. (Typ.)—1.365 [34.67] L x 1.295 [32.89] W x .275 [6.99] H

No. of Pos.	Leg Length	
	.140 [3.65] Assembly With Cover[1]	.110 [2.79] Assembly With Cover[1]
44	55232-1	55232-2
52	55227-1	55227-2
68	55159-1	55159-2
84	55225-1	55225-2
100	55219-1	55219-2

[1]Cover and assembly available separately.
Note: Shipped without cover installed.

Low Height Chip Carrier Sockets For Surface Mounting



Insertion Tool
Part No. 68381-1

Note: Housing Dim. (Typ.)—1.365 [34.67] L x 1.295 [32.89] W x .275 [6.99] H

No. of Pos.	Part Number
	Assembly with Cover
68	55588-1

Note: Shipped without cover installed.

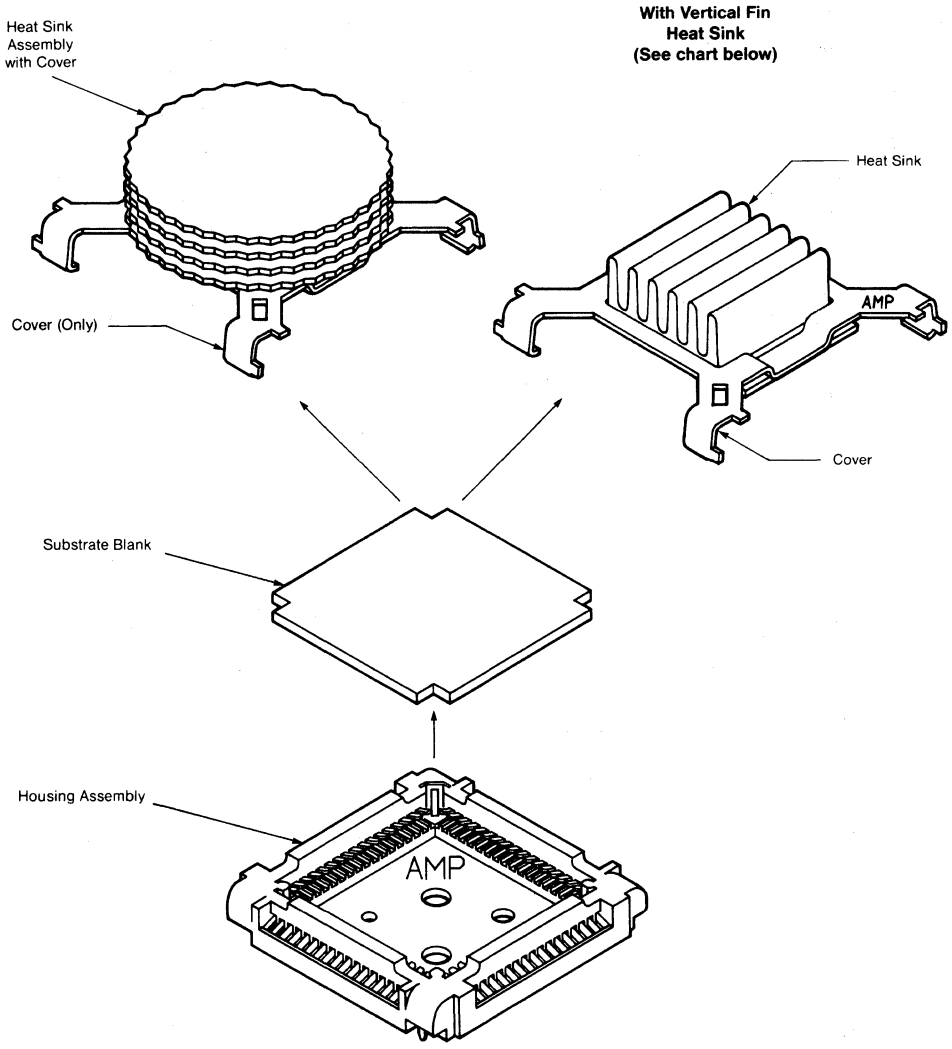
SOURCE: Catalog 82172

Specifications subject to change.
1-800-522-6752 Product Information Center/ AMP FAX Service
1-800-722-1111 Tooling/Technical Assistance Center

LCCC Sockets
(Continued)

Low Height Chip Carrier Sockets with Heat Sinks

68-Position Socket Assemblies
Shipped fully assembled with cover and heat sink



Insertion Tool
Part No. 68381-1

Socket Assemblies with Circular Fin Heat Sinks

No. of Circular Heat Sink Fins	Max. Assembled Height Above Pc Board	Part Numbers Leg Length .110 [2.79]
2	**.455** 11.56	55540-2
3	**.535** 13.59	55668-2
4	**.615** 15.62	55523-2

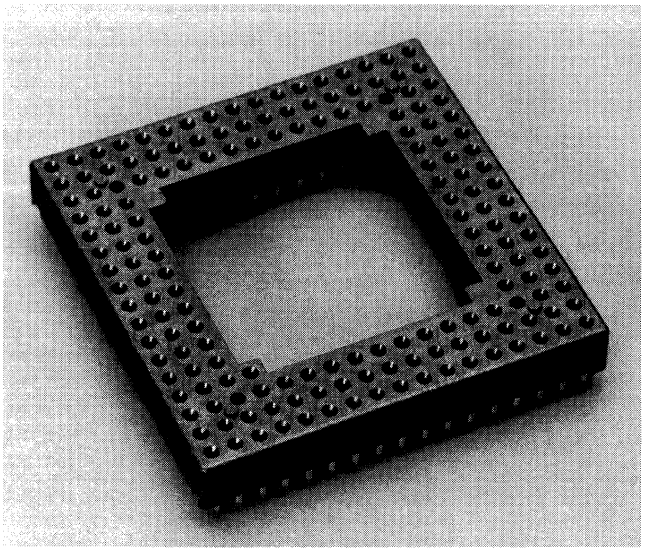
Socket Assemblies with Vertical Fin Heat Sinks

Max. Assembled Height Above Pc Board	Part Number Leg Length .110 [2.79]
.520 13.21	55531-2

SOURCE: Catalog 82172

Specifications subject to change.
1-800-522-6752 Product Information Center/ AMP FAX Service
1-800-722-1111 Tooling/Technical Assistance Center

PGA Sockets
Low Insertion Force (LIF)



Product Facts

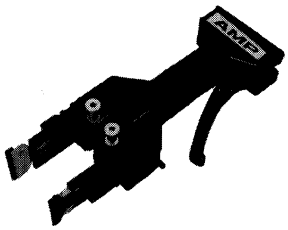
- Uses the same board area as the PGA substrate
- Preloaded contacts of staggered height reduce force to install PGA substrate
- Materials suitable for 105°C max. continuous service
- Installed socket height equals .275 [6.99] max. which allows .500 [12.7] spacing between boards
- Dual-beam contact provides two wide gold-plated surfaces to interface with the PGA substrate leads
- Circuit cavity lead-in facilitates PGA substrate leads loading
- Accepts .016-.020 [0.41-0.51] diameter leads
- Sockets are packaged in tubes for automatic handling
- Recognized under the Component Program of Underwriters Laboratories Inc., File No. E28476
- Certified by Canadian Standards Association, File No. LR 7189
- Free 3D and 2D CAD images— See page 56

EADS CD-ROM

PGA Package
Extraction Tool — Metal

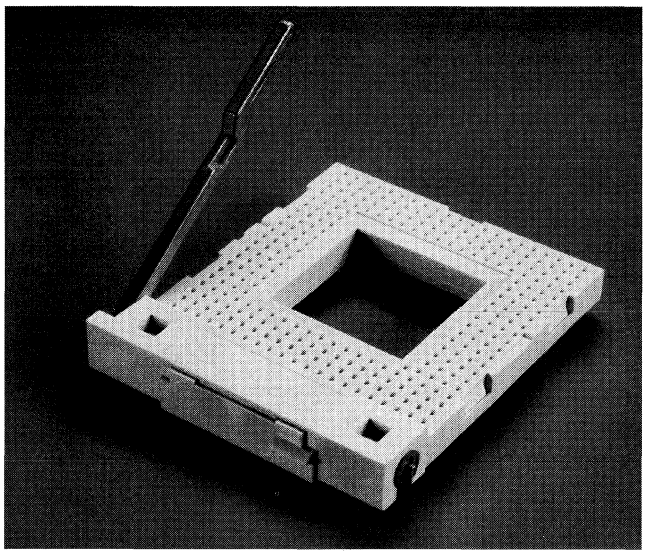
No. of Blades	Part Numbers
5	58113-1
10	58113-3
13	58113-4
16	58113-5

PGA Package
Mechanical Action
Insertion/Extraction Tool



Grid Sizes	Part Numbers
10 x 10 - 17 x 17	58417-1
18 x 18 - 25 x 25	58417-2

PGA Sockets
Single Lever (SL) ZIF



Product Facts

- Zero insertion force actuation to facilitate device socketing
- Convenient single lever (SL) handle operation requires no tools
- Contacts are plated with 30 microinches of gold
- Large funnel entry cavity
- Normally closed, full wiping contacts
- Lower in cost than most other ZIF-style PGA sockets
- Positive detent-locking lever eliminates inadvertent opening
- Housing design permits the addition of a heat sink
- Free 3D and 2D CAD images— See page 56

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SOURCE: Catalog 82172

Specifications subject to change.

1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

PGA Sockets—Patterns for LIF

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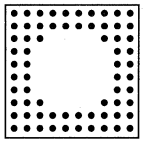
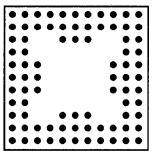


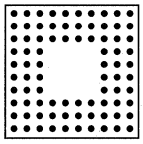
10 x 10
68 Positions

Style	Solder Tail Length	Socket Number
LIF[4]	.110 2.79	916220-2



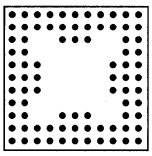
11 x 11
84 Positions

Style	Solder Tail Length	Socket Number
LIF[4]	.110 2.79	916221-1



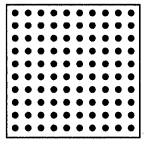
10 x 10
84 Positions

Style	Solder Tail Length	Socket Number
LIF[4]	.110 2.79	916220-1



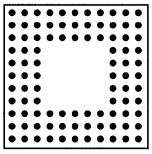
11 x 11
85 Positions

Style	Solder Tail Length	Socket Number
LIF[4]	.110 2.79	916221-2



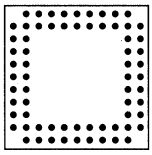
10 x 10
100 Positions

Style	Solder Tail Length	Socket Number
LIF[2]	.110 2.79	916220-4



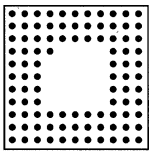
11 x 11
96 Positions

Style	Solder Tail Length	Socket Number
LIF[4]	.110 2.79	916221-6



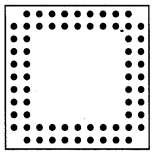
11 x 11
68 Positions

Style	Solder Tail Length	Socket Number
LIF[3]	.110 2.79	916221-7



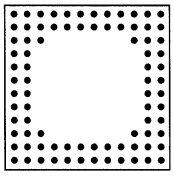
11 x 11
97 Positions

Style	Solder Tail Length	Socket Number
LIF[4]	.110 2.79	916221-8



11 x 11
69 Positions

Style	Solder Tail Length	Socket Number
LIF[4]	.140 3.56	916221-9



12 x 12
84 Positions

Style	Solder Tail Length	Socket Number
LIF[4]	.110 2.79	916222-1

Legend:
LIF — Low Insertion Force
[2] Full grid.
[3] Open center.
[4] Closed center.

Position A1:
Lower left corner

SOURCE: Catalog 82172

Specifications subject to change.

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1-800-722-1111
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PGA Sockets—Patterns for LIF
(Continued)

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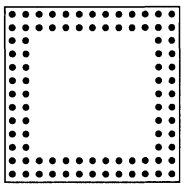
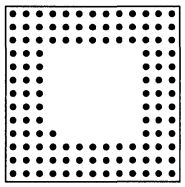


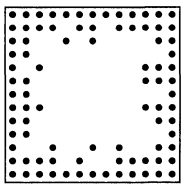
13 x 13
88 Positions

Style	Solder Tail Length	Socket Number
LIF[4]	.110 2.79	916223-8



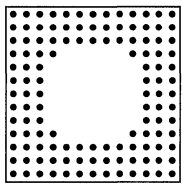
13 x 13
121 Positions

Style	Solder Tail Length	Socket Number
LIF[3]	.110 2.79	1-916223-6
LIF[3,9]	.110 2.79	916593-1



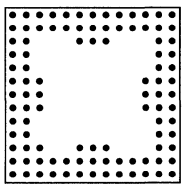
13 x 13
88 Positions

Style	Solder Tail Length	Socket Number
LIF[4]	.110 2.79	1-916223-3



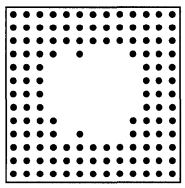
13 x 13
124 Positions

Style	Solder Tail Length	Socket Number
LIF[4]	.140 3.56	1-916223-5



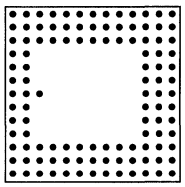
13 x 13
101 Positions

Style	Solder Tail Length	Socket Number
LIF[4]	.110 2.79	916223-5
LIF[4]	.140 3.56	1-916223-7



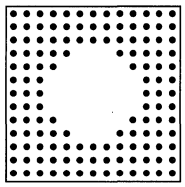
13 x 13
128 Positions

Style	Solder Tail Length	Socket Number
LIF[2]	.110 2.79	1-916223-1



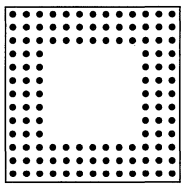
13 x 13
114 Positions

Style	Solder Tail Length	Socket Number
LIF[4]	.110 2.79	916223-3



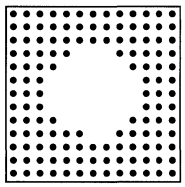
13 x 13
132 Positions

Style	Solder Tail Length	Socket Number
LIF[2]	.110 2.79	1-916223-0



13 x 13
120 Positions

Style	Solder Tail Length	Socket Number
LIF[4]	.110 2.79	916223-1



13 x 13
133 Positions

Style	Solder Tail Length	Socket Number
LIF[2]	.110 2.79	916223-9

Legend:
LIF — Low Insertion Force

[2] Full grid.
[3] Open center.
[4] Closed center.
[9] .000010 [0.00025] min. gold on contact surface.

Position A1:
Lower left corner

SOURCE: Catalog 82172

Specifications subject to change.
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Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

PGA Sockets—Patterns for LIF
(Continued)

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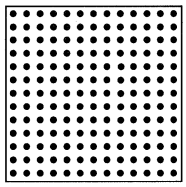
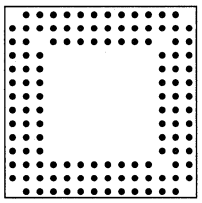


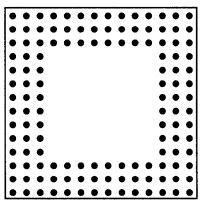
13 x 13
169 Positions

Style	Solder Tail Length	Socket Number
LIF[2]	.140 3.56	1-916223-2



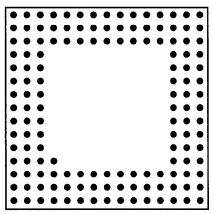
14 x 14
125 Positions

Style	Solder Tail Length	Socket Number
LIF[4]	.110 2.79	916224-5



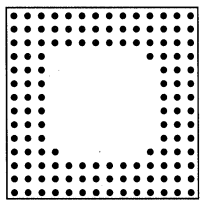
14 x 14
132 Positions

Style	Solder Tail Length	Socket Number
LIF[3]	.110 2.79	916224-8
LIF[3,9]	.110 2.79	916594-1



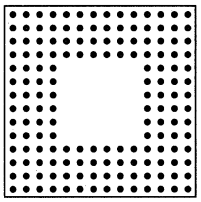
14 x 14
133 Positions

Style	Solder Tail Length	Socket Number
LIF[4]	.110 2.79	916224-3



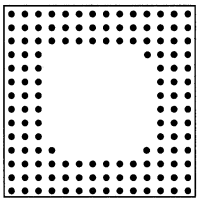
14 x 14
135 Positions

Style	Solder Tail Length	Socket Number
LIF[4]	.110 2.79	916224-4



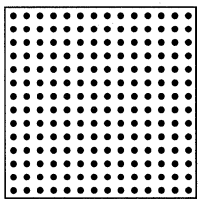
14 x 14
160 Positions

Style	Solder Tail Length	Socket Number
LIF[3]	.110 2.79	916224-9



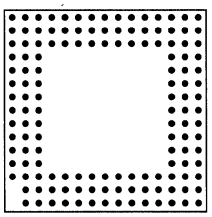
14 x 14
184 Positions

Style	Solder Tail Length	Socket Number
LIF[2]	.110 2.79	916224-6



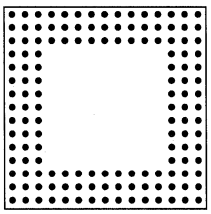
14 x 14
196 Positions

Style	Solder Tail Length	Socket Number
LIF[2]	.140 3.56	916224-2



15 x 15
142 Positions

Style	Solder Tail Length	Socket Number
LIF[4]	.140 3.56	1-916225-3
LIF[3]	.110 2.79	2-916225-3



15 x 15
144 Positions

Style	Solder Tail Length	Socket Number
LIF[3]	.110 2.79	2-916225-0

Legend:
LIF — Low Insertion Force
[2] Full grid.
[3] Open center.
[4] Closed center.
[9] .000010 [0.00025] min. gold on contact surface.

Position A1:
Lower left corner

SOURCE: Catalog 82172

Specifications subject to change.
1-800-522-6752
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1-800-722-1111
Tooling/Technical Assistance Center

PGA Sockets — Patterns for LIF and SL ZIF

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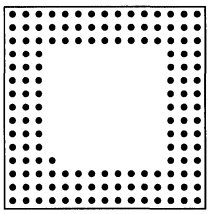
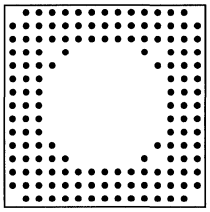


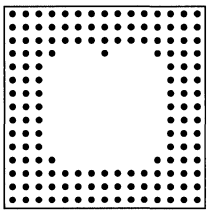
15 x 15
145 Positions

Style	Solder Tail Length	Socket Number
LIF[3]	.110 2.79	2-916225-4
LIF[4]	.140 3.56	1-916225-4



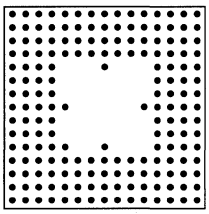
15 x 15
149 Positions

Style	Solder Tail Length	Socket Number
LIF[4]	.110 2.79	916225-2



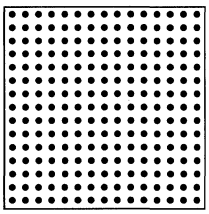
15 x 15
149 Positions

Style	Solder Tail Length	Socket Number
LIF[4]	.110 2.79	916225-5



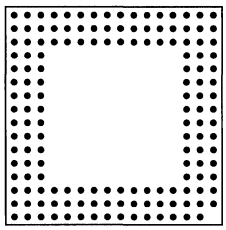
15 x 15
181 Positions

Style	Solder Tail Length	Socket Number
LIF[2]	.140 3.56	916225-4



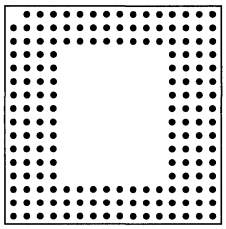
15 x 15
225 Positions

Style	Solder Tail Length	Socket Number
LIF[2]	.110 2.79	2-916225-2
LIF[2]	.140 3.56	916225-7



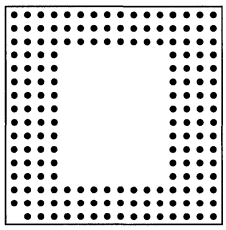
16 x 16
155 Positions

Style	Solder Tail Length	Socket Number
LIF[4]	.110 2.79	916226-3



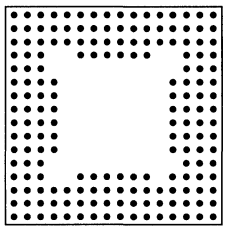
16 x 16
175 Positions

Style	Solder Tail Length	Socket Number
LIF[4]	.110 2.79	916226-2



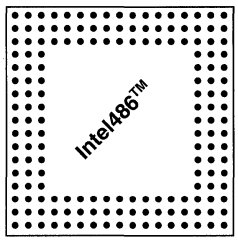
16 x 16
175 Positions

Style	Solder Tail Length	Socket Number
LIF[3]	.110 2.79	916226-6
LIF[3]	.140 3.56	916226-8



16 x 16
181 Positions

Style	Solder Tail Length	Socket Number
LIF[4]	.110 2.79	916226-4



17 x 17
168 Positions

Style	Solder Tail Length	Socket Number
LIF[3]	.085 2.16	2-916227-5
LIF[3]	.110 2.79	2-916227-6
LIF[3,5]	.110 2.79	382624-2
LIF[3,9]	.110 2.79	382741-4
LIF[4]	.140 3.56	1-916227-0
LIF[4]	.170 4.32	916227-8
SL ZIF[3,6]	.110 2.79	916552-1
SL ZIF[3,5,6]	.110 2.79	916547-1

Legend:

LIF — Low Insertion Force
SL ZIF — Single Lever ZIF

[2] Full grid.
[3] Open center.
[4] Closed center.
[5] Heat sink compatible.
[6] Blue
[9] .000010 [0.00025] min. gold on contact surface.

Position A1:
Lower left corner

SOURCE: Catalog 82172

Specifications subject to change.

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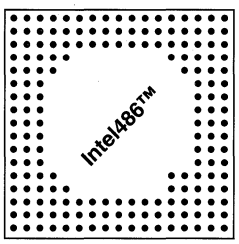
Tooling/Technical Assistance Center

PGA Sockets — Patterns for LIF and SL ZIF
(Continued)

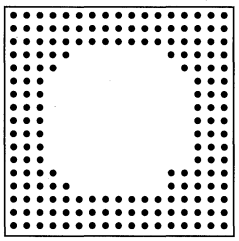
EADS CD-ROM



17 x 17
169 Positions

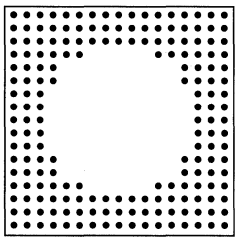
Style	Solder Tail Length	Socket Number
LIF[3]	.085 2.16	2-916227-4
LIF[3,9]	.085 2.16	382741-2
LIF[3]	.110 2.79	2-916227-7
LIF[3,5]	.110 2.79	382624-1
LIF[3,9]	.110 2.79	382741-1
LIF[3]	.140 3.56	3-916227-0
LIF[3,9]	.140 3.56	382741-3
SL ZIF[3,7]	.110 2.79	916503-1**
SL ZIF[3,5,6]	.110 2.79	916504-2

**Molded Socket 1



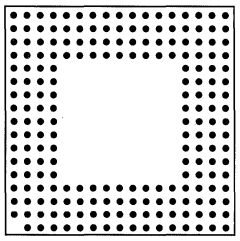
17 x 17
181 Positions

Style	Solder Tail Length	Socket Number
LIF[4]	.140 3.56	916227-5



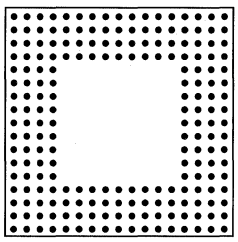
17 x 17
188 Positions

Style	Solder Tail Length	Socket Number
LIF[4]	.110 2.79	916227-9



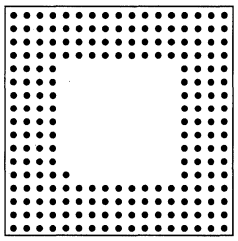
17 x 17
207 Positions

Style	Solder Tail Length	Socket Number
LIF[4]	.110 2.79	916227-6



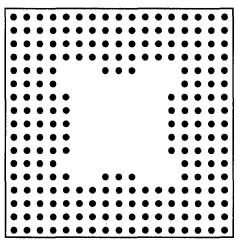
17 x 17
208 Positions

Style	Solder Tail Length	Socket Number
LIF[3]	.110 2.79	2-916227-1
LIF[4]	.170 4.32	1-916227-6



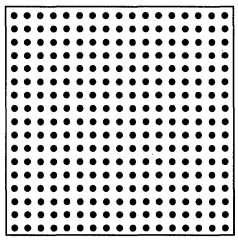
17 x 17
209 Positions

Style	Solder Tail Length	Socket Number
LIF[3]	.110 2.79	2-916227-0
LIF[3]	.140 3.56	1-916227-5
LIF[3,9]	.110 2.79	382741-5



17 x 17
225 Positions

Style	Solder Tail Length	Socket Number
LIF[4]	.110 2.79	916227-2
LIF[4]	.140 3.56	1-916227-3



17 x 17
289 Positions

Style	Solder Tail Length	Socket Number
LIF[2]	.110 2.79	2-916227-8

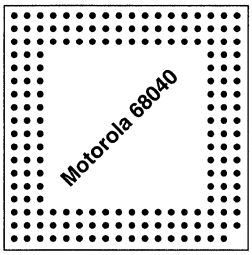
Legend:
LIF — Low Insertion Force
SL ZIF — Single Lever ZIF

[2] Full grid.
[3] Open center.
[4] Closed center.
[5] Heat sink compatible.
[6] Blue
[7] Ivory
[9] .000010 [0.00025] min. gold on contact surface.

Position A1:
Lower left corner

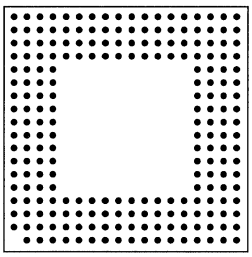
SOURCE: Catalog 82172

PGA Sockets — Patterns for LIF and SL ZIF
(Continued)



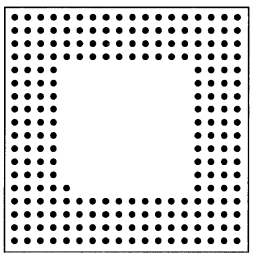
18 x 18
179 Positions

Style	Solder Tail Length	Socket Number
LIF[3]	.110 2.79	916568-1
LIF[3,5]	.110 2.79	916435-3
LIF[3]	.140 3.56	916568-2
LIF[3,8]	.140 3.56	1-916228-2
LIF[4]	.140 3.56	916228-3
LIF[3,5]	.140 3.56	916435-2
SL ZIF[3,5,7]	.110 2.79	916589-1



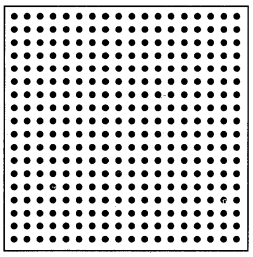
18 x 18
223 Positions

Style	Solder Tail Length	Socket Number
LIF[3]	.140 3.56	916228-6
LIF[4]	.170 4.32	916228-2



18 x 18
225 Positions

Style	Solder Tail Length	Socket Number
LIF[4]	.110 2.79	916228-5



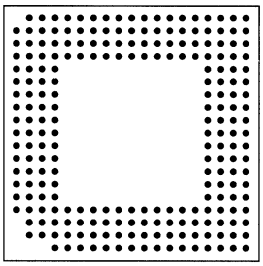
18 x 18
324 Positions

Style	Solder Tail Length	Socket Number
LIF[2]	.140 3.56	916228-8

Legend:
LIF — Low Insertion Force
SL ZIF — Single Lever ZIF
Position A1:
Lower left corner except where pattern rotation is indicated.

SOURCE: Catalog 82172

[2] Full grid.
[3] Open center.
[4] Closed center.
[5] Heat sink compatible.
[7] Ivory
[8] Rotate pattern clockwise 90°.
[9] .000010 [0.00025] min. gold on contact surface.
[10] Left hand socket.

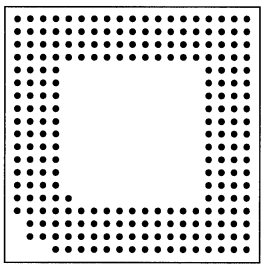


Position A1 not loaded

19 x 19
235 Positions

Style	Solder Tail Length	Socket Number
LIF[3,5,9]	.110 3.56	916597-1
LIF[3]	.110 3.56	1-916229-1
LIF[3,5]	.110 2.79	382740-7
LIF[3,9]	.110 2.79	916477-7
LIF[3]	.140 3.56	1-916229-1
LIF[3,5]	.140 3.56	382740-8
LIF[3,9]	.140 3.56	916477-8
SL ZIF[3,5,7]	.110 2.79	916570-1*
SL ZIF[3,5,7]	.110 2.79	916592-1*

*Molded Socket 6



Position A1 not loaded

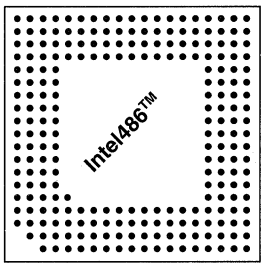
19 x 19
237 Positions

Style	Solder Tail Length	Socket Number
LIF[3]	.110 2.79	916229-9
LIF[3,5]	.110 2.79	382740-3
LIF[3,9]	.110 2.79	916477-6
LIF[3,5,9]	.110 2.79	916597-2
LIF[3]	.140 3.56	1-916229-0
LIF[3,5]	.140 3.56	382740-4
SL ZIF[3,5,7]	.110 2.79	916554-2*
SL ZIF[3,5,7,10]	.110 2.79	916506-2*
SL ZIF[3,5,7]	.110 2.79	916541-1*
SL ZIF[3,7]	.110 2.79	916539-2*

*Molded Socket 3

Specifications subject to change.
1-800-522-6752 Product Information Center/ AMP FAX Service
1-800-722-1111 Tooling/Technical Assistance Center

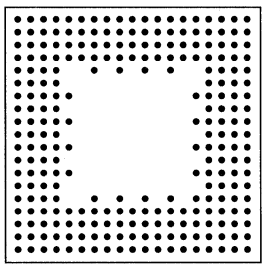
PGA Sockets — Patterns for LIF and SL ZIF
(Continued)



19 x 19
238 Positions

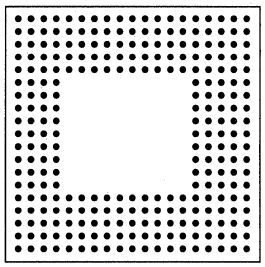
Style	Solder Tail Length	Socket Number
LIF[3]	.110 2.79	916229-6
LIF[3,5]	.110 2.79	382740-1
LIF[3,9]	.110 2.79	916477-1
LIF[3,5,9]	.110 2.79	916597-3
LIF[3,5]	.140 3.56	382740-2
LIF[3,9]	.140 3.56	916477-3
SL ZIF[3,6]	.110 2.79	916501-1**
SL ZIF[3,5,6]	.110 2.79	916591-1**
SL ZIF[3,5,6]	.110 2.79	916537-1**

**Molded Socket 2



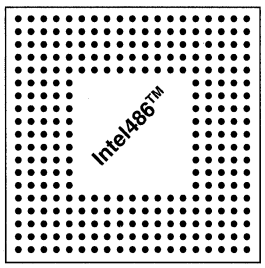
19 x 19
257 Positions

Style	Solder Tail Length	Socket Number
LIF[4]	.140 3.56	916229-1
LIF[4]	.170 4.32	916229-2



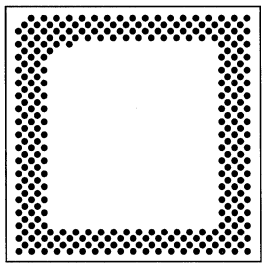
19 x 19
271 Positions

Style	Solder Tail Length	Socket Number
LIF[4]	.110 2.79	916229-3



19 x 19
280 Positions

Style	Solder Tail Length	Socket Number
LIF[3,5]	.110 2.79	382642-1
LIF[3]	.110 2.79	382668-1



19 x 19
296 Positions
Interstitial

Style	Solder Tail Length	Socket Number
SL ZIF[3,5,7]	.110 2.79	916512-1

Legend:
LIF — Low Insertion Force
SL ZIF — Single Lever ZIF

[2] Full grid.
[3] Open center.
[4] Closed center.
[5] Heat sink compatible.
[6] Blue
[7] Ivory
[9] .000010 [0.00025] min. gold on contact surface.

Position A1:
Lower left corner

SOURCE: Catalog 82172

Specifications subject to change.

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Product Information Center/ AMP FAX Service

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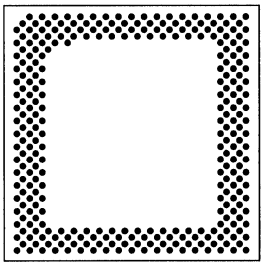
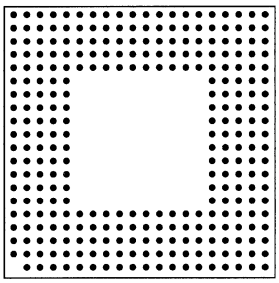
PGA Sockets — Patterns for LIF and SL ZIF
(Continued)



19 x 19
320 Positions
Interstitial

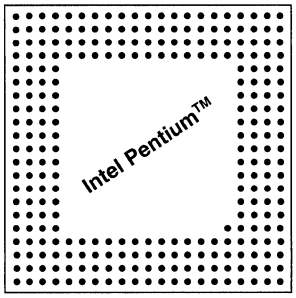
Style	Solder Tail Length	Socket Number
SL ZIF[3,5,7]	.080 2.03	916513-2*
SL ZIF[3,5,7]	.080 2.03	916560-2*
SL ZIF[3,5,7]	.110 2.79	916560-1*
SL ZIF[3,5,7]	.110 2.79	916513-1*

*Molded Socket 5



20 x 20
299 Positions

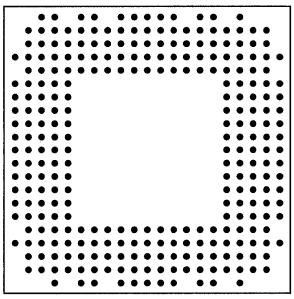
Style	Solder Tail Length	Socket Number
LIF[4]	.110 2.79	916300-1
LIF[3]	.140 3.56	916300-5
LIF[4]	.170 4.32	916300-2



21 x 21
273 Positions

Style	Solder Tail Length	Socket Number
LIF[3,5]	.110 2.79	382644-1
LIF[3,6]	.110 2.79	382672-1
LIF[3,5,9]	.110 2.79	916595-1
LIF[3,6,9]	.110 2.79	916596-1
LIF[3,5]	.140 3.56	382644-2
SL ZIF[3,5,7]	.080 2.03	916585-2*
SL ZIF[3,5,7]	.110 2.79	916585-1*
SL ZIF[5,7]	.110 2.79	916534-2*
SL ZIF[3,5,7]	.110 2.79	916510-1*

*Molded Socket 4



21 x 21
289 Positions

Style	Solder Tail Length	Socket Number
LIF[4]	.110 2.79	916301-2

Legend:
LIF — Low Insertion Force
SL ZIF — Single Lever ZIF

[2] Full grid.
[3] Open center.
[4] Closed center.
[5] Heat sink compatible.
[7] Ivory
[8] Rotate pattern clockwise 90°.
[9] .000010 [0.00025] min. gold on contact surface.

Position A1:
Lower left corner except where pattern rotation is indicated.

SOURCE: Catalog 82172

Specifications subject to change.

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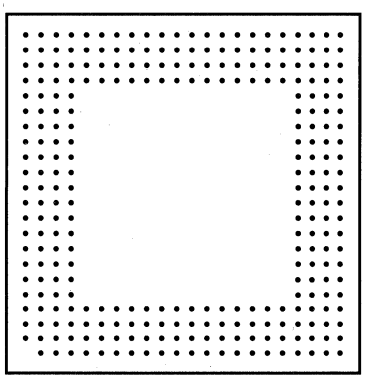
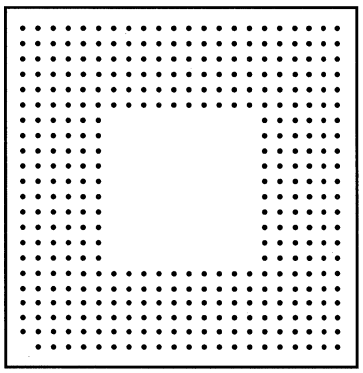
PGA Sockets — Patterns for LIF and SL ZIF
(Continued)



22 x 22
287 Positions

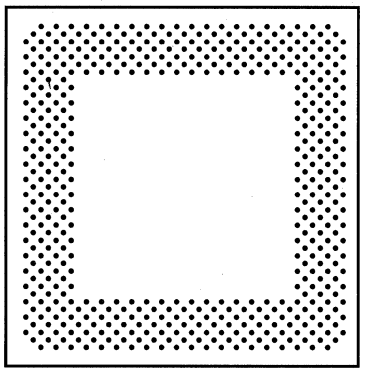
Style	Solder Tail Length	Socket Number
LIF[3]	.110 2.79	916564-1
LIF[3,5]	.110 2.79	916561-1
LIF[3]	.140 3.56	916564-2
LIF[3,5]	.140 3.56	916561-2
SL ZIF[3,5,7]	.110 2.79	916579-1*

*Molded Socket 287 (DEC)



22 x 22
383 Positions

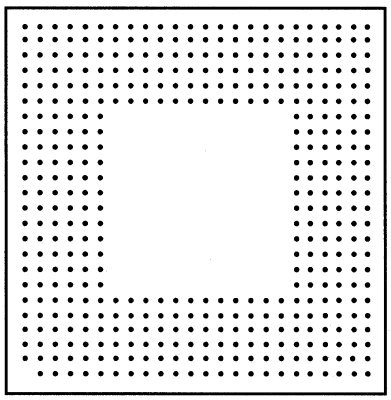
Style	Solder Tail Length	Socket Number
LIF[3]	.110 2.79	916564-3
LIF[3,5]	.110 2.79	916561-3
LIF[3]	.140 3.56	916564-4
LIF[3,5]	.140 3.56	916561-4



22 x 22
499 Positions
Interstitial

Style	Solder Tail Length	Socket Number
SL ZIF[3,5,7]	.110 2.79	916583-1*

*Molded Socket 499 (DEC)



24 x 24
431 Positions

Style	Solder Tail Length	Socket Number
LIF[3]	.110 2.79	916566-1
LIF[3]	.140 3.56	916566-2

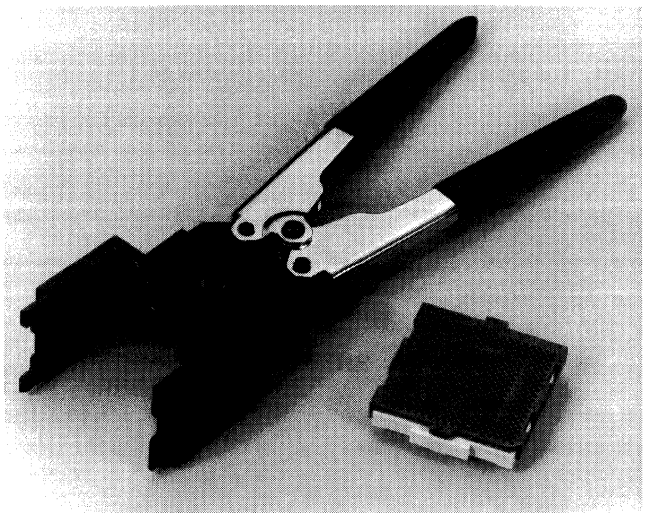
Legend:
LIF — Low Insertion Force
SL ZIF — Single Lever ZIF

[3] Open center.
[5] Heat sink compatible.
[7] Ivory

Position A1:
Lower left corner

SOURCE: Catalog 82172

PGA Sockets — Tool Actuated ZIF (TAZ)



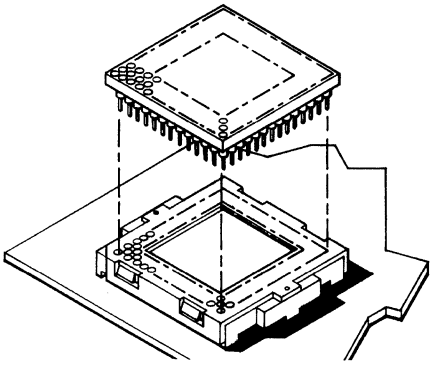
Product Facts

- Smaller in size than other ZIF sockets
- Adaptable to robotic handling
- Easy detection of bent IC pins
- Large funnel entry
- Normally closed contacts
- Spring-loaded socket cover
- Compatible hand tool
- Recognized under the Component Program of Underwriters Laboratories Inc., File No. E28476
- Certified by Canadian Standards Association, File No. LR 7189

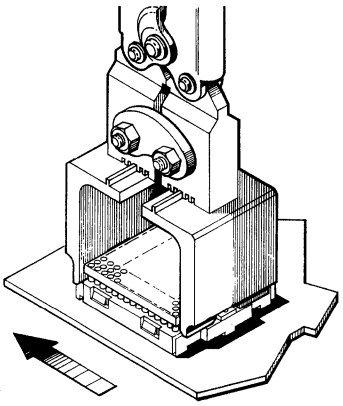
Assembly Procedure

Actuation Hand Tool
14 x 14 - 19 x 19
Part No. 854234-1

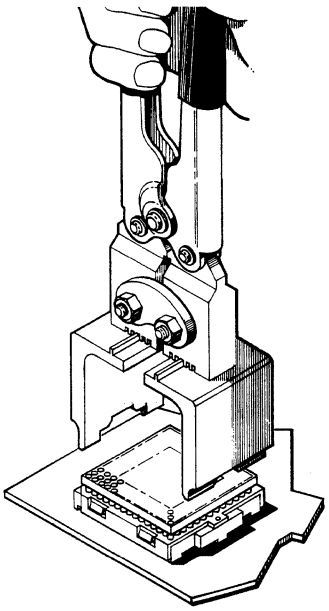
20 x 20 - 25 x 25
Part No. 854234-2



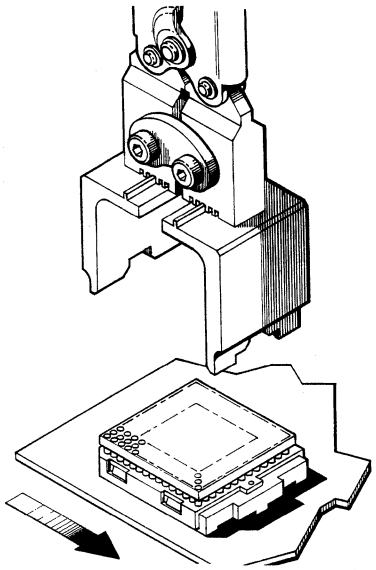
1. Loading IC package into socket.
Note: Spring-loaded cover aligns empty socket in open position.



3. Cam the socket cover and the package to the closed position.



2. Aligning tool with socket.



4. To remove, rotate tool 180° and realign with socket. Cam the socket cover and the package to the open position. Remove the IC package.

SOURCE: Catalog 82172

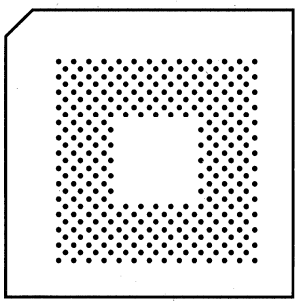
Specifications subject to change.

1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

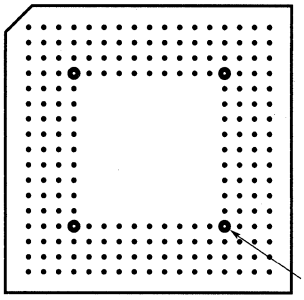
PGA Sockets — Tool Actuated ZIF (TAZ)
(Continued)

Patterns



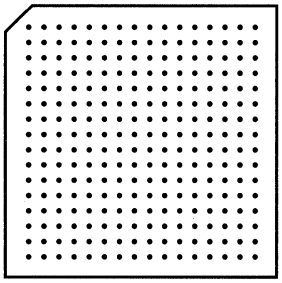
14 x 14
304 Positions

Solder Tail Length	Socket Part Number
.110 2.79	1-382532-1



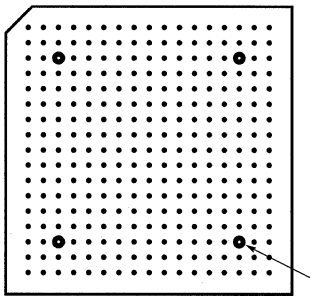
17 x 17
208 Positions

Solder Tail Length	Socket Part Number
.110 2.79	1-382532-0



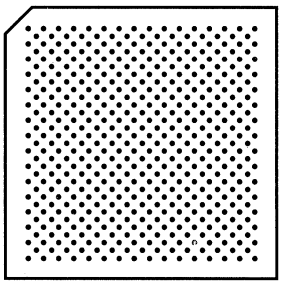
16 x 16
256 Positions

Solder Tail Length	Socket Part Number
.110 2.79	382532-3



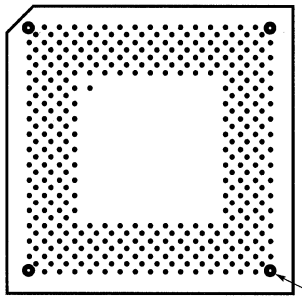
17 x 17
289 Positions

Solder Tail Length	Socket Part Number
.140 3.56	382532-8
.170 4.32	382532-4



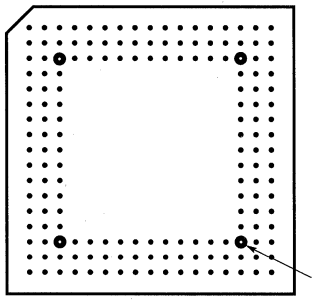
16 x 16
481 Positions

Solder Tail Length	Socket Part Number
.110 2.79	382532-2



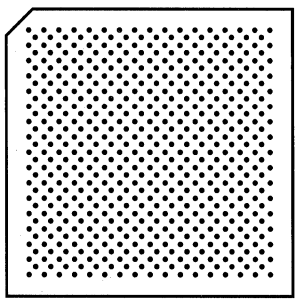
17 x 17
365 Positions

Solder Tail Length	Socket Part Number
.140 3.56	382532-6
.110 2.79	1-382532-2



17 x 17
168 Positions

Solder Tail Length	Socket Part Number
.140 3.56	382532-7
.170 4.32	382532-5



17 x 17
545 Positions

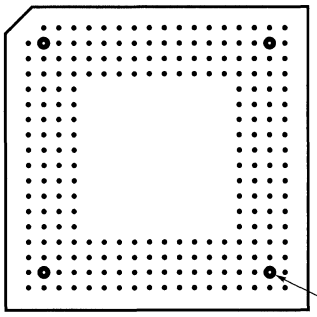
Solder Tail Length	Socket Part Number
.110 2.79	382532-1
.140 3.56	382532-9

SOURCE: Catalog 82172

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

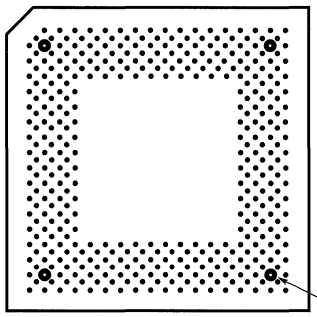
PGA Sockets — Tool Actuated ZIF (TAZ)
(Continued)

Patterns



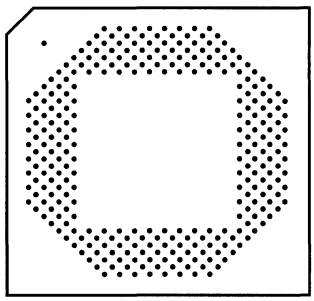
Solder Tail Length	Socket Part Number
.170 4.32	382533-5

18 x 18
223 Positions



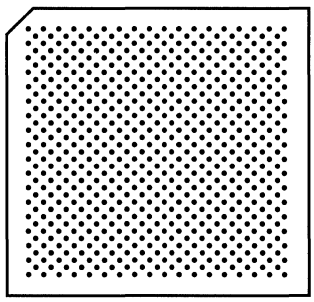
Solder Tail Length	Socket Part Number
.170 4.32	382533-4
.110 2.79	382533-6
.140 3.56	1-382533-4

18 x 18
391 Positions



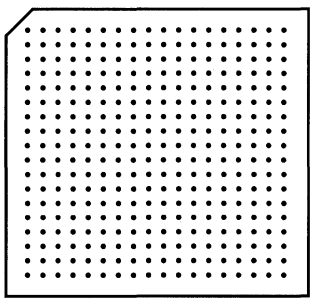
Solder Tail Length	Socket Part Number
.170 4.32	1-382533-3

18 x 18
293 Positions



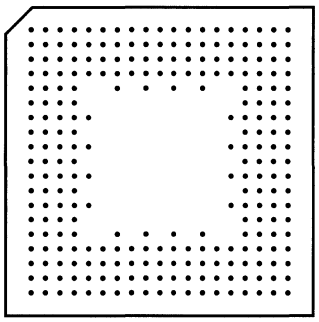
Solder Tail Length	Socket Part Number
.170 4.32	382533-2

18 x 18
613 Positions



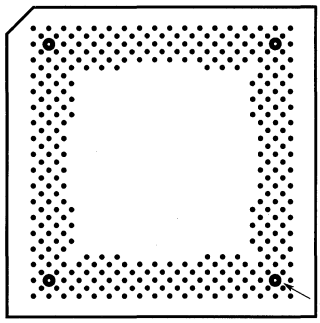
Solder Tail Length	Socket Part Number
.170 4.32	382533-3

18 x 18
324 Positions



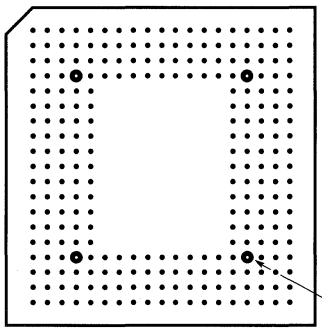
Solder Tail Length	Socket Part Number
.170 4.32	382533-8

19 x 19
257 Positions



Solder Tail Length	Socket Part Number
.110 2.79	1-382533-0
.170 4.32	382533-9

18 x 18
325 Positions



Solder Tail Length	Socket Part Number
.110 2.79	1-382533-1

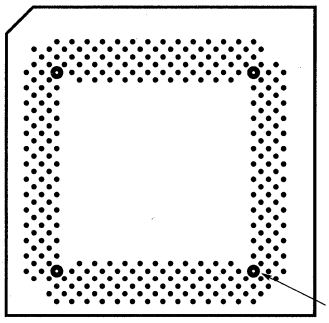
19 x 19
262 Positions

SOURCE: Catalog 82172

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

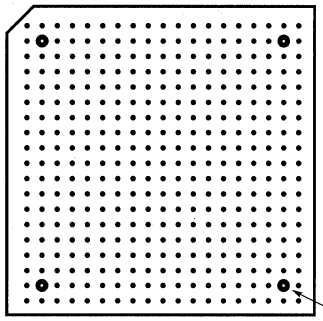
PGA Sockets — Tool Actuated ZIF (TAZ)
(Continued)

Patterns



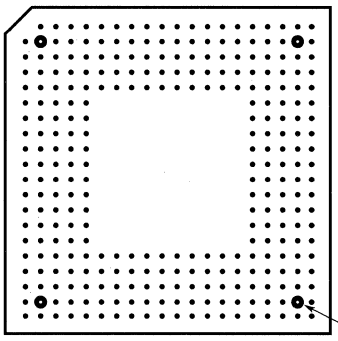
Solder Tail Length	Socket Part Number
.170 4.32	1-382533-5

18 x 18
305 Positions



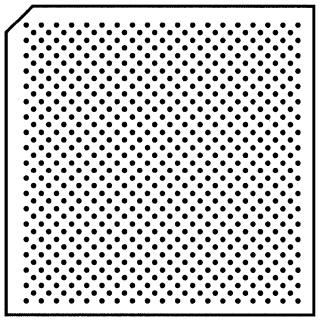
Solder Tail Length	Socket Part Number
.170 4.32	382533-7

19 x 19
361 Positions



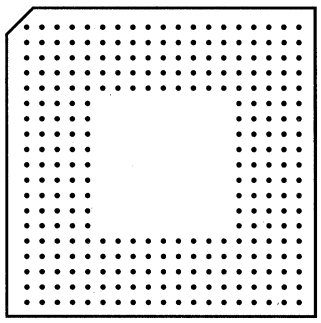
Solder Tail Length	Socket Part Number
.140 3.56	1-382533-6

18 x 18
431 Positions



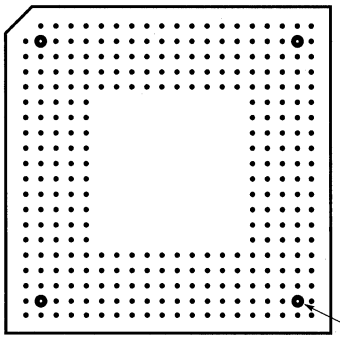
Solder Tail Length	Socket Part Number
.170 4.32	382533-1

19 x 19
685 Positions



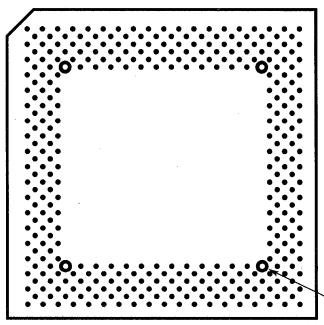
Solder Tail Length	Socket Part Number
.110 2.79	382733-1

19 x 19
280 Positions



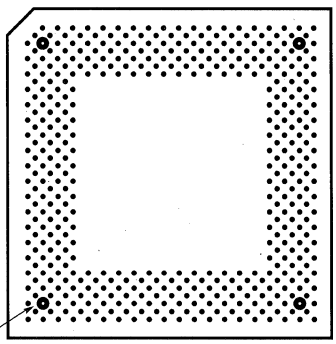
Solder Tail Length	Socket Part Number
.170 4.32	382584-1
.140 3.56	382584-6

20 x 20
299 Positions



Solder Tail Length	Socket Part Number
.110 2.79	1-382533-2

19 x 19
348 Positions



Solder Tail Length	Socket Part Number
.110 2.79	382584-4
.110 2.79	382795-1[1]
.110 2.79	382869-1[1,2]
.170 4.32	382584-2
.140 3.56	382584-5
.090 2.29	382795-2[1]

[1] Open center
[2] Phosphor bronze contacts

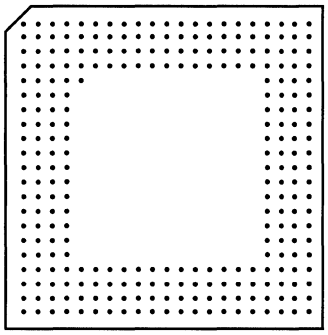
20 x 20
447 Positions

SOURCE: Catalog 82172

Specifications subject to change.
1-800-522-6752 Product Information Center/ AMP FAX Service
1-800-722-1111 Tooling/Technical Assistance Center

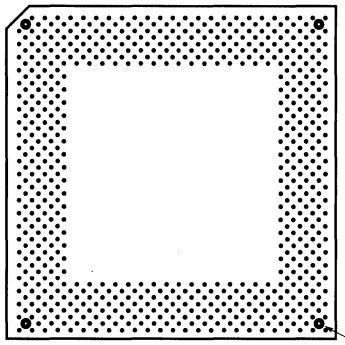
PGA Sockets — Tool Actuated ZIF (TAZ)
(Continued)

Patterns



21 x 21
273 Positions

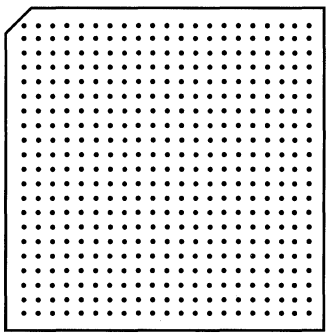
Solder Tail Length	Socket Part Number
.110 2.79	382734-1



23 x 23
591 Positions

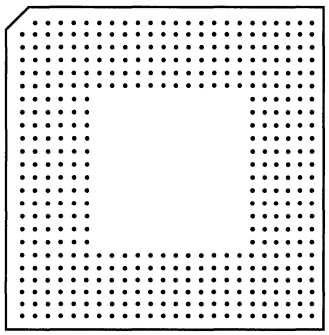
Solder Tail Length	Socket Part Number
.140 3.56	382585-3
.140 3.56	382870-1[1]

[1]Phosphor bronze contacts



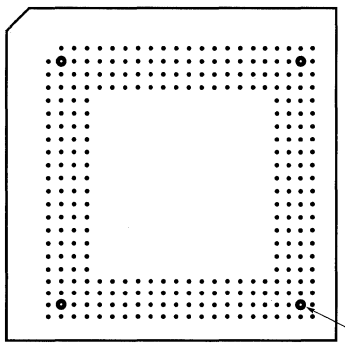
21 x 21
441 Positions

Solder Tail Length	Socket Part Number
.170 4.32	382584-3



24 x 24
431 Positions

Solder Tail Length	Socket Part Number
.170 4.32	382585-2



22 x 22
287 Positions

Solder Tail Length	Socket Part Number
.110 2.79	382585-4

SOURCE: Catalog 82172

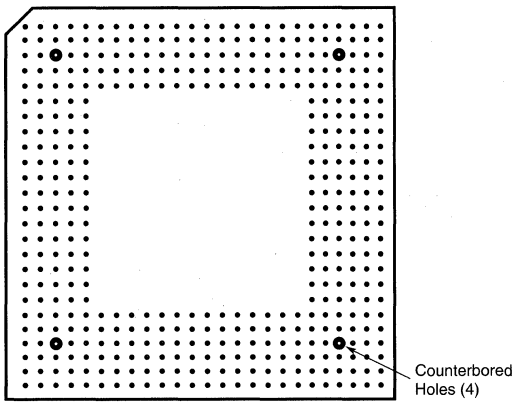
Specifications subject to change.

1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

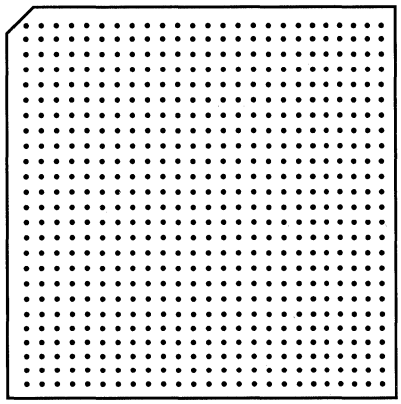
PGA Sockets — Tool Actuated ZIF (TAZ)
(Continued)

Patterns



25 x 25
400 Positions

Solder Tail Length	Socket Part Number
.170 4.32	382585-5



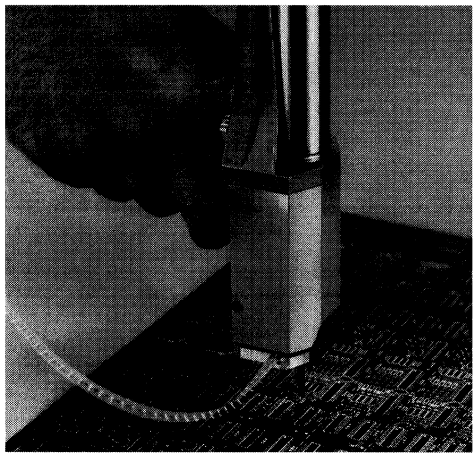
25 x 25
625 Positions

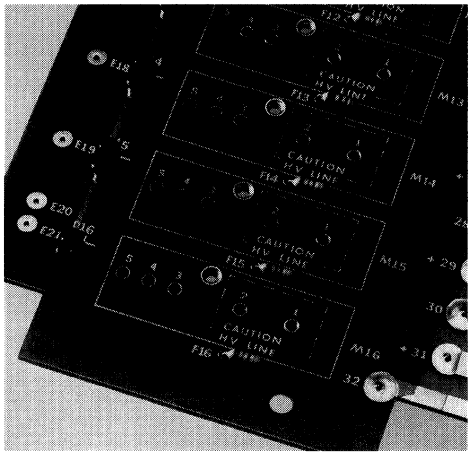
Solder Tail Length	Socket Part Number
.170 4.32	382585-1

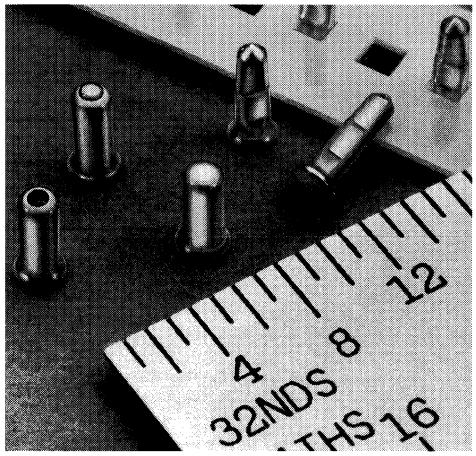
SOURCE: Catalog 82172

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

Miniature Spring Sockets (For Ultra-Low Socketing Requirements)







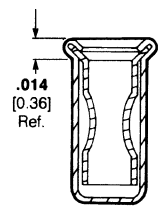
Product Facts

- SMT and IRR processing compatibility
- Five different hole size series (.039 to .107 [0.99 to 2.72]) available to accommodate a pin diameter range of .012 to .065 [0.30 to 1.65] and board thicknesses of .031 to .125 [0.79 to 3.18]
- Low-profile, above-board height of .022 [0.56] allows maximum board-to-board clearance
- Small head diameters allow centerline spacing as close as .070 [1.78]
- Sockets accept round, square or rectangular leads without socket orientation
- Bellmouth design provides easy insertion of leads
- Inner helical spring assures maximum reliability
- Two basic design configurations available — Flat bottom sockets with closed, open and knockout bottom designs, and bullet nose sockets
- Hand-held, bench-mounted and computerized insertion equipment available

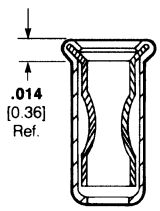
Bullet Nose Sockets (Loose Piece and Tape Mounted)

Flat Bottom Sockets

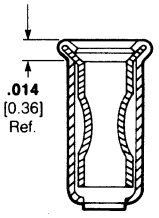
Closed Bottom



Open Bottom*



Knockout Bottom



*Open bottom sockets can be made available.

SOURCE: Catalog 82172

Specifications subject to change.

1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

Miniature Spring Sockets
(Continued)

Bullet Nose Sockets (Loose Piece and Tape Mounted)
(Continued)

Flat Bottom Sockets

Series I Sockets

For .012–.021 [0.30–0.53] Round and .009–.015 [0.23–0.38] Square Leads[3]

Prototype Insertion Kit
Part No. 382337-1

Miniature Spring Socket Insertion Tool
Part No. 382378-1

Hand Insertion Tooling for Bullet Nose Sockets on Polyester Carrier Tape
Part No. 354700-1

Knockout Plug Tool
Part No. 69728

Flat Bottom — Recommended Hole Size: .041 [1.04] for Semi-Automatic Insertion or Hand Insertion

Note: Sockets Dim. (Typ.)—0.59 [1.50] Dia. x .142 [3.61] L

Pin Dia. Range	Finish		Part Numbers	
	Spring	Sleeve	Closed Bottom	Knockout Bottom
.013–.020 0.33–0.51	Gold[1]	Gold[2]	2-330808-8	3-330808-8
	Gold[1]	Tin	6-330808-5	5-330808-3
	Tin	Tin	2-330808-7	3-330808-7
.013–.020 0.33–0.51	Tin	Tin	1-332095-2	—
	Gold[1]	Tin	2-332095-4	1-332095-9
	Gold[1]	Gold[2]	2-332095-1	2-332095-2

Bullet Nose — Recommended Hole Size: .042 [1.07] for Semi-Automatic/Automatic Insertion or Hand Insertion

Note: Sockets Dim. (Typ.)—.066 [1.67] Dia. x .184 [4.64] L

Pin Dia. Range	Finish		Part Numbers		
				Polyester Carrier Tape	
	Spring	Sleeve	Loose Piece	Without Sealant 50,000/Reel	With Sealant 50,000/Reel
.012–.021 0.30–0.53	Gold[1]	Tin	645946-2	645950-2	—
	Tin	Tin	—	—	645949-1
.015–.021 0.38–0.53	Gold[1]	Tin	645945-2	—	645947-2
	Tin	Tin	645945-1	645948-1	645947-1

[1].000030 [0.00076] gold plating.
[2]Gold flash.
[3]To calculate diameter required for rectangular or square leads: Pin Diameter = $\left[\sqrt{(\text{Lead Width})^2 + (\text{Lead Thickness})^2}\right]$ -.003.

Series II Sockets

For .014–.026 [0.36–0.66] Round and .010–.018 [0.25–0.46] Square Leads[3]

Prototype Insertion Kit
Part No. 382337-1

Miniature Spring Socket Insertion Tool
Part No. 382378-1

Hand Insertion Tooling for Bullet Nose Sockets on Polyester Carrier Tape
Part No. 354700-2

Knockout Plug Tool
Part No. 69728

Flat Bottom — Recommended Hole Size: .052 [1.32] for Semi-Automatic Insertion or Hand Insertion

Note: Sockets Dim. (Typ.)—.070 [1.78] Dia. x .260 [6.60] L

Pin Dia. Range	Finish		Part Numbers	
	Spring	Sleeve	Closed Bottom	Knockout Bottom
.028–.021 0.46–0.53	Gold[1]	Gold[2]	2-331272-2	3-331272-0
	Gold[1]	Tin	2-331272-3	3-331272-1
	Tin	Tin	2-331272-1	—
.014–.026 0.36–0.66	Gold[1]	Gold[2]	50863-4	—
	Gold[1]	Tin	50863-5	50863-3
	Tin	Tin	50863-8	50863-7
.022–.025 0.56–0.64	Gold[1]	Gold[2]	2-331272-6	3-331272-4
	Gold[1]	Tin	2-331272-7	3-331272-5
	Tin	Tin	2-331272-5	3-331272-3
.014–.026 0.36–0.66	Gold[1]	Gold[2]	50462-6	—
	Gold[1]	Tin	50462-8	50462-5
	Tin	Tin	50462-7	50462-4

Bullet Nose — Recommended Hole Size: .052 [1.32] for Semi-Automatic/Automatic Insertion or Hand Insertion

Note: Sockets Dim. (Typ.)—.075 [1.91] Dia. x .184 [4.67] L

Pin Dia. Range	Finish		Part Numbers		
				Polyester Carrier Tape	
	Spring	Sleeve	Loose Piece	Without Sealant 50,000/Reel	With Sealant 50,000/Reel
.014–.026 0.35–0.66	Gold[1]	Tin	645952-2	—	645955-2
	Tin	Tin	645952-1	645956-1	645955-1
.020–.026 0.51–0.66	Gold[1]	Tin	645951-2	645954-2	645953-2
	Tin	Tin	645951-1	645954-1	645953-1

[1].000030 [0.00076] gold plating.
[2]Gold flash.
[3]To calculate diameter required for rectangular or square leads: Pin Diameter = $\left[\sqrt{(\text{Lead Width})^2 + (\text{Lead Thickness})^2}\right]$ -.003.

Specifications subject to change.
1-800-522-6752 Product Information Center/ AMP FAX Service
1-800-722-1111 Tooling/Technical Assistance Center

Miniature Spring Sockets
(Continued)

Bullet Nose Sockets (Loose Piece and Tape Mounted)
(Continued)

Flat Bottom Sockets

Series III Sockets

For .026–.033 [0.66–0.53] Round and .025–.064 [0.64-1.63] Square Leads[3]

Prototype Insertion Kit
Part No. 382337-1

Miniature Spring Socket Insertion Tool
Part No. 382378-1

Hand Insertion Tooling for Bullet Nose Sockets on Polyester Carrier Tape
Part No. 354700-3

Knockout Plug Tool
Part No. 69728-1

Flat Bottom — Recommended Hole Size: .062 [1.57] for Semi-Automatic/Automatic Insertion or Hand Insertion

Note: Sockets Dim. (Typ.)—.080 [2.03] Dia. x .257 [6.53] L

Pin Dia. Range	Finish		Part Numbers	
	Spring	Sleeve	Closed Bottom	Knockout Bottom
.026–.029 0.66–0.74	Gold[1]	Gold[2]	1-331677-1	3-331677-0
	Gold[1]	Tin	3-331677-8	3-331677-2
	Tin	Tin	1-331677-0	—
.026–.033 0.66–0.84	Gold[1]	Gold[2]	50864	—
	Gold[1]	Tin	50864-1	50864-3
	Tin	Tin	50864-6	50864-7
.030–.033 0.76–0.84	Gold[1]	Gold[2]	1-331677-4	2-331677-9
	Gold[1]	Tin	1-331677-8	3-331677-4
	Tin	Tin	1-331677-3	—

Flat Bottom — Recommended Hole Size: .062 [1.57] for Semi-Automatic/Automatic Insertion or Hand Insertion

Note: Sockets Dim. (Typ.)—.080 [2.03] Dia. x .290 [7.37] L

Pin Dia. Range	Finish		Part Numbers		
				Polyester Carrier Tape	
	Spring	Sleeve	Loose Piece	Without Sealant 10,000/Reel	With Sealant 10,000/Reel
.028–.033 0.71–0.84	Gold[1]	Tin	—	—	1-645986-2
	Tin	Tin	—	1-645990-1	1-645986-1

[1].000030 [0.00076] gold plating.
[2]Gold flash.
[3]To calculate diameter required for rectangular or square leads: Pin Diameter = $\left[\sqrt{(\text{Lead Width})^2 + (\text{Lead Thickness})^2}\right]$ -.003.

Series IV Sockets

For .034–.041 [0.86–1.04] Round and .026–.031 [0.66–0.79] Square Leads[3]

Prototype Insertion Kit
Part No. 382337-1

Miniature Spring Socket Insertion Tool
Part No. 382378-1

Hand Insertion Tooling for Bullet Nose Sockets on Polyester Carrier Tape
Part No. 354700-4

Knockout Plug Tool
Part No. 69728-2

Flat Bottom — Recommended Hole Size: .071 [1.80] for Semi-Automatic Insertion or Hand Insertion

Note: Sockets Dim. (Typ.)—.089 [2.26] Dia. x .260 [6.60] L

Pin Dia. Range	Finish		Part Numbers	
	Spring	Sleeve	Closed Bottom	Knockout Bottom
.034–.041 0.86–1.04	Gold[1]	Gold[2]	50865	50865-2
	Gold[1]	Tin	50865-5	50865-1
	Tin	Tin	50865-8	50865-7
.037–.040 0.94–1.02	Gold[1]	Gold[2]	1-332070-1	1-332070-7
	Gold[1]	Tin	2-332070-3	3-332070-5
	Tin	Tin	2-332070-2	3-332070-4

Flat Bottom — Recommended Hole Size: .069 [1.75] for Semi-Automatic/Automatic Insertion or Hand Insertion

Note: Sockets Dim. (Typ.)—.089 [2.26] Dia. x .260 [6.60] L

Pin Dia. Range	Finish		Part Numbers		
				Polyester Carrier Tape	
	Spring	Sleeve	Loose Piece	Without Sealant 10,000/Reel	With Sealant 10,000/Reel
.037–.041 0.94–1.04	Gold[1]	Tin	645500-1	1-645502-1	1-645501-1
	Tin	Tin	—	—	1-645501-2

[1].000030 [0.00076] gold plating.
[2]Gold flash.
[3]To calculate diameter required for rectangular or square leads: Pin Diameter = $\left[\sqrt{(\text{Lead Width})^2 + (\text{Lead Thickness})^2}\right]$ -.003.

SOURCE: Catalog 82172

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

Miniature Spring Sockets
(Continued)

Bullet Nose Sockets (Loose Piece and Tape Mounted)
(Continued)

Flat Bottom Sockets

Bullet Nose — Recommended Hole Size: .102 [2.59] for Semi-Automatic Insertion or Hand Insertion

Note: Sockets Dim. (Typ.)—.118 [3.00] Dia. x .288 [7.31] L

Pin Dia. Range	Finish		Part Numbers	
	Spring	Sleeve	Closed Bottom	Open Bottom
.042–.049 1.07–1.24	Gold[1]	Gold[2]	50871-4	50871
	Gold[1]	Tin	50871-5	50871-1
	Tin	Tin	50871-8	50871-6
.050–.057 1.27–1.45	Gold[1]	Gold[2]	1-50871-3	—
	Gold[1]	Tin	1-50871-4	1-50871-0
	Tin	Tin	1-50871-7	—
.056–.065 1.42–1.65	Gold[1]	Gold[2]	2-50871-2	1-50871-8
	Gold[1]	Tin	2-50871-3	1-50871-9
	Tin	Tin	2-50871-6	2-50871-4

Series V Sockets
For .042–.065 [1.07–1.65] Round and .032–.048 [0.81–1.22] Square Leads[3]

Prototype Insertion Kit
Part No. 382337-1

Miniature Spring Socket Insertion Tool
Part No. 382378-1

Hand Insertion Tooling for Bullet Nose Sockets on Polyester Carrier Tape
Part No. 354700-5

Knockout Plug Tool
Part No. 69728-3

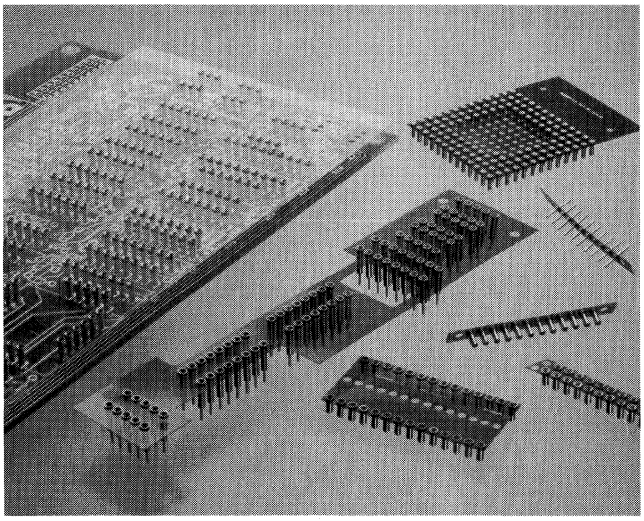
Bullet Nose — Recommended Hole Size: .102 [2.59] for Semi-Automatic Insertion or Hand Insertion

Note: Sockets Dim. (Typ.)—.120 [3.05] Dia. x .308 [7.82] L

Pin Dia. Range	Finish		Part Numbers		
				Polyester Carrier Tape	
	Spring	Sleeve	Loose Piece	Without Sealant 10,000/Reel	With Sealant 10,000/Reel
.042–.049 1.07–1.24	Gold[2]	Tin	645980-2	1-645979-2	1-645991-2
	Tin	Tin	645980-1	—	1-645991-1

[1].000030 [0.00076] gold plating.
[2]Gold flash.
[3]To calculate diameter required for rectangular or square leads: Pin Diameter = $\left[\sqrt{(\text{Lead Width})^2 + (\text{Lead Thickness})^2}\right]$ -.003.

Film Carrier Sockets and Pins



Product Facts

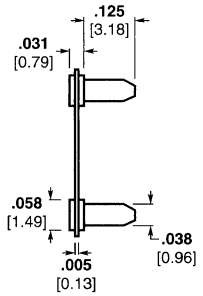
- Low profile — .015–.031 [0.38–0.78] above pc board
- Film carrier withstands temperatures to +400°C
- Manual assembly
- Closed Bottom — inhibits flux and solder wicking
- Ease of removing film carrier after soldering
- Visual inspection on both sides of pc board
- Excellent air flow around IC's
- Footprints to customer requirements
- Customer multiple footprints on single film carrier

SOURCE: Catalog 82172

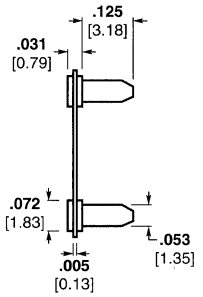
Film Carrier Sockets
(Continued)

DIP Socket Assemblies

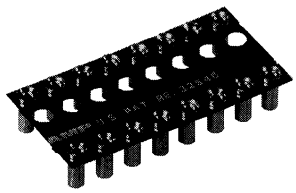
Sockets will accept a .016-.021 [0.41-0.53] diameter or .010 x .018 [0.25 x 0.46] rectangular pin



Type A



Type B



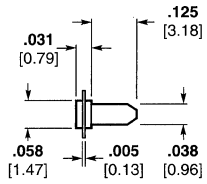
Note: 20 Pos. Housing Dim. (Typ.)—1.000 [25.40] L x .400 [10.16] W x .156 [3.97] H

No. of Pos.	Terminal Types[1]	Minimum Acceptable Pin Length	Part Numbers	
			Contact / Sleeve Tin / Tin	Contact / Sleeve Gold / Tin
8	A	**.090** [2.29]	—	382522-8
	B	**.075** [1.91]	382447-8	382459-8
14	A	**.090** [2.29]	—	1-382522-4
	B	**.075** [1.91]	1-382447-4	1-382459-4
16	A	**.090** [2.29]	—	1-382522-6
	B	**.075** [1.91]	1-382447-6	1-382459-6
18	A	**.090** [2.29]	—	1-382522-8
	B	**.075** [1.91]	1-382447-8	1-382459-8
20	A	**.090** [2.29]	—	2-382522-0
	B	**.075** [1.91]	2-382447-0	2-382459-0
24	A	**.090** [2.29]	—	2-382522-4
	B	**.075** [1.91]	2-382447-4	2-382459-4
28	A	**.090** [2.29]	—	2-382522-8
	B	**.075** [1.91]	2-382447-8	2-382459-8
32	A	**.090** [2.29]	—	3-382522-2
	B	**.075** [1.91]	3-382447-2	3-382459-2
40	A	**.090** [2.29]	—	4-382522-0
	B	**.075** [1.91]	4-382447-0	4-382459-0
64	A	**.090** [2.29]	—	6-382522-4
	B	**.075** [1.91]	6-382447-4	6-382459-4

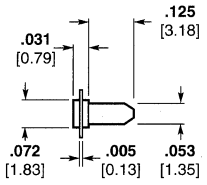
[1]Standard terminal types are listed on pages 11054 and 11055.
Any terminal type can be made available in this configuration; contact AMP.
Note: See pages 11054 and 11055 for samples of terminal types for customer evaluation.

SIP Socket Assemblies

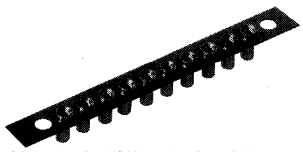
Sockets will accept a .016-.021 [0.41-0.53] diameter or .010 x .018 [0.25 x 0.46] rectangular pin



Type A



Type B



Note: 14 Pos. Housing Dim. (Typ.)—1.600 [40.64] L x .150 [3.81] W x .156 [3.97] H

No. of Pos.	Terminal Types[1]	Minimum Acceptable Pin Length	Part Numbers	
			Contact / Sleeve Tin / Tin	Contact / Sleeve Gold / Tin
8	A	**.090** [2.29]	—	382521-8
	B	**.075** [1.91]	382445-8	382495-8
10	A	**.090** [2.29]	—	1-382521-0
	B	**.075** [1.91]	1-382445-0	1-382495-0
12	A	**.090** [2.29]	—	1-382521-2
	B	**.075** [1.91]	1-382445-2	1-382495-2
14	A	**.090** [2.29]	—	1-382521-4
	B	**.075** [1.91]	1-382445-4	1-382495-4
16	A	**.090** [2.29]	—	1-382521-6
	B	**.075** [1.91]	1-382445-6	1-382495-6
20	A	**.090** [2.29]	—	2-382521-0
	B	**.075** [1.91]	2-382445-0	2-382495-0
24	A	**.090** [2.29]	—	2-382521-4
	B	**.075** [1.91]	2-382445-4	2-382495-4
100	A	**.090** [2.29]	—	382521-1
	B	**.075** [1.91]	382445-1	382495-1

[1]Standard terminal types are listed on pages 11054 and 11055.
Any terminal type can be made available in this configuration; contact AMP.
Note: See pages 11054 and 11055 for samples of terminal types for customer evaluation.

SOURCE: Catalog 82172

Specifications subject to change.

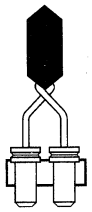
1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

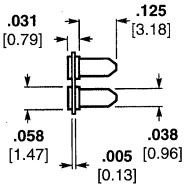
Film Carrier Sockets
(Continued)

ZIP Socket Assemblies

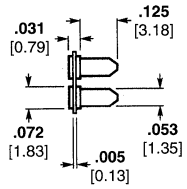
Sockets will accept a .016-.021 [0.41-0.53] diameter or .010 x .018 [0.25 x 0.46] rectangular pin



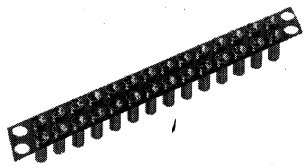
Typical Assembly View



Type A



Type B



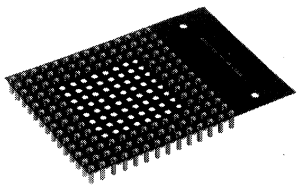
Note: 24 Pos. Housing Dim. (Typ.)—1.450 [36.83] L x .200 [5.08] W x .156 [3.97] H

No. of Pos.	Terminal Types[1]	Minimum Acceptable Pin Length	Part Numbers	
			Contact / Sleeve Tin / Tin	Contact / Sleeve Gold / Tin
20	A	**.090** [229]	—	2-382520-0
	B	**.075** [1.91]	2-382448-0	2-382458-0
24	A	**.090** [2.29]	—	1-382520-4
	B	**.075** [1.91]	2-382448-4	2-382458-4
28	A	**.090** [2.29]	—	2-382520-8
	B	**.075** [1.91]	2-382448-8	2-382458-8
40	A	**.090** [2.29]	—	4-382520-0
	B	**.075** [1.91]	4-382448-0	4-382458-0

[1]Standard terminal types are listed on pages 11054 and 11055.
Any terminal type can be made available in this configuration; contact AMP.
Note: See pages 11054 and 11055 for samples of terminal types for customer evaluation.

PGA Socket Assemblies

Sockets will accept a .016-.021 [0.41-0.53] diameter or .010 x .018 [0.25 x 0.46] rectangular pin



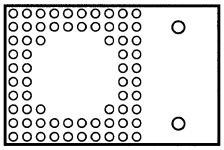
Grid Size	No. of Pos.	Terminal Type[1]	Minimum Acceptable Pin Length	Base Part Number[2]
10 x 10	68, 84 and 100	A	**.090** [2.29]	382450
11 x 11	68, 84 and 121	A	**.090** [2.29]	382451
13 x 13	114, 121 and 169	A	**.090** [2.29]	382453
14 x 14	132 and 196	A	**.090** [2.29]	382454
15 x 15	145, 149 and 181	A	**.090** [2.29]	382455
17 x 17	168 and 169	A	**.090** [2.29]	382457
		L[3]	**.090** [2.29]	382684
19 x 19	238 and 280	L[3]	**.090** [2.29]	382685
21 x 21	273	L[3]	**.090** [2.29]	382686

[1]Standard terminal types are listed on pages 11054 and 11055.
[2]See pages 11051 and 11052 for patterns and part number suffixes.
[3]Low force, staggered contacts.
Any terminal type can be made available in this configuration; contact AMP.
Note: See pages 11054 and 11055 for samples of terminal types for customer evaluation.

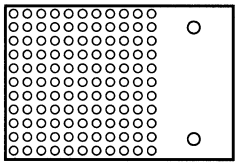
Specifications subject to change.
1-800-522-6752 Product Information Center/ AMP FAX Service
1-800-722-1111 Tooling/Technical Assistance Center

Film Carrier Sockets — PGA Grid Patterns

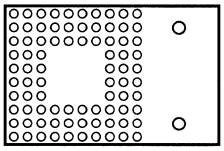
10 x 10
68 Positions
Part No. 382450-1



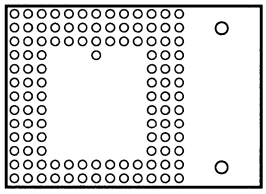
11 x 11
121 Positions
Part No. 382451-3



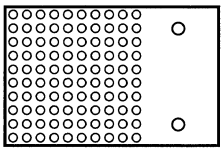
10 x 10
84 Positions
Part No. 382450-2



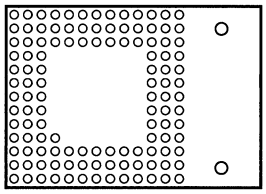
13 x 13
114 Positions
Part No. 382453-1



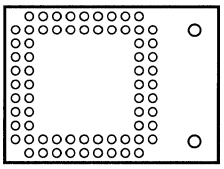
10 x 10
100 Positions
Part No. 382450-3



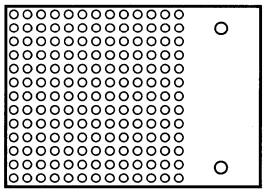
13 x 13
121 Positions
Part No. 382453-2



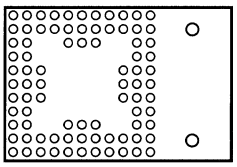
11 x 11
68 Positions
Part No. 382451-1



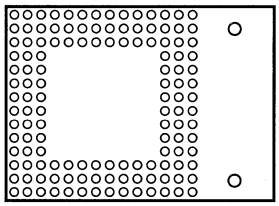
13 x 13
169 Positions
Part No. 382453-3



11 x 11
84 Positions
Part No. 382451-2



14 x 14
132 Positions
Part No. 382454-1

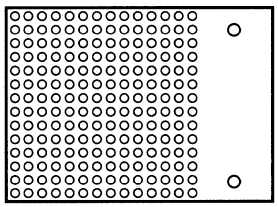


SOURCE: Catalog 82172

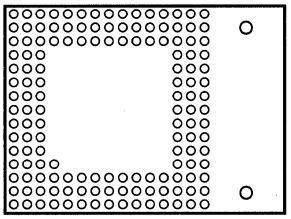
Specifications subject to change.
1-800-522-6752 Product Information Center/ AMP FAX Service
1-800-722-1111 Tooling/Technical Assistance Center

Film Carrier Sockets — PGA Grid Patterns
(Continued)

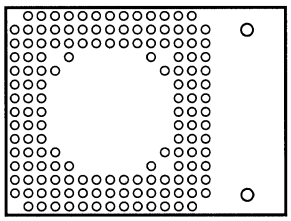
14 x 14
196 Positions
Part No. 382454-2



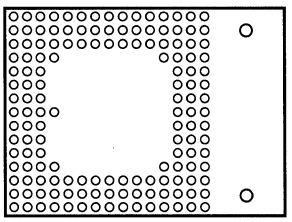
15 x 15
145 Positions
Part No. 382455-1



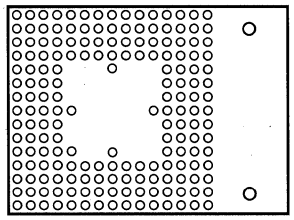
15 x 15
149 Positions
Part No. 382455-2



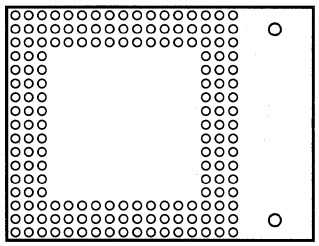
15 x 15
149 Positions
Part No. 382455-3



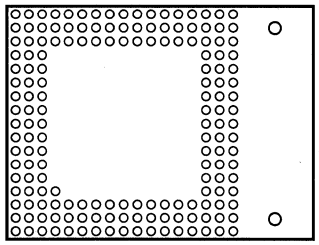
15 x 15
181 Positions
Part No. 382455-4



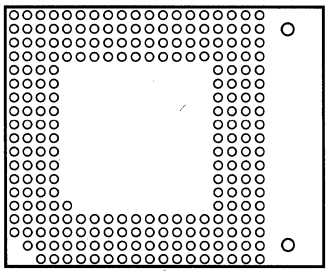
17 x 17
168 Positions
Part No. 382457-1
Part No. 382684-1[1]



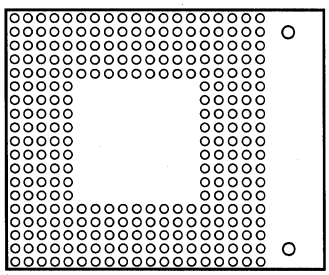
17 x 17
169 Positions
Part No. 382457-2
Part No. 382684-2[1]



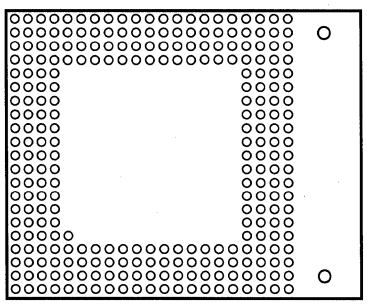
19 x 19
238 Positions
Part No. 382685-1[1]



19 x 19
280 Positions
Part No. 382685-2[1]



21 x 21
273 Positions
Part No. 382686-1[1]

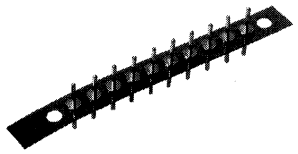


[1]Low force, staggered contacts.

SOURCE: Catalog 82172

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

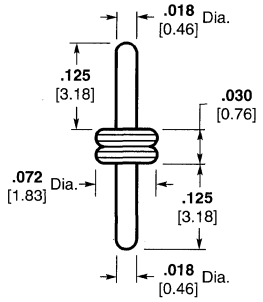
Film Carrier Pins



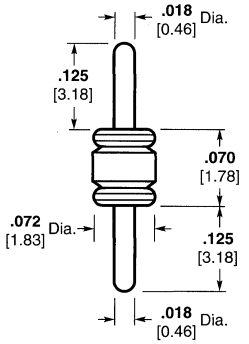
No. of Pos.	Terminal Type[1]	Part Numbers	
		Terminal	
		Tin	Gold
8	G	382449-8	382490-8
	H	382460-8	—
	J	382461-8	—
10	G	1-382449-0	1-382490-0
	H	1-382460-0	1-382492-0
	J	1-382461-0	1-382494-0
12	G	1-382449-2	1-382490-2
14	G	1-382449-4	1-382490-4
16	G	1-382449-6	1-382490-6
20	G	2-382449-0	2-382490-0
24	G	2-382449-4	2-382490-4
100	G	382449-1	382490-1

[1]Standard terminal types are listed on pages 11054 and 11055.
Any terminal type can be made available in this configuration; contact AMP.
Note: See pages 11054 and 11055 for samples of terminal types for customer evaluation.

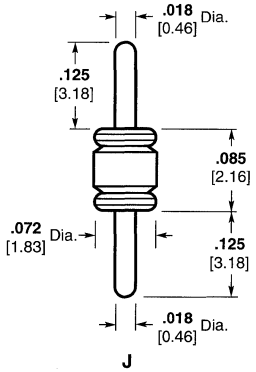
Terminal Types – Pins



G



H



J

SOURCE: Catalog 82172

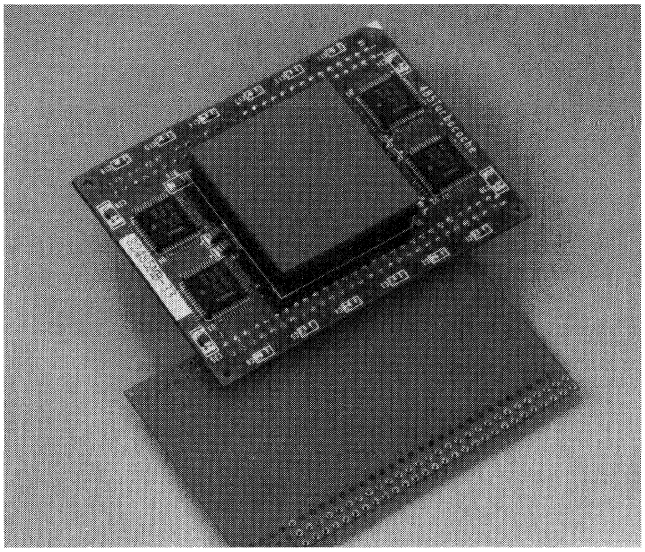
Specifications subject to change.
1-800-522-6752 Product Information Center/ AMP FAX Service
1-800-722-1111 Tooling/Technical Assistance Center

Custom Sheets of Sockets

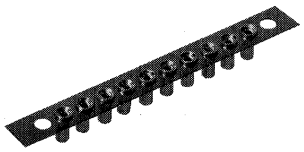
20 x 28 PGA Film Carrier Socket for Intel® Turbocache Controller 82485 Part No. 382518-1

AMP Film Carrier Sockets, such as the 20 x 28 PGA custom designed socket for Intel's Turbocache Controller 82485 shown here, are ideal for extremely low-profile, high-density applications.

The socket and film carrier withstand temperatures ranging from -259°C to +400°C for compatibility with vapor phase, infrared, hand and wave soldering. The socket/carrier assembly is manually placed on the board. Following soldering, the carrier is peeled away, leaving free-standing socket terminals that allow visual inspection, easy flux removal and excellent heat dissipation. The flexible carrier eliminates concern about contact damage during carrier insertion or extraction.



Film Carrier Socket and Pin Types for Terminal Evaluation



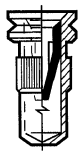
SIP Socket

No. of Pos.	Terminal Type	Minimum Acceptable Pin Length	Part Numbers		
			Contact Tin / Sleeve Tin	Contact Gold / Sleeve Tin	Contact Gold / Sleeve Gold
10	A	**.100** [2.54]	—	1-382521-0	1-382511-0
	B	**.110** [2.79]	1-382445-0	1-382495-0	1-382509-0
	C	**.110** [2.79]	1-382499-0	1-382500-0	1-382501-0
	D	**.110** [2.79]	1-382496-0	1-382497-0	1-382498-0
	E	**.090** [2.29]	1-382505-0	1-382506-0	1-382507-0
	F	**.110** [2.79]	1-382502-0	1-382503-0	1-382504-0

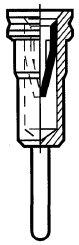
Terminal Types—Sockets

Sockets will accept a .016-.021 [0.41-0.53] diameter or .010 x .018 [0.25 x 0.46] rectangular pin

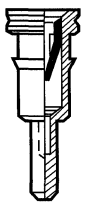
A, B, L and M



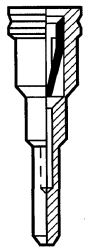
C



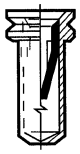
D



E



F



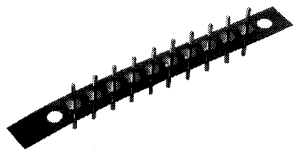
K

SOURCE: Catalog 82172

Specifications subject to change.
1-800-522-6752 Product Information Center/ AMP FAX Service
1-800-722-1111 Tooling/Technical Assistance Center

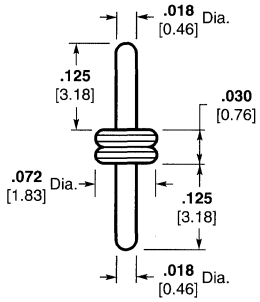
Film Carrier Socket and Pin Types for Terminal Evaluation
(Continued)

Pin

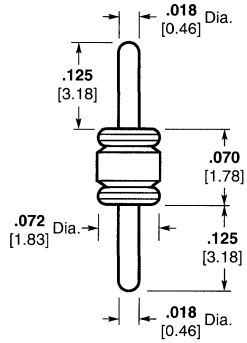


No. of Pos.	Terminal Type	Part Numbers	
		Terminals	
		Tin	Gold
10	G	1-382449-0	1-382490-0
	H	1-382460-0	1-382492-0
	J	1-382461-0	1-382494-0

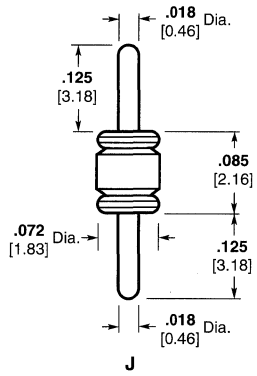
Terminal Types—Pins



G



H

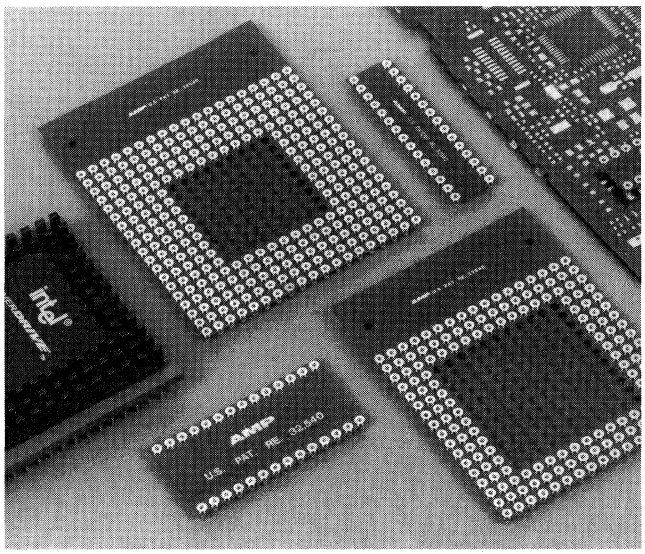


J

SOURCE: Catalog 82172

Specifications subject to change.
1-800-522-6752 Product Information Center/ AMP FAX Service
1-800-722-1111 Tooling/Technical Assistance Center

Film Carrier IC Sockets for Surface Mounting



Product Facts

- Low profile — as low as .095 [2.41] above pc board
- Film carrier withstands temperatures to +100°C
- Manual or robotic assembly
- Closed bottom — inhibits flux and solder wicking
- Ease of removing film carrier after soldering
- Visual inspection on both sides of pc board and 360° around solder connection
- Excellent air flow around IC
- Custom or multiple footprints on single film carrier

DIP Socket Assemblies

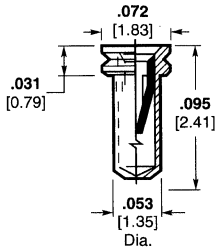
Sockets will accept a .016-.021 [0.41-0.53] diameter or .010 x .018 [0.25 x 0.46] rectangular pin.

Note: 28 Pos. Housing Dim. (Typ.)—1.400 [35.56] L x .700 [17.78] W x .095 [2.41] H

No. of Positions	Part Numbers
28	2-382516-8
30	3-382690-0

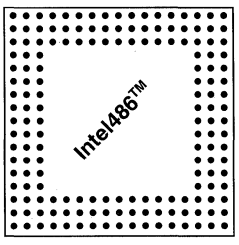
PGA Socket Assemblies

Grid Size	No. of Positions	Part Numbers
17 x 17	168	382776-1
17 x 17	169	382776-2
19 x 19	280	382777-1
21 x 21	273	382778-1

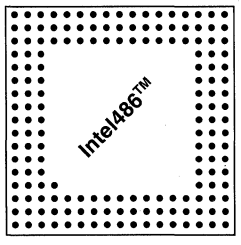


Terminal Type K
Minimum acceptable pin length: .070 [1.78]

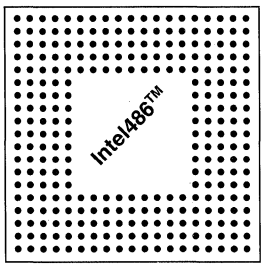
PGA Socket Patterns



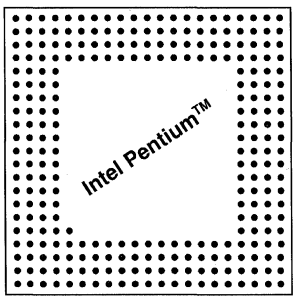
17 x 17
168 Positions
Part No. 382776-1



17 x 17
169 Positions
Part No. 382776-2



19 x 19
280 Positions
Part No. 382777-1



21 x 21
273 Positions
Part No. 382778-1

SOURCE: Catalog 82172

Specifications subject to change.

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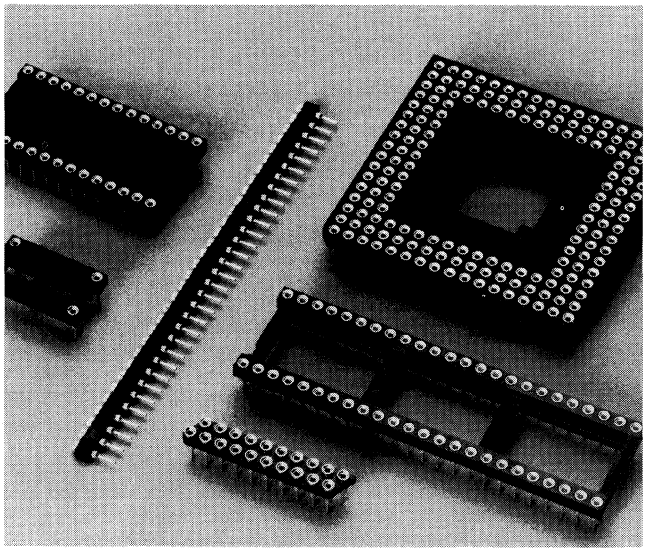
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

Screw Machine IC Sockets



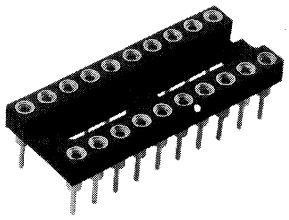
Product Facts

- Screw machine outer sleeve has closed bottom to prevent solder wicking into contact area
- Seamless, low insertion force inner contact ensures highly reliable connections
- Consistent insertion and withdrawal forces over a full range of IC leads
- Currently available in popular DIP, SIP, ZIP and PGA versions
- Recognized under the Component Program of Underwriters Laboratories Inc., File No. E28476

DIP Sockets

Open Frame

IC Lead Range Accepted—
.008 x .013 to .015 x .020
[0.20 x 0.33 to 0.38 x 0.51]



Note: 24 Pos. Housing Dim. (Typ.)—1.200 [30.48] L x .499 [12.57] W x .175 [4.45] H

No. of Pos.	Part Numbers		
	Gold Contact Tin Sleeve[1]	Gold Contact Tin Sleeve[2]	Tin Contact Tin Sleeve[3]
6	544177-3	544177-2	544177-4
8	544180-3	544180-2	544180-4
14	544184-3	544184-2	544184-4
16	544188-3	544188-2	544188-4
18	544194-3	544194-2	544194-4
20	544196-3	544196-2	544196-4
22	544203-3	544203-2	544203-4
24	544204-3	544204-2	544204-4
24	544209-3	544209-2	544209-4
24	560118-3	560118-2	560118-4
28	544216-3	544216-2	544216-4
28	544219-3	544219-2	544219-4
32	544223-3	544223-2	544223-4
40	544224-3	544224-2	544224-4
48	544227-3	544227-2	544227-4
64	544228-3	544228-2	544228-4

Finishes
[1]Inner contact .000030 [0.00076] thick gold over nickel;
Outer sleeve .000200 [0.00508] thick tin-lead over nickel over copper.
[2]Inner contact .000010 [0.00025] thick gold over nickel;
Outer sleeve .000200 [0.00508] thick tin-lead over nickel over copper.
[3]Inner contact .000200 [0.00508] thick tin over nickel;
Outer sleeve .000200 [0.00508] thick tin-lead over nickel over copper.
Note: Printed circuit board thickness—.062 to .093 [1.57 to 2.36].

SOURCE: Catalog 82172

Specifications subject to change.

1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
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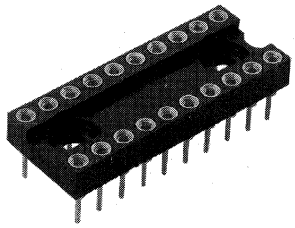
DIP Sockets
(Continued)
Closed Frame

IC Lead Range Accepted—
.008 x .013 to .015 x .020
[0.20 x 0.33 to 0.38 x 0.51]



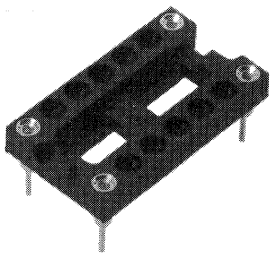
Note: 20 Pos. Housing Dim. (Typ.)—1.000 [25.4] L x .399 [10.13] W x .175 [4.45] H

No.of Pos.	Part Numbers	
	Gold Contact Tin Sleeve[1]	Tin Contact Tin Sleeve[3]
6	544108-3	544108-4
8	544110-3	544110-4
14	544114-3	544114-4
16	544120-3	544120-4
18	544125-3	544125-4
20	544132-3	544132-4
22	544137-3	544137-4
24	544140-3	544140-4
24	544141-3	544141-4
28	544146-3	544146-4
40	544150-3	544150-4

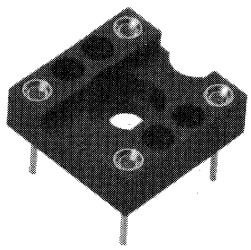
Finishes:
[1]Inner contact .000030 [0.00076] thick gold over nickel;
Outer sleeve .000200 [0.00508] thick tin-lead over nickel over copper.
[3]Inner contact .000200 [0.00508] thick tin over nickel;
Outer sleeve .000200 [0.00508] thick tin-lead over nickel over copper.
Note: Printed circuit board thickness—.062 to .093 [1.57 to 2.36].

Crystal Oscillator Sockets

IC Lead Range Accepted—
.008 x .013 to .015 x .020
[0.20 x 0.33 to 0.38 x 0.51]



Open Frame



Closed Frame

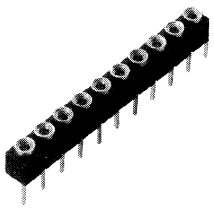
Note: 8 Pos. Housing Dim. (Typ.)—.400 [10.16] L x .400 [10.16] W x .170 [4.32] H

Style	No.of Pos.	Part Numbers		
		Gold Contact Tin Sleeve[1]	Gold Contact Tin Sleeve[2]	Tin Contact Tin Sleeve[3]
Open Frame	8	545568-3	545568-2	545568-4
	14	545569-3	545569-2	545569-4
Closed Frame	8	545566-3	545566-2	545566-4
	14	545567-3	545567-2	545567-4

Finishes:
[1]Inner contact .000030 [0.00076] thick gold over nickel;
Outer sleeve .000200 [0.00508] thick tin-lead over nickel over copper.
[2]Inner contact .000010 [0.00025] thick gold over nickel;
Outer sleeve .000200 [0.00508] thick tin-lead over nickel over copper.
[3]Inner contact .000200 [0.00508] thick tin over nickel;
Outer sleeve .000200 [0.00508] thick tin-lead over nickel over copper.
Note: Printed circuit board thickness—.062 to .093 [1.57 to 2.36].

SIP Sockets

IC Lead Range Accepted—
.008 x .013 to .015 x .020
[0.20 x 0.33 to 0.38 x 0.51]



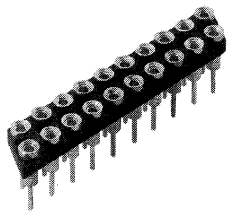
Note: 12 Pos. Housing Dim. (Typ.)—1.200 [30.48] L x .100 [2.54] W x .175 [4.45] H

No.of Pos.	Part Numbers	
	Gold Contact Tin Sleeve[1]	Tin Contact Tin Sleeve[3]
6	544249-3	544249-4
8	544255-3	544255-4
10	544261-3	544261-4
11	544265-3	544265-4
12	544267-3	544267-4
20	544282-3	544282-4
24	544289-3	544289-4
30	544296-3	544296-4
32	544299-3	544299-4

Finishes:
[1]Inner contact .000030 [0.00076] thick gold over nickel;
Outer sleeve .000200 [0.00508] thick tin-lead over nickel over copper.
[3]Inner contact .000200 [0.00508] thick tin over nickel;
Outer sleeve .000200 [0.00508] thick tin-lead over nickel over copper.
Note: Printed circuit board thickness—.062 to .093 [1.57 to 2.36].

ZIP Sockets

IC Lead Range Accepted—
.008 x .013 to .015 x .020
[0.20 x 0.33 to 0.38 x 0.51]

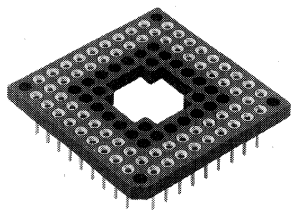


No.of Pos.	Part Numbers	
	Gold Contact Tin Sleeve[1]	Tin Contact Tin Sleeve[3]
16	544119-3	544119-4
18	544124-3	544124-4
20	544130-3	544130-4
24	544139-3	544139-4
28	544144-3	544144-4

Finishes:
[1]Inner contact .000030 [0.00076] thick gold over nickel;
Outer sleeve .000200 [0.00508] thick tin-lead over nickel over copper.
[3]Inner contact .000200 [0.00508] thick tin over nickel;
Outer sleeve .000200 [0.00508] thick tin-lead over nickel over copper.
Note: Printed circuit board thickness—.062 to .093 [1.57 to 2.36].

PGA Sockets

IC Lead Range Accepted—
.016 to .020 [0.41 to 0.51]



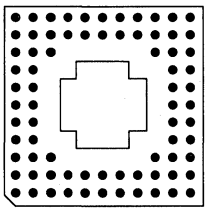
SOURCE: Catalog 82172

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

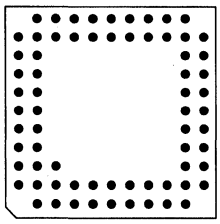
PGA Sockets
(Continued)

Patterns

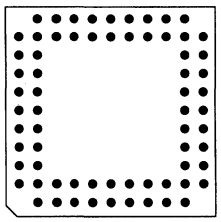
10 x 10
68 Positions
Part No. 545099-3[1]



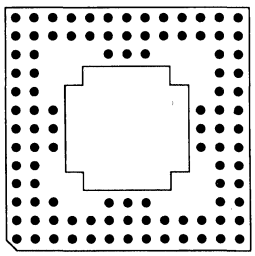
11 x 11
69 Positions
Part No. 545168-3[1]



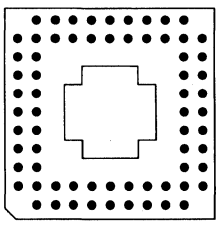
11 x 11
68 Positions
Part No. 545160-3[1]



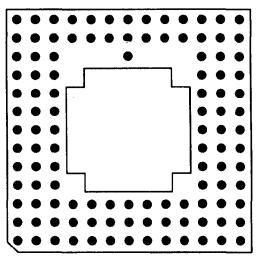
13 x 13
101 Positions
Part No. 545078-3[1]



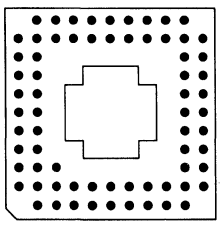
11 x 11
68 Positions
Part No. 545163-3[1]



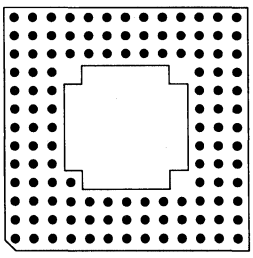
13 x 13
114 Positions
Part No. 545248-3[1]



11 x 11
68 Positions
Part No. 545166-3[1]



13 x 13
121 Positions
Part No. 545258-3[1]
Part No. 545258-2[2]



Finishes:
[1]Inner contact .000030 [0.00076] thick gold over nickel;
Outer sleeve .000200 [0.00508] thick tin-lead over nickel over copper.
[2]Inner contact .000010 [0.00025] thick gold over nickel;
Outer sleeve .000200 [0.00508] thick tin-lead over nickel over copper.

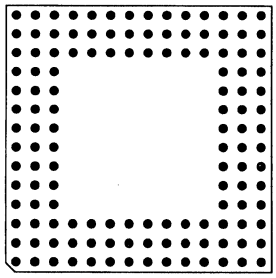
SOURCE: Catalog 82172

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

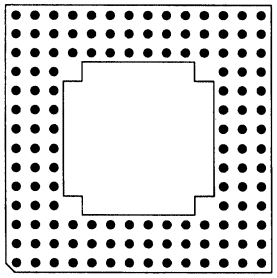
PGA Sockets
(Continued)

Patterns
(Continued)

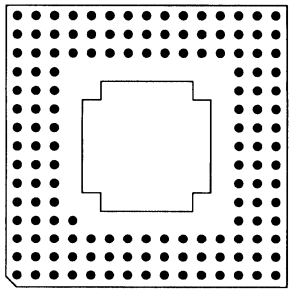
14 x 14
132 Positions
Part No. 545283-3[1]



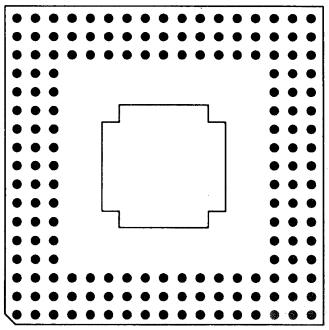
14 x 14
132 Positions
Part No. 545285-3[1]
Part No. 545285-2[2]



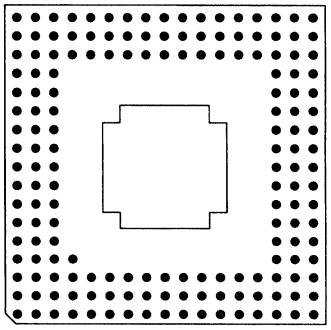
15 x 15
145 Positions
Part No. 545312-3[1]



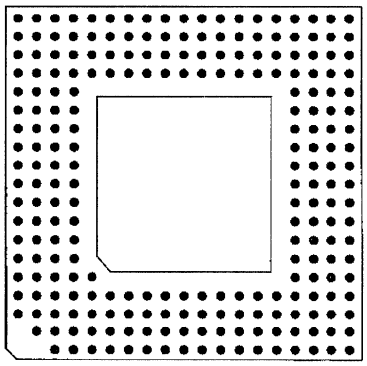
17 x 17
168 Positions
Part No. 545340-3[1]



17 x 17
169 Positions
Part No. 545365-3[1]



19 x 19
238 Positions*
Part No. 544613-3[1]



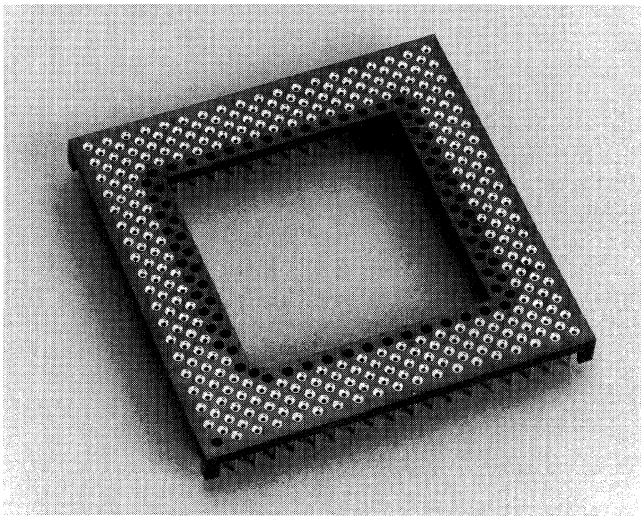
*Low Force — 5 tyne contacts
Housing Material — IR and Vapor Phase compatible

Finishes:
[1]Inner contact .000030 [0.00076] thick gold over nickel;
Outer sleeve .000200 [0.00508] thick tin-lead over nickel over copper.
[2]Inner contact .000010 [0.00025] thick gold over nickel;
Outer sleeve .000200 [0.00508] thick tin-lead over nickel over copper.

SOURCE: Catalog 82172

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

Cold-Formed PGA Sockets for Screw Machine Applications

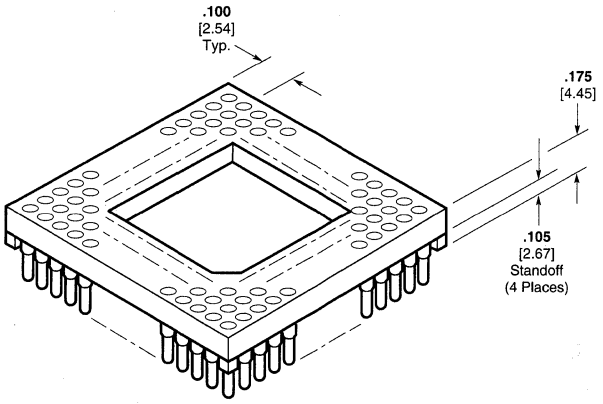


Product Facts

- Low cost
- Insulator is molded of Liquid Crystal Polymer (LCP), rated 94V-0
- Insulator is vapor phase and IR compatible
- Seamless, low insertion force OMNI-TACT, 4-tyne drawn contact
- Closed bottom, cold-formed outer sleeve protects against solder wicking into contact area
- Molded standoff promotes good solder fillet
- Recognized under the Component Program of Underwriters Laboratories Inc., File No. E28476

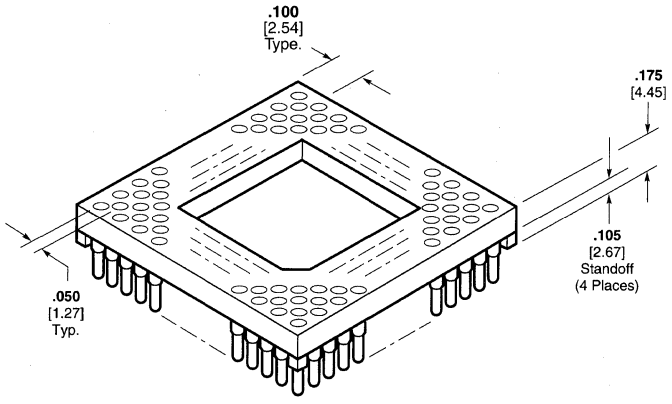
.100 [2.54] Centerline

Lead Range Accepted—
.016 to .020 [0.41 to 0.51]

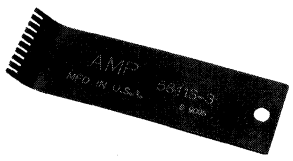


.050 [1.27] (Interstitial) Centerline

Lead Range Accepted—
.016 to .020 [0.41 to 0.51]

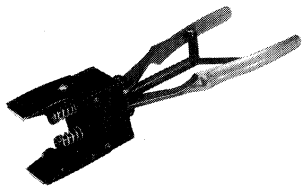


PGA Package Extraction Tool — Metal



No. of Blades	Part Numbers
5	58113-1
10	58113-3
13	58113-4
16	58113-5

PGA Package Mechanical Action Insertion Extraction Tool



Part Number 545740-1

SOURCE: Catalog 82172

Specifications subject to change.

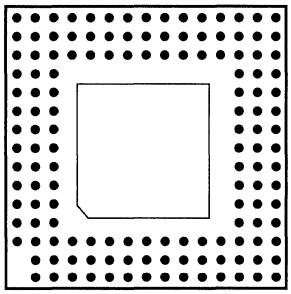
1-800-522-6752
Product Information Center/·AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

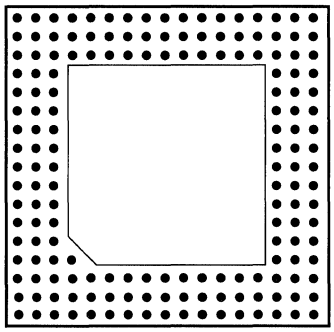
Cold-Formed PGA Sockets for Screw Machine Applications
(Continued)

Patterns

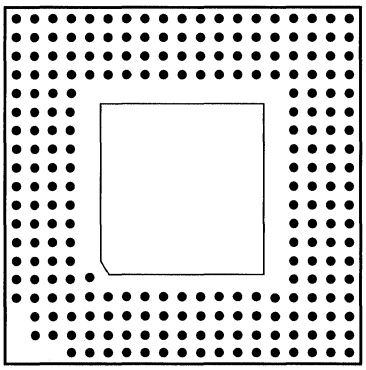
15 x 15
142 Positions
Part No. 545576-2



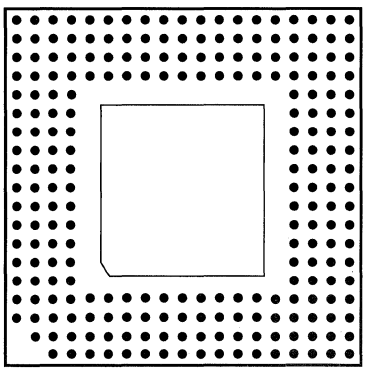
17 x 17
169 Positions
Part No. 545578-2



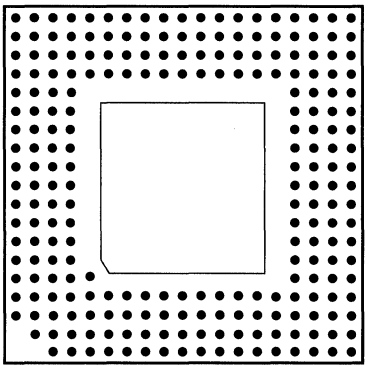
19 x 19
236 Positions
Part No. 560306-2



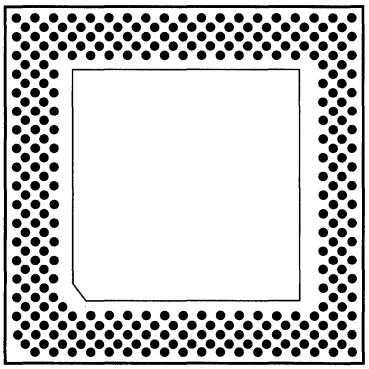
19 x 19
237 Positions
Part No. 560307-2



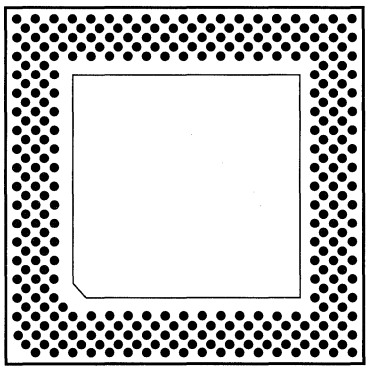
19 x 19
238 Positions
Part No. 545580-2



19 x 19
296 Positions
Interstitial Pattern
Part No. 560303-2
Part No. 560631-2[1]



19 x 19
320 Positions
Interstitial Pattern
Part No. 560304-2
Part No. 560632-2[1]



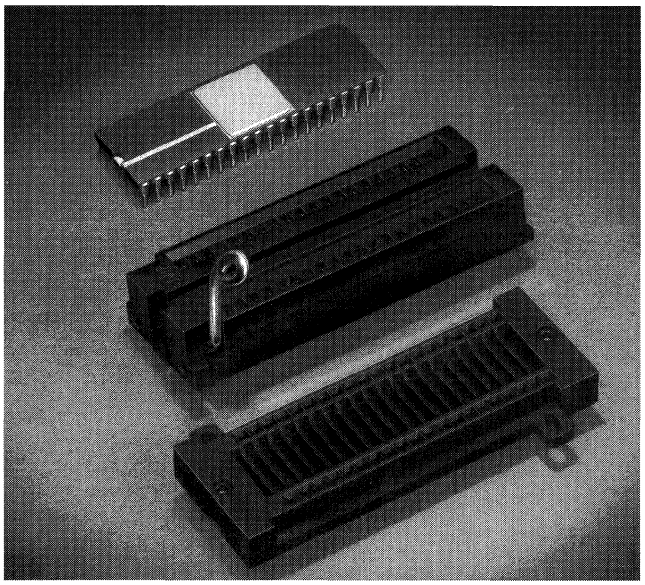
[1]Heat sink compatible

SOURCE: Catalog 82172

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

DIP Test/Burn-In Sockets

ZIF-Lock — Zero Insertion Force Connectors and Header Sockets



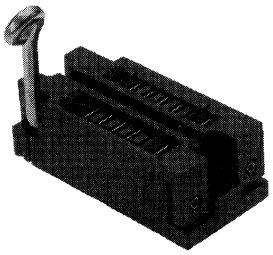
Product Facts — Connector

- Normally closed contacts omit dependence on plastic housing to sustain contact forces
- Contacts available in tin-lead plated or selective gold plated versions
- Actuation effective for 25,000 cycles, minimum (1000 cycles at 150°C for burn-in applications)
- Handles available in up "on" or down "on" versions
- True zero insertion and withdrawal force characteristics
- Wide entry angle accommodates misaligned DIP device legs
- DIP device cannot be inserted when connector is closed, preventing leg damage
- Positive lock actuation ensures DIP device containment and stops accidental opening
- Height compatible for use in existing equipment
- Can be directly soldered to pc board or used with matching header
- Available in 14 through 40 positions

Product Facts — Header

- Housing heights of .270 [6.86] and .500 [12.70]
- Polyethersulfone housing can be used to 105°C with tin-lead plated contacts
- Integral threaded screw inserts
- Wrap-type legs available
- Available in 14 through 40 positions
- Accommodates entire line of ZIF-Lock Connectors

ZIF-Lock (Zero Insertion Force) Connectors



Note: 20 Pos. Housing Dim. (Typ.)—1.590 [40.39] L x .595 [15.11] W x .435 [11.05] H

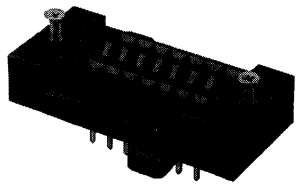
No. of Pos.	Plating	Color	Temp. °C	Handle "ON" Position	Part Numbers
14	Tin-Lead	Black	105	Down	55173-5
	Gold	Black	150	Down	55173-6
16	Tin-Lead	Black	105	Down	55174-5
	Gold	Black	150	Down	55174-6
18	Gold	Black	150	Up	55175-4
	Tin-Lead	Black	105	Down	55175-5
	Gold	Black	150	Down	55175-6
20	Gold	Black	150	Down	55176-6
24	Tin-Lead	Black	105	Down	54993-5
	Gold	Black	150	Down	54993-6
28	Gold	Black	150	Up	54994-4
	Tin-Lead	Black	105	Down	54994-5
	Gold	Black	150	Down	54994-6
40	Tin-Lead	Black	105	Down	54995-5
	Gold	Black	150	Down	54995-6

SOURCE: Catalog 82172

Specifications subject to change.
1-800-522-6752 Product Information Center/ AMP FAX Service
1-800-722-1111 Tooling/Technical Assistance Center

DIP Burn-In Sockets
(Continued)

Header Socket for ZIF-Lock Connectors

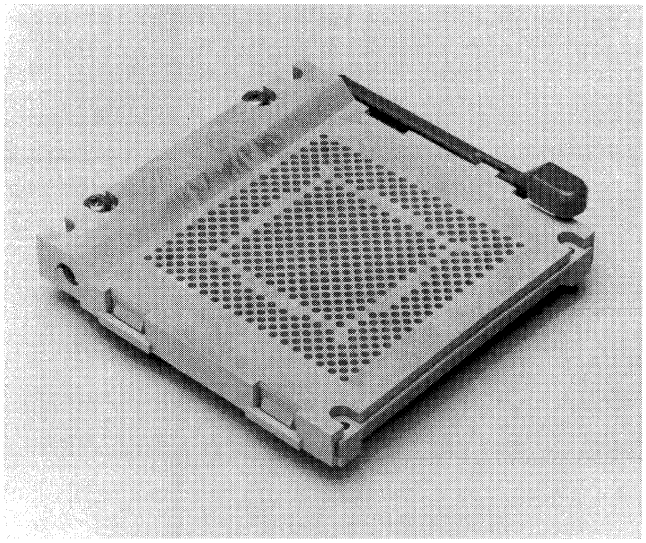


Note: 20 Pos. Housing Dim. (Typ.)—1.590 [40.39] L x .595 [15.11] W x .270 [6.86] H

No. of Pos.	Style	Part Numbers
14	Standard 180	55202-1
	Wrap Type 410	55202-2
16	Standard 180	55203-1
20	Standard 180	55205-1
24	Standard 180	55206-1
28	Standard 180	55207-1
	High Profile 410	55207-3
40	Standard 180	55208-1

PGA Burn-In (HAZ) Sockets

Handle Actuated ZIF (HAZ) Sockets



Product Facts

- Convenient lever actuation with no tool required
- Easy detection of bent IC pins
- Large funnel entry
- Normally closed contacts
- Full wiping contacts
- Recognized under the Component Program of Underwriters Laboratories Inc., File No. E28476

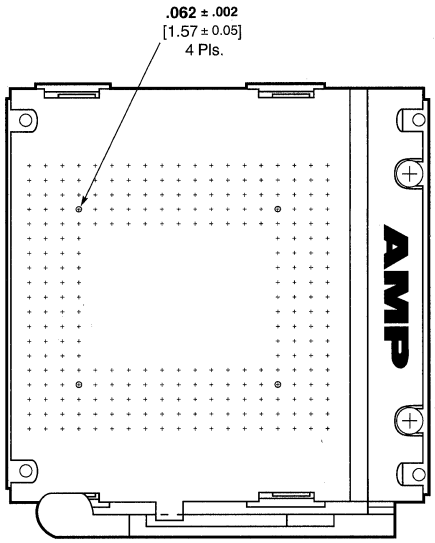
SOURCE: Catalog 82172

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

PGA Burn-In (HAZ) Sockets — Patterns

262 Positions
Part No. 1-382320-3

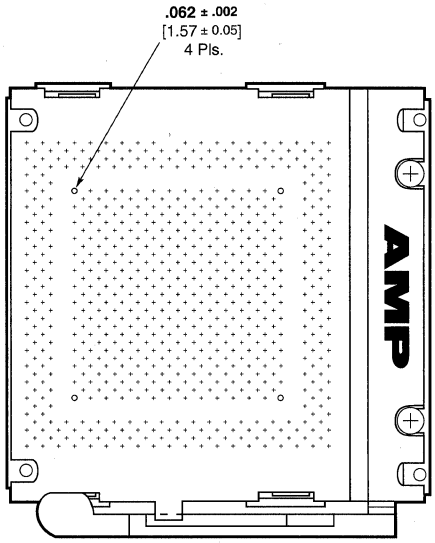
Solder Tail Length .110 [2.79]



Cover Hole Pattern

300 Positions
Part No. 382320-8

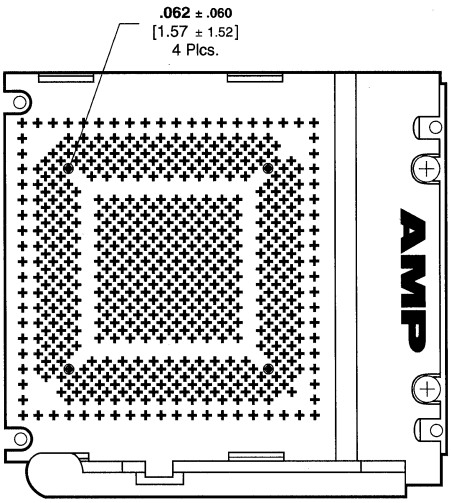
Solder Tail Length .110 [2.79]



Cover Hole Pattern

305 Positions
Part No. 1-382320-5

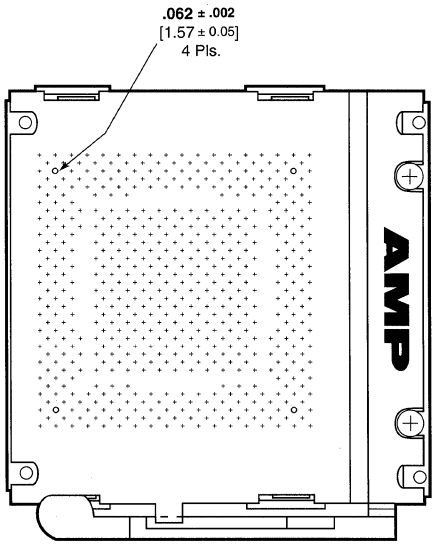
Solder Tail Length .170 [4.32]



Cover Hole Pattern

325 Positions
Part No. 382320-9

Solder Tail Length .170 [4.32]



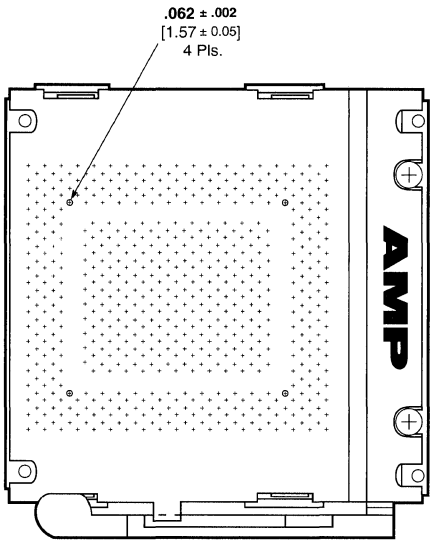
Cover Hole Pattern

PGA Burn-In (HAZ) Sockets — Patterns

(Continued)

348 Positions
Part No. 1-382320-2

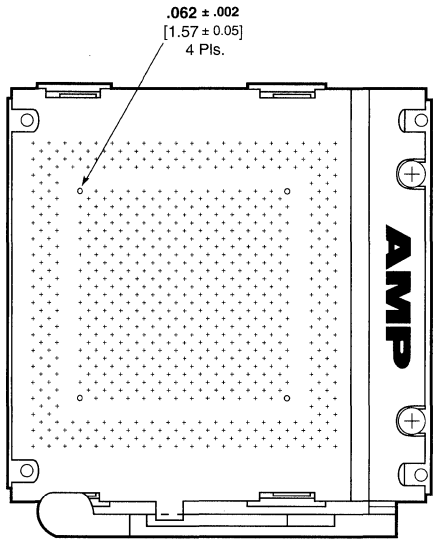
Solder Tail Length .110 [2.79]



Cover Hole Pattern

361 Positions
Part No. 382320-3

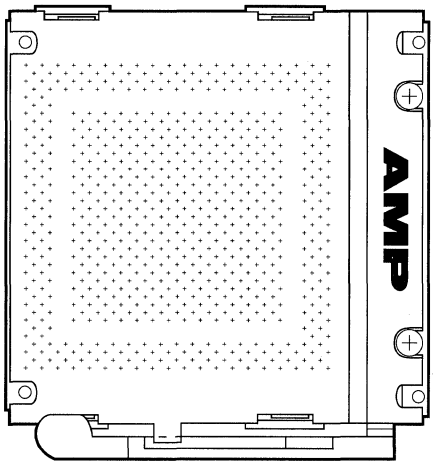
Solder Tail Length .110 [2.79]



Cover Hole Pattern

365 Positions
Part No. 382320-7

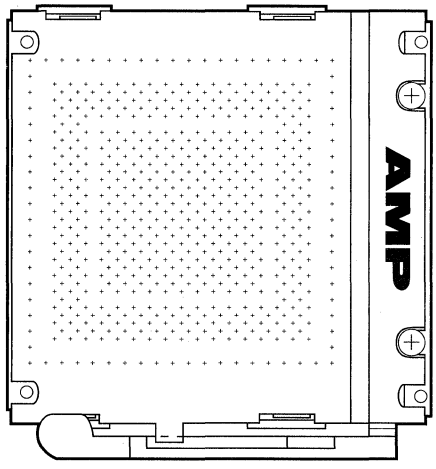
Solder Tail Length .110 [2.79]



Cover Hole Pattern

389 Positions
Part No. 382320-4

Solder Tail Length .110 [2.79]



Cover Hole Pattern

SOURCE: Catalog 82172

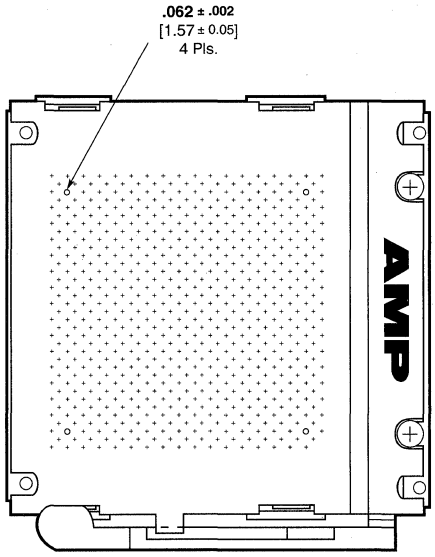
Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

PGA Burn-In (HAZ) Sockets — Patterns

(Continued)

391 Positions
Part No. 382320-2

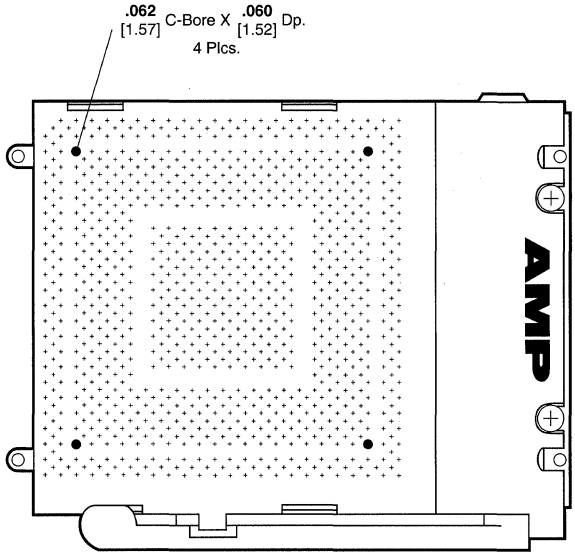
Solder Tail Length .170 [4.32]



Cover Hole Pattern

431 Positions
Part No. 382876-3

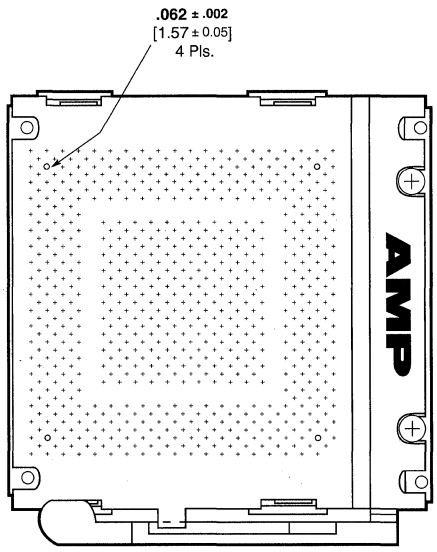
Solder Tail Length .140 [3.56]



Cover Hole Pattern

447 Positions
Part No. 1-382320-0

Solder Tail Length .170 [4.32]



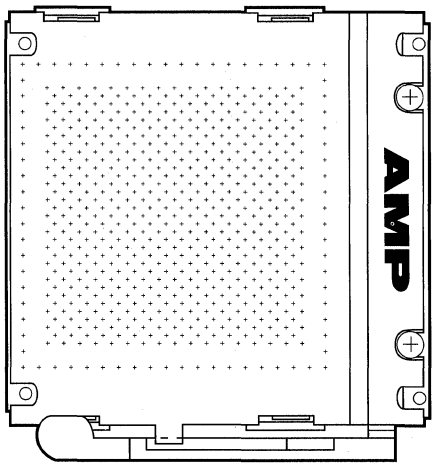
Cover Hole Pattern

545 Positions
Part No. 382320-5

Solder Tail Length .110 [2.79]

Part No. 1-382320-1

Solder Tail Length .170 [4.32]



Cover Hole Pattern

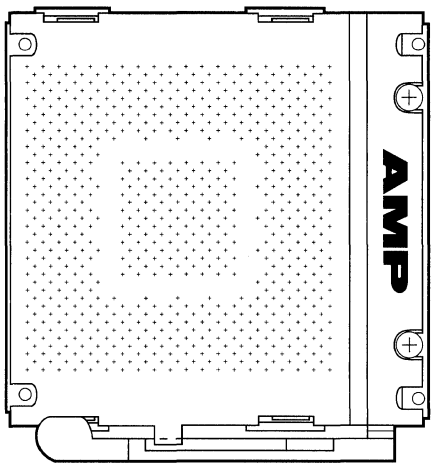
SOURCE: Catalog 82172

PGA Burn-In (HAZ) Sockets — Patterns

(Continued)

564 Positions
Part No. 382320-6

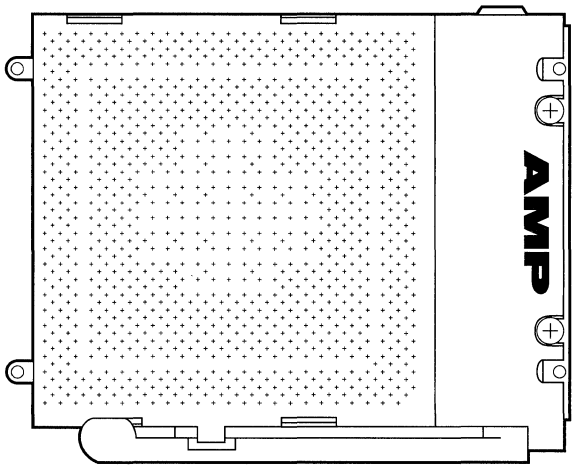
Solder Tail Length .170 [4.32]



Cover Hole Pattern

736 Positions
Part No. 382876-2

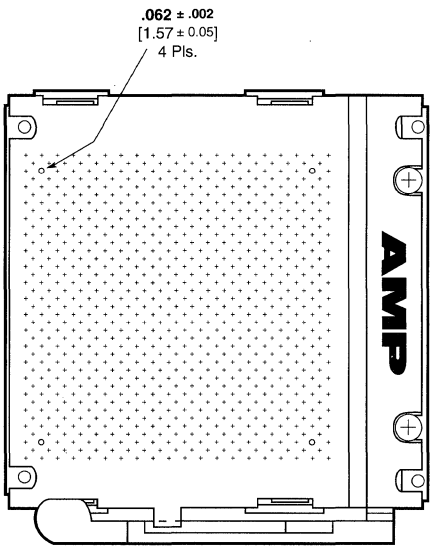
Solder Tail Length .170 [4.32]



Cover Hole Pattern

761 Positions
Part No. 382320-1

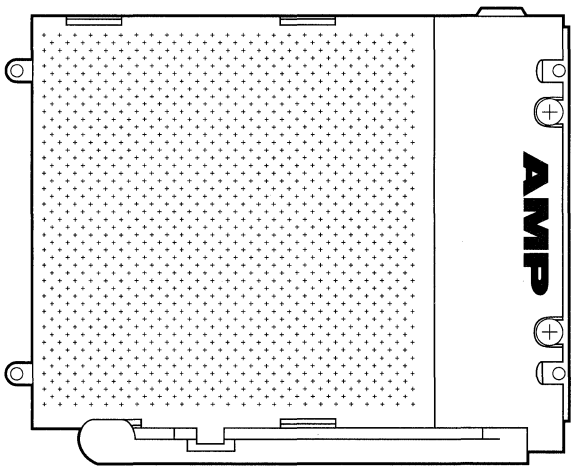
Solder Tail Length .170 [4.32]



Cover Hole Pattern

1201 Positions
Part No. 382876-1

Solder Tail Length .170 [4.32]



Cover Hole Pattern

SOURCE: Catalog 82172

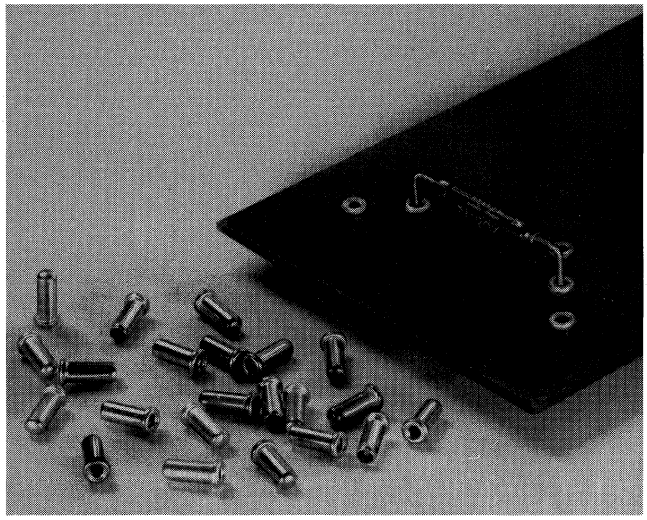
Specifications subject to change.
1-800-522-6752 Product Information Center/ AMP FAX Service
1-800-722-1111 Tooling/Technical Assistance Center

Test Sockets

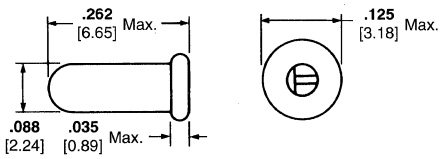
Reusable Receptacles for Component Testing

Product Facts

- Variety of test receptacles is available
- Receptacles help prevent heat damage to pc boards and components during burn-in and bread-boarding evaluation
- Receptacles accept component leads in ranges .018–.040 [0.46–1.02]; .036–.051 [0.91–1.30]; and .036–.054 [0.91–1.37]
- Receptacles eliminate need for soldering components directly to the board
- Board components can be inserted and extracted at a minimum of 100 times
- Application tooling provides high speed insertion



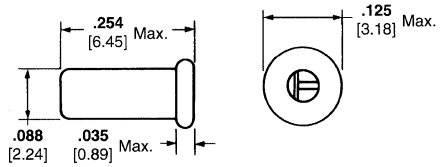
Closed Bottom



Accepts Lead Size	Finish		Part Numbers
	Cup	Spring	
.018–.040 0.46–1.02	Gold[1]	Gold[1]	380598-1
	Tin-Lead	Gold[1]	380598-2
	Tin-Lead	Tin-Lead	380598-3
.036–.051 0.91–1.30	Tin-Lead	Tin-Lead	1-380758-0
	Tin-Lead	Gold[1]	1-380758-1

[1].000030 [0.00076] gold plating over nickel plating.

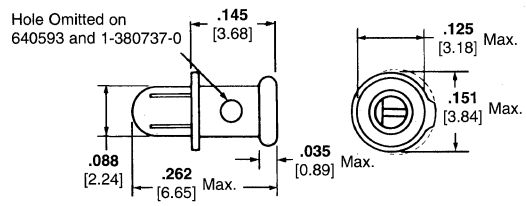
Open Bottom



Accepts Lead Size	Finish		Part Numbers
	Cup	Spring	
.018–.040 0.46–1.02	Gold[1]	Gold[1]	380635-1
	Tin-Lead	Gold[1]	380635-2
	Tin-Lead	Tin-Lead	380635-5
.036–.051 0.91–1.30	Tin-Lead	Tin-Lead	640206-1
	Tin-Lead	Gold[1]	640206-2

[1].000030 [0.00076] gold plating over nickel plating.

Stand-Off



Accepts Lead Size	Finish		Part Numbers
	Cup	Spring	
.018–.040 0.46–1.02	Tin-Lead	Gold[1]	1-380737-0
	Tin-Lead	Tin-Lead	640593-1

[1].000030 [0.00076] gold plating over nickel plating.

SOURCE: Catalog 82172

Specifications subject to change.

1-800-522-6752
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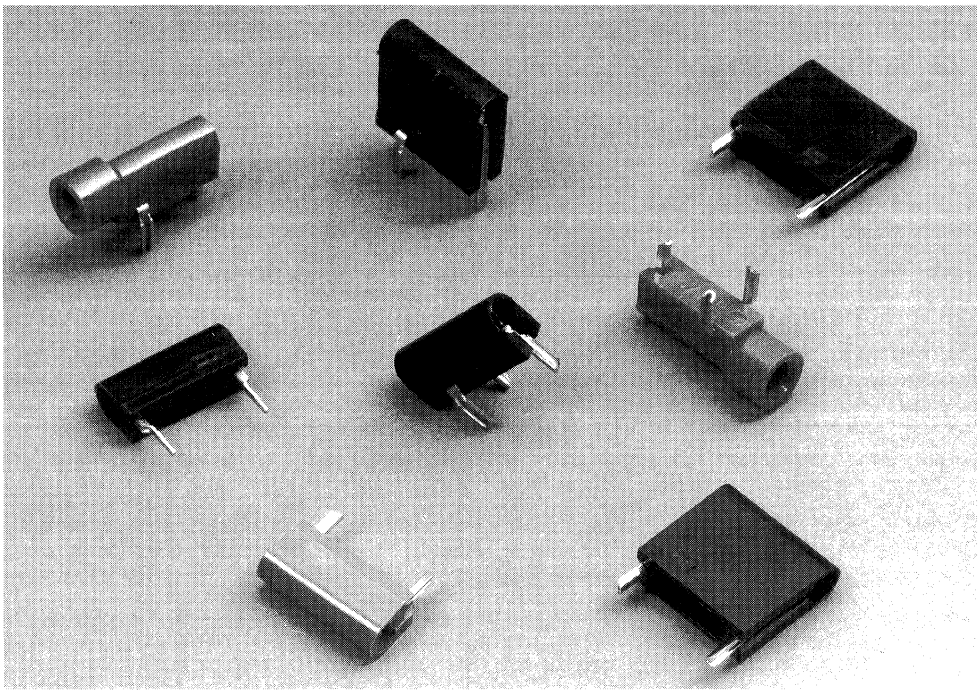
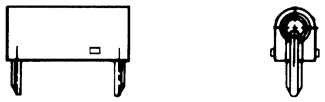
1-800-722-1111
Tooling/Technical Assistance Center

Test Probe Receptacles

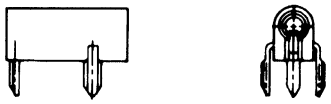
Product Facts

- Leg mounts are "V"-shaped to promote solder wicking and consistent fillets
- Receptacle is recessed in housing to prevent shorting or flashover
- Probe may be inserted in either end of test probe receptacle except Type C
- Housing color is molded, not dyed
- Accepts .080±.001 [2.03±0.03] probes
- Available with two or three mounting legs

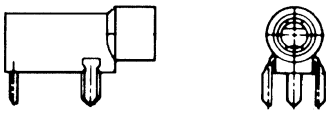




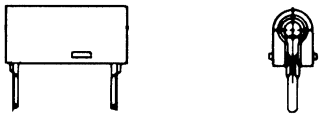
Type A



Type B



Type C



Type D

Color Suffix Table

Suffix Dash Number	Housing Color
-0	Black
-1	Brown
-2	Red
-3	Orange
-4	Yellow
-5	Green
-6	Blue
-7	Violet
-8	Gray
-9	White

Note: Color table contains AMP designations.

Type	Contact Finish	Housing Colors	Part Numbers*
A	Bright Tin-Lead	See Table	1-582118-x
	Silver	See Table	2-582118-x
	Gold	See Table	3-582118-x
	Silver	Natural	5-582118-9
	Gold	Natural	6-582118-9
	Bright Tin-Lead	See Table	1-582340-x
	Silver	Black	2-582340-0
	Silver	Red	2-582340-2
	Gold	See Table	3-582340-x
	Gold	Natural	6-582340-9
B	Gold	See Table	3-582119-x
	Gold	Natural	6-582119-9
	Gold	See Table	3-582120-x
	Gold	Natural	6-582120-9
C	Gold	See Table	350180-x
D	Gold	See Table	1-380736-x
	Gold	Natural	2-380736-0
	Bright Tin-Lead	Green	3-380736-5

*Part numbers with a numerical suffix are only for the specific color listed in the table.

SOURCE: Catalog 82172

Specifications subject to change.

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Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

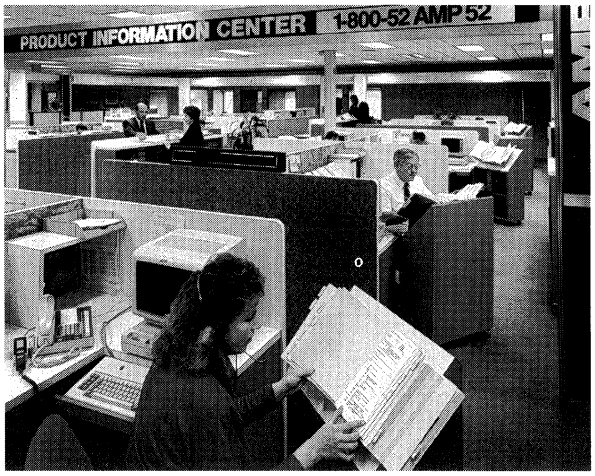
Need Information?
Call the AMP

PRODUCT INFORMATION CENTER

1-800-522-6752

The Product Information Center is staffed with specialists well versed in all AMP products. The Center can provide you with:

- Catalogs
- Technical Support
- Product Samples



AMP FAX SERVICE

Instant information by FAX 24-hours a day.

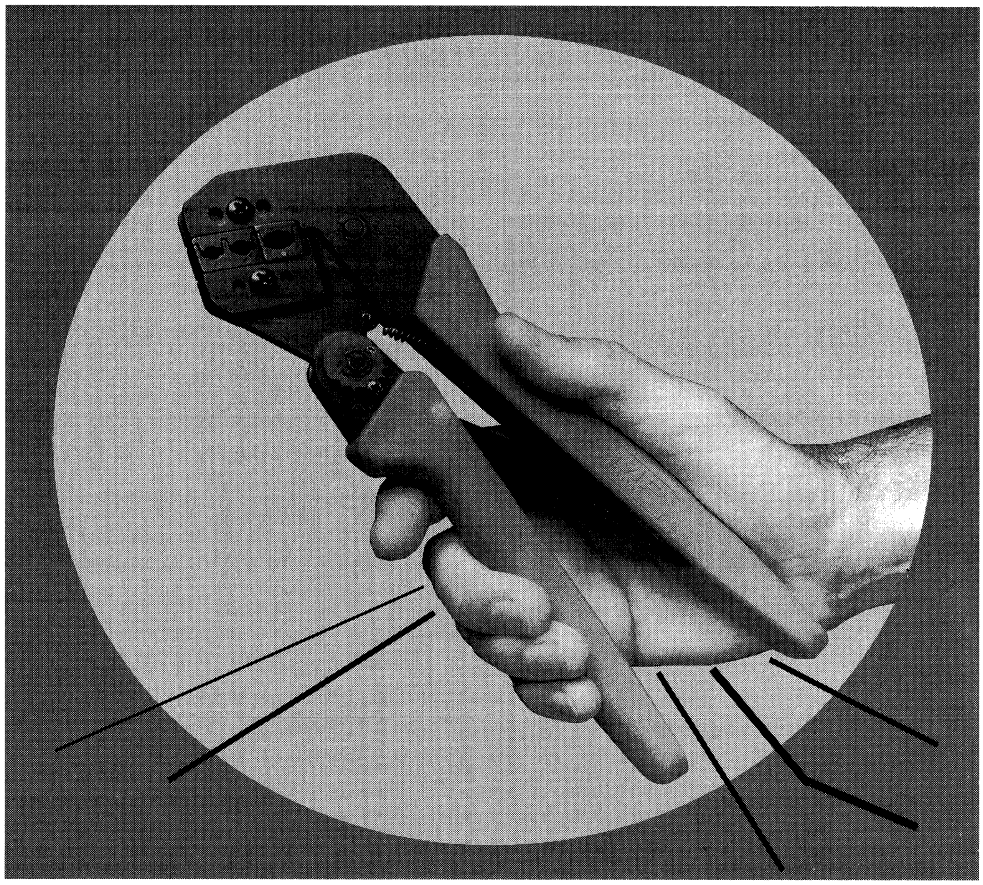
- Drawings
- Instruction Sheets (IS#)
- Product Specifications
- Application Specifications
- Latest Revision of Catalog Pages
- AMP Authorized Distributors Locations
- Instructions for AMP FAX Service

See Inside Front Cover for Instructions on "How to Access" AMP FAX SERVICE

PRO-CRIMPER II Hand Tool

Product Facts

- **Ratchet control provides complete crimping cycle**
- **Emergency ratchet release**
- **Angled head provides a comfortable hand and wrist position**
- **One tool with interchangeable dies can crimp many different types of connectors**
- **Multiple terminal sizes are accommodated in one die**
- **Precision construction of durable high-carbon steel**
- **Extra strength pivot pins provide greater durability**



The PRO-CRIMPER II Hand Tool with an all new design requires dramatically less hand force to produce the same connection as comparable tools. It's the most versatile and reliable crimping tool in the mid-price class. With interchangeable dies the PRO-CRIMPER II Hand Tool will crimp:

- R-B-Y Insulated Terminals and Splices
- Budget Terminals and Splices
- "O" Crimp BNC and TNC, Hex Crimp BNC and TNC, N, SMB, and Standard and Miniature UHF Coaxial Connectors
- Subminiature D (AMPLIMITE) Sizes 20 and 22 DF Contacts
- Universal and Mini-Universal MATE-N-LOK Contacts
- Commercial MATE-N-LOK Contacts
- MR Miniature Rectangular Contacts
- Type III+, VI and X Contacts
- 040 and 070 Series MULTILOCK Contacts
- Dynamic Series D-3 Contacts
- AMPSEAL Automotive Receptacles
- .093 and .062 Soft Shell Commercial Contacts
- Fiber Optic Connectors

All you need to change the dies is a slotted or Phillips screwdriver and 30 seconds.

The tool is constructed of durable high-carbon steel and incorporates a ratchet control that provides full die closure and helps eliminate partial crimps. The angled head and specially designed handles reduce hand stretch and provide comfortable operation.

PRO-CRIMPER II hand tools are ideally suited for R&D prototyping, networking applications, and commercial, industrial and institutional maintenance work. Low cost, high productivity and the flexibility of interchangeable dies makes this tool the best all-around choice in its field.

SOURCE: Catalog 82276

Specifications subject to change.

1-800-522-6752
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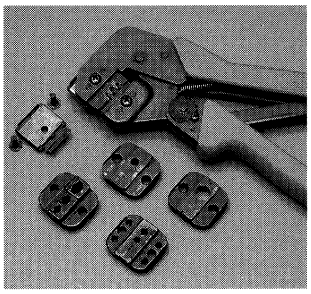
1-800-722-1111
Tooling/Technical Assistance Center

Connector/Terminal-to-Tool Reference



PRO-CRIMPER II Hand Tool with interchangeable dies is the most versatile crimping tool in the mid-price class.

Tool Frame without Die Set Part Number 354940-1

AMP Product/ Catalog Number[1]	RG/U Cable[2] or Wire Size	Termination Type/Style	Tool Assembly with Die Set		Die Set Only	
			AMP Part Number	Alpha-Numeric Part Number[3]	AMP Part Number	Alpha-Numeric Part Number[3]
50 Ohm BNC and TNC Coaxial Connectors/ Catalog No. 82074	174, 179, 180, 195	Hex/Commercial	—	—	58436-3	—
	RD 316	"O"/Commercial	—	—	58330-1	—
	Belden 89907	"O"/Commercial	—	—	58304-2	—
	58, 62, 59	"O"/Commercial	58433-1	TPCCBTO	58435-1	DPCCBTO
	58, 62, 59	Hex/Commercial	58433-2	TPCCBTH	58436-1	DPCCBTH
	58, 141, 142	"O"/Military	—	—	220189-3	DS58BT
	62, 59	"O"/Military	—	—	220189-4	DS59BT
	Belden 9104, 9112	"O"/Commercial	—	—	220189-5	DS59BTHT
	Belden 9248, 9114	"O"/Commercial	—	—	220244-1	—
	Belden 8281, 9141	Hex/Commercial	—	—	58436-2	—
		"O"/ Commercial & Military	—	—	220189-6	DC8281BT
75 Ohm BNC Coaxial Connectors/ Catalog No. 82074	179, 161, 187	"O"/Commercial	—	—	58304-1	—
		Hex/Commercial	—	—	58425-2	DPCH75735
	62, 59	Hex/Commercial	—	—	58425-1	DPCH7559
	62, 59	"O"/Commercial	—	—	58085-1	DC7559
	Double Braid 59	Hex/Commercial	—	—	58425-3	DPCH758281
	Belden 9248, 8228	"O"/Commercial	—	—	58086-1	DC759248
75 Ohm TNC Coaxial Connectors/ Catalog No. 82074	179, 187	"O"/Commercial	—	—	58304-1	—
	62, 59	"O"/Commercial	—	—	58085-1	DC7559
	Belden 8281, 9231	"O"/Commercial	—	—	220189-7	DC758281
50 Ohm N Coaxial Connectors/ Catalog No. 82074	8, 9, 213, 214, 216	Hex/Commercial	58501-1	TPC50N9880	58485-1	DPC50N9880
	393	Hex/Commercial	58501-2	—	58485-2	—
Standard UHF Coaxial Connectors/ Catalog No. 82074	58, 62, 59	Single Crimp	58506-1	—	58503-1	—
	8, 213	Single Crimp	58506-2	—	58504-1	—
Miniature UHF Coaxial Connectors/ Catalog No. 82074	58	Dual Crimp	58506-3	—	220196-1	—
	174, 316, 188	Dual Crimp	58506-4	—	58505-1	—
50 Ohm SMB Coaxial Connectors/ Catalog No. 82074	178, 196, 174, 316, 188, 179, RD 316, 188 Double Braid	Hex/Commercial	58500-1	—	58489-1	—
		Hex/Military	58499-1	—	58483-1	—
Insulated Terminals and Splices- PIDG and PLASTI-GRIP/ Catalog No. 82042	22-16 AWG [0.26–1.65 mm²]	—	58433-3	TPCRBY	58423-1	DPCRBY
	16-14 AWG [1.04–2.62 mm²]					
	12-10 AWG [2.62–6.64 mm²]					
Budget Terminals and Splices/ Catalog No. 65505	22-16 AWG [0.26–1.65 mm²]	—	58508-1	—	58509-1	—
	16-14 AWG [1.04–2.62 mm²]					
	12-10 AWG [2.62–6.64 mm²]					
Fiber Optic Connectors/ Catalog No. 124003	D4 & FC Type 2.5 mm Bayonet (ST-Style)	—	58433-4	TPCFO	58424-1	DPCFO
		—	—	—	—	—
Fiber Optic LightCrimp ST-Style Connectors/ Catalog No. 124003	125 µm	—	502835-1	—	502834-1	—
	140 µm	—	—	—	—	—
Fiber Optic Connectors/ Catalog No. 124003	FSD	—	58519-1	—	58510-1	—
	—	—	—	—	—	—
Fiber Optic Connectors/ Catalog No. 124003	FSMA-I, FSMA-II & Simplex (3.0 & 3.8 mm Diameter)	—	58520-1	—	58502-1	—
		—	—	—	—	—

[1] Request catalog for detailed product information.
[2] Coaxial cable of similar size can be crimped with these tools. Request Catalog No. 82074 for a complete listing of possible cable sizes.
[3] Request NETCONNECT Open Cabling Systems Catalog No. 82164 for a listing of the products applied with these tools.

Connector/Terminal-to-Tool Reference
(Continued)

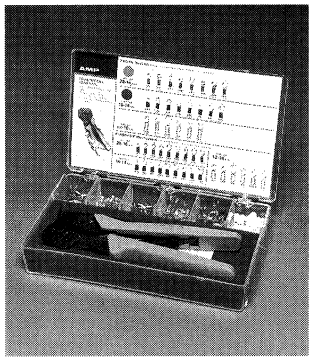
AMP Product/ Catalog Number[1]	RG/U Cable[2] or Wire Size	Termination Type/Style	Tool Assembly with Die Set		Die Set Only	
			AMP Part Number	Alpha-Numeric Part Number[3]	AMP Part Number	Alpha-Numeric Part Number[3]
Subminiature D 20 DF Pin and Socket Contacts/ Catalog No. 82068	28-24 AWG [0.08–0.2 mm²]	—	58448-2	TPCSD	58448-3	DPCSD
	24-20 AWG [0.2–0.6 mm²]					
Subminiature D 22 DF Pin and Socket Contacts/ Catalog No. 82068	28-22 AWG [0.08–0.4 mm²]	—	90800-1	TPCSD22	90800-2	DPCSD22
Type III+, Type VI and Type X Pin and Socket Contacts/ Catalog No. 82003	28-24 AWG [0.08–0.2 mm²]	—	58495-1	—	58495-2	—
	24-20 AWG [0.2–0.6 mm²]					
	18-16 AWG [0.8–1.4 mm²]					
Dynamic Series D-3 Contacts/ Catalog No. 65224	28-24 AWG [0.08–0.2 mm²]	—	90682-1	—	90682-2	—
	24-20 AWG [0.2–0.56 mm²]	—	90683-1	—	90683-2	—
	20-16 AWG [0.5–1.42 mm²]	—	90684-1	—	90684-2	—
.093 Soft Shell Commercial Pin and Socket Contacts/ Catalog No. 82181	24-18 AWG [0.2–0.9 mm²]	—	90872-1	—	90872-2	—
	20-14 AWG [0.6–2 mm²]	—	90871-1	—	90871-2	—
.062 Soft Shell Commercial Pin and Socket Contacts/ Catalog No. 82181	30-24 AWG [0.05–0.2 mm²]	—	90870-1	—	90870-2	—
	24-18 AWG [0.2–0.9 mm²]	—	90869-1	—	90869-2	—
MR Pin and Socket Contacts/ Catalog No. 82181	26-18 AWG [0.13–0.9 mm²]	—	58514-1	—	58514-2	—
Universal MATE-N-LOK Pin and Socket Contacts/ Catalog No. 82181	24-18 AWG [0.2–0.9 mm²]	—	90548-1	—	90548-2	—
	20-14 AWG [0.6–2 mm²] .060-.130 [1.52–3.30] Ins.	—	90546-1	—	90546-2	—
	20-14 AWG [0.6–2 mm²] .130-.200 [3.30–5.08] Ins.	—	90547-1	—	90547-2	—
	12-10 AWG [3-5 mm²]	—	58530-1	—	58530-2	—
Mini-Universal MATE-N-LOK Pin and Socket Contacts/ Catalog No. 82181	26-22 AWG [0.13–0.3 mm²]	—	90758-1	—	90758-2	—
	22-18 AWG [0.3–0.9 mm²]	—	90759-1	—	90759-2	—
	20-16 AWG [0.6–1.4 mm²]	—	90760-1	—	90760-2	—
Commercial MATE-N-LOK Pin and Socket Contacts/ Catalog No. 82181	24-18 AWG [0.2–0.9 mm²]	—	90574-1	—	90574-2	—
	20-14 AWG [0.6–2 mm²]	—	90575-1	—	90575-2	—
040 Series MULTILOCK Contacts/ Catalog No. 65839	22-20 AWG [0.3–0.5 mm²]	—	58522-1	—	58522-2	—
070 Series MULTILOCK Contacts/ Catalog No. 65839	24-22 AWG [0.2–0.3 mm²]	—	58528-1	—	58528-2	—
	20-16 AWG [0.5–1.25 mm²]	—	58521-1	—	58521-2	—
	16-14 AWG [1.25–2.09 mm²]	—	58527-1	—	58527-2	—
040 II Series MULTILOCK Contacts/ Catalog No. 65839	22-18 AWG [0.3–0.85 mm²]	—	90652-1	—	90652-2	—
070 II Series MULTILOCK Contacts/ Catalog No. 65839	22-18 AWG [0.3–0.85 mm²]	—	90653-1	—	90653-2	—
	20-16 AWG [0.5–1.25 mm²]	—	90654-1	—	90654-2	—
AMPSEAL Automotive Receptacles/ Catalog No. 65481	20-16 AWG [0.5–1.25 mm²]	—	58529-1	—	58529-2	—

[1] Request catalog for detailed product information.
[2] Coaxial cable of similar size can be crimped with these tools. Request Catalog No. 82074 for a complete listing of possible cable sizes.
[3] Request NETCONNECT Open Cabling Systems Catalog No. 82164 for a listing of the products applied with these tools.
Note: For other commercial and service hand tools call AMP.

SOURCE: Catalog 82276

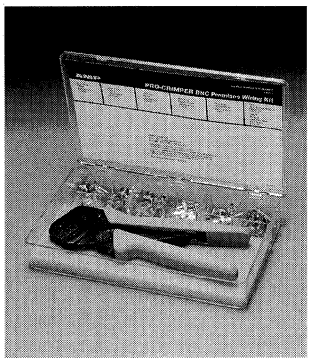
Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

Hand Tool Kits



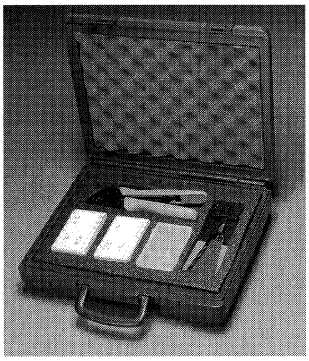
PIDG and PLASTI-GRIP Terminal Kit No. 55823-1 (RBYTSK)

Includes hand tool, 225 ring and spade terminals in 12-10, 16-14 and 22-16 AWG wire sizes.



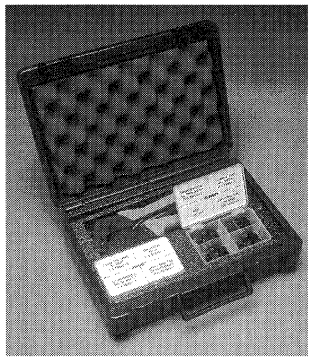
BNC Premises Wiring Kit No. 58477-1 (BNC5859KO)

Includes hand tool, plugs—5 RG 58, 10 RG 59/62, 5 RG 58 plenum and RG 59/62 plenum sizes; adapters—2 jack-to-jack and 2 "T".



Local Area Network (LAN) Kit No. 58513-1 (LANPCK)

Includes 8-position Modular Plug Hand Tool— **Part No. 2-231652-1**, and PRO-CRIMPER II frame— **Part No. 354940-1,** plus dies for Fiber Optic Connectors— **Part No. 58424-1 (DPCFO)**, LightCrimp Connectors— **Part No. 502834-1**, FSMA Connectors— **Part No. 58502-1**, FSD Connectors— **Part No. 58510-1**, BNC Connectors— **Part No. 58436-1 (DPCCBTH),** and N Connectors— **Part No. 58485-1**.



PRO-CRIMPER II Tooling Kits

Includes frame plus an assortment of up to eight dies. Contact AMP with your specific requirements.

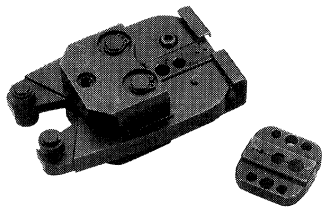
Accessories

PRO-CRIMPER II Hand Tool Repair Kit No. 679221-1 (RKPCII)

Includes retaining rings, handle return spring, pawl spring and die screws.

Special Head for PRO-CRIMPER II Dies Part No. 679304-1

For use with Model 626 Pneumatic Tools. Request Catalog No. 124208 for a listing of available Power Units.



CERTI-CRIMP Hand Tools

Product Facts

- Designed to exacting dimensions
- Ratchet control provides complete crimping cycle
- For military, UL and CSA applications
- Manufactured using the highest quality materials
- Requires minimum skill
- Repairable

CERTI-CRIMP Hand Tools are our top-of-the-line, hand-operated tools for crimping the broad array of terminals, contacts and special wiring devices available from AMP. They are designed to exacting specifications to produce consistent, high-quality terminations. A service life of over 50,000 cycles is not unusual, depending on operator care.

AMP currently offers eight basic styles of CERTI-CRIMP Hand Tools. The choice depends on the product being applied and/or your preferred method of application. For example, open barrel contacts typically require straight-action die movement to minimize possible rotation during crimping. Or, if your application requires crimping different sizes of terminals, you may prefer using a single tool with a combination of crimping cavities, rather than two or three separate tools.

Other options include insulation crimp adjustment for different insulation thicknesses, a locator for properly positioning and supporting your terminal or contact in the tool, a wire stop, and color coding and/or wire information on the head of the tool or on the handles.

All CERTI-CRIMP Hand Tools feature the proven ratchet control. The ratchet is connected between both handles. It will not release until the handles are fully closed and the dies bottomed. This helps eliminate partial crimps.

CERTI-CRIMP Hand Tools are ideally suited for low production runs, prototype work, and repairs—any application requiring consistent, highly-reliable terminations. Check appropriate AMP product catalogs for qualification to military specifications, UL Recognition and CSA Certification.

SOURCE: Catalog 65780

Specifications subject to change.

1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

Connector/ Terminal-to-Tool Reference

Connector Terminal	Style	Wire Range	Max. Insul. Dia.	Part Numbers						
				DAHT	SAHT	SADAHT	TETRA-CRIMP	T-HEAD	HHHT	Dies for Tool Frame
AMPLI-BOND Terminals, PLASTI-GRIP Terminals	–	8 AWG	**.377** [9.58]	–	–	–	–	–	69959	–
AMPLIMITE Connectors	Size 20 DF Contacts	28-24 AWG	**.040** [1.02]	–	90302-1	–	–	–	–	–
		24-20 AWG	**.060** [1.52]							
	Size 22 DF Contacts	28-22 AWG	**.040** [1.02]	–	90430-1	–	–	–	–	–
AMPMODU Connectors	Mod. IV Contacts	26-22 AWG	**.061** [1.55]	–	90418-1	–	–	–	–	–
		24-20 AWG	**.069** [1.75]	–	90202-2	–	–	–	–	–
	Locking Clip Contacts	26-22 AWG	**.062** [1.57]	–	90289-1	–	–	–	–	–
	MTE & Tandem Spring Contacts	32-28 AWG	**.054** [1.37]	–	58342-2	–	–	–	–	–
		26-22 AWG	**.065** [1.65]	–	58342-1	–	–	–	–	–
CPC Connectors, M Series Connectors	Type II Contacts	28-24 AWG	**.085** [2.16]	–	–	58305-1	–	–	–	90230-1[1]
		24-20 AWG	**.060** [1.52]							
		18-16 AWG	**.105** [2.67]	–	–	90136-1	–	–	–	–
		18-14 AWG	–	–	–	45098	–	–	–	90231-2[1]
	Type III+ Contacts	26-24 AWG	**.055** [1.40]	–	90066-7	–	–	–	–	–
		24-20 AWG	**.080** [2.03]							
		24-20 AWG	**.100** [2.54]	–	90067-5	–	–	–	–	–
		18-16 AWG	**.100** [2.54]	–	90067-4	–	–	–	–	–
		18-14 AWG	**.100** [2.54]	–	90310-3	–	–	–	–	–
	Type XII Contacts	16 AWG	**.160** [4.06]	–	–	–	–	–	90382-2	90145-2[1]
		14-12 AWG	**.160** [4.06]	–	–	–	–	–	90382-2	90145-1[1]
		18-14 AWG	**.100** [2.54]	–	90310-3	–	–	–	90384-1	90140-1[1]
	Subminiature COAXICON Contacts	174 RG/U	–	–	–	69656	–	–	–	69690[1]
		187 RG/U	–	–	–	69656-1	–	–	–	69690-1[1]
FASTON Straight Receptacles (Premier Line Only)	250 Series	22-18 AWG	**.130** [3.30]	90166-1	–	–	–	–	–	–
		18-14 AWG	**.170** [4.32]	90165-1	–	–	–	–	–	–
		14-10 AWG	**.200** [5.08]	90120	–	–	–	–	–	–
MATE-N-LOK Connectors	Commercial Contacts	30-22 AWG	**.075** [1.91]	–	90066-8	–	–	–	–	–
		24-18 AWG	**.100** [2.54]	90123-2	–	–	–	–	–	–
		20-14 AWG	**.130** [3.30]	90124-2	–	–	–	–	–	–
	Universal & Universal II Contacts	24-18 AWG	**.100** [2.54]	–	90300-2	–	–	–	–	–
		20-14 AWG	**.130** [3.30]	–	90296-2	–	–	–	–	–
		20-18 AWG	**.200** [5.08]	–	90298-2	–	–	–	–	–
		16-14 AWG	**.200** [5.08]	–	90299-2	–	–	–	–	–
		12 AWG	**.200** [5.08]	–	–	–	–	–	–	58380-1[1]
		10 AWG	**.200** [5.08]	–	–	–	–	–	–	58380-2[1]
	Mini-Universal Contacts	26-22 AWG	**.069** [1.75]	–	755330-1	–	–	–	–	–
		22-18 AWG	**.094** [2.39]	–	755331-1	–	–	–	–	–
		20-16 AWG	**.126** [3.20]	–	753808-1	–	–	–	–	–

[1]Use with "C" Head Straight Action Hand Tool, **Part Number 69710.**

SOURCE: Catalog 65780

Connector/ Terminal-to-Tool Reference
(Continued)

Connector/ Terminal	Style	Wire Range	Max. Insul. Dia.	Part Numbers						
				DAHT	SAHT	SADAHT	TETRA-CRIMP	T-HEAD	HHHT	Dies for Tool Frame
MR Connectors	Contacts	26-24 AWG	**.050** [1.27]	–	90326-1	–	–	–	–	–
		26-18 AWG	**.115** [2.92]	–	90325-1	–	–	–	–	–
PIDG FASTON Receptacles (6409xx P/N Series Only)	–	22-18 AWG	**.100** [2.54]	–	–	–	59824-1	–	–	–
		16-14 AWG	**.170** [4.32]							
		12-10 AWG	**.250** [6.35]							
PIDG Terminals & Splices, PLASTI-GRIP Terminals	–	26-22 AWG	**.082** [2.08]	46121	–	–	–	59275	–	69344[1]
		22-16 AWG	**.125** [3.18]	47386	–	–	59824-1	59250	–	47806-2[1]
		16-14 AWG	**.150** [3.81]	47387	–	–	59824-1	59250	–	47807-1[1]
		12-10 AWG	**.230** [5.84]	–	–	–	59824-1	–	59239-4	47808-6[1]
PLASTI-GRIP Butt Splices	–	26-22 AWG	**.080** [2.03]	46121	–	–	–	–	–	–
		22-16 AWG	**.170** [4.32]	45160	–	–	–	–	–	–
		16-14 AWG	**.215** [5.46]	45575-1	–	–	–	–	–	–
PLASTI-STRIP Terminals, Ultra-Fast Plus FASTON Receptacles	–	22-18 AWG	**.135** [3.43]	–	–	–	–	–	–	58079-3[2]
		16-14 AWG	**.160** [4.06]	–	–	–	–	–	–	58080-3[2]
SOLISTRAND Terminals & Splices	–	22-16 AWG	–	49935	–	–	–	–	–	47812[1]
		16-14 AWG	–	49935	–	–	–	–	–	47813[1]
		12-10 AWG	–	49935	–	–	–	–	–	–
Ultra-Fast FASTON Tabs and Receptacles	–	22-18 AWG	**.230** [5.84]	–	–	–	–	–	–	90390-3[2]
		16-14 AWG	**.260** [6.60]	–	–	–	–	–	–	90391-3[2]
BNC/TNC Connectors	50-Ohm Commercial Dual Crimp	58 RG/U	–	220187-1	–	–	–	–	–	220217-1[1]
		59 RG/U	–	220187-2	–	–	–	–	–	220217-2[1]
		8281	–	220043-1	–	–	–	–	–	220088-1[1]
	50-Ohm Military Single Crimp	174 RG/U	–	–	–	69245-1	–	–	–	69422[1]
		58 RG/U	–	–	–	69140-1	–	–	–	69223-1[1]
		59 RG/U	–	–	–	69141-1	–	–	–	–
N Connectors	50-Ohm Military Dual Crimp	58 RG/U	–	220045-2	–	–	–	–	–	–
		8 RG/U	–	–	–	–	–	–	220015-1	–
Miniature UHF Connectors	Dual Crimp	58 RG/U	–	220149-1	–	–	–	–	–	58158-1[1]
SMA Connectors	Military	174 RG/U, 58 RG/U	–	220061-1	–	–	–	–	–	220091-1[1]
Twin BNC Connectors	–	108 RG/U	–	–	–	69667	–	–	–	69708[1]

[1]Use with "C" Head Straight Action Hand Tool, **Part Number 69710.**
[2]Use with Platform Die Hand Tool, **Part Number 58078-3.**

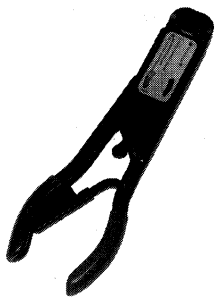
For copies of Instruction Sheets for the part numbers listed above, call the Product Information Center at 1-800-522-6752.

SOURCE: Catalog 65780

Tooling Options

Double Action Hand Tool (DAHT)

- Dies travel in arc-like path
- Locator on tools for FASTON, MATE-N-LOK, PIDG, PLASTI-GRIP and RF Connectors
- Insulation adjustment on tools for FASTON, MATE-N-LOK, PIDG and PLASTI-GRIP Connectors
- Approximate weight 1.2 lb. [0.54 kg]

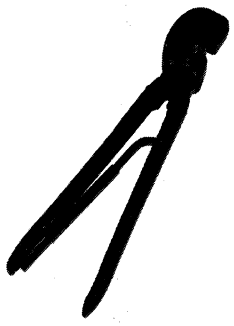


T-HEAD Hand Tool

- Dies close in a straight line
- Locator
- Quick take-up on handle for holding terminal or splice in place
- Adjust insulation crimp with a four-position screw
- Color coded
- Approximate weight 1.3 lb. [0.59 kg]

Straight Action Hand Tool (SAHT)

- Dies close in a straight line
- Contact locator and support
- Wire stop
- Insulation crimp adjustment lever when applicable
- Ejects crimped contact
- Approximate weight 1.3 lb. [0.59 kg]

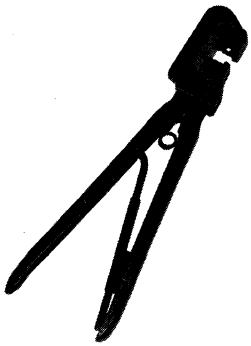


Heavy Head Hand Tool (HHHT)

- Designed to terminate large coaxial cable and heavy-gauge wire
- Dies close in a straight line
- Locator and wire stop when applicable
- Insulation adjustment on tools for AMPLI-BOND, PIDG and PLASTI-GRIP Connectors
- Approximate weight 2.1 lb. [0.95 kg]

Straight Action, Double Action Hand Tool (SADAHT)

- Same handles as DAHT
- Dies close in a straight line
- Contact locator and support
- Approximate weight 1.5 lb. [0.68 kg]

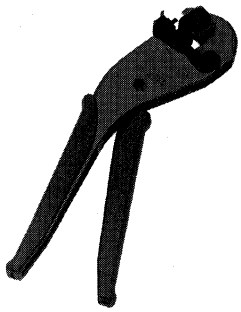


"C" Head Straight Action Hand Tool, Part No. 69710

- Dies close in a straight line
- Dies are interchangeable
- Locators and other applicable features included with dies
- Approximate weight 1.9 lb. [0.86 kg]

TETRA-CRIMP Hand Tool

- Dies travel in arc-like path
- Multiple color-coded crimping cavities
- Terminal locator and wire stop
- Ratchet control release
- Approximate weight 1.4 lb. [0.64 kg]



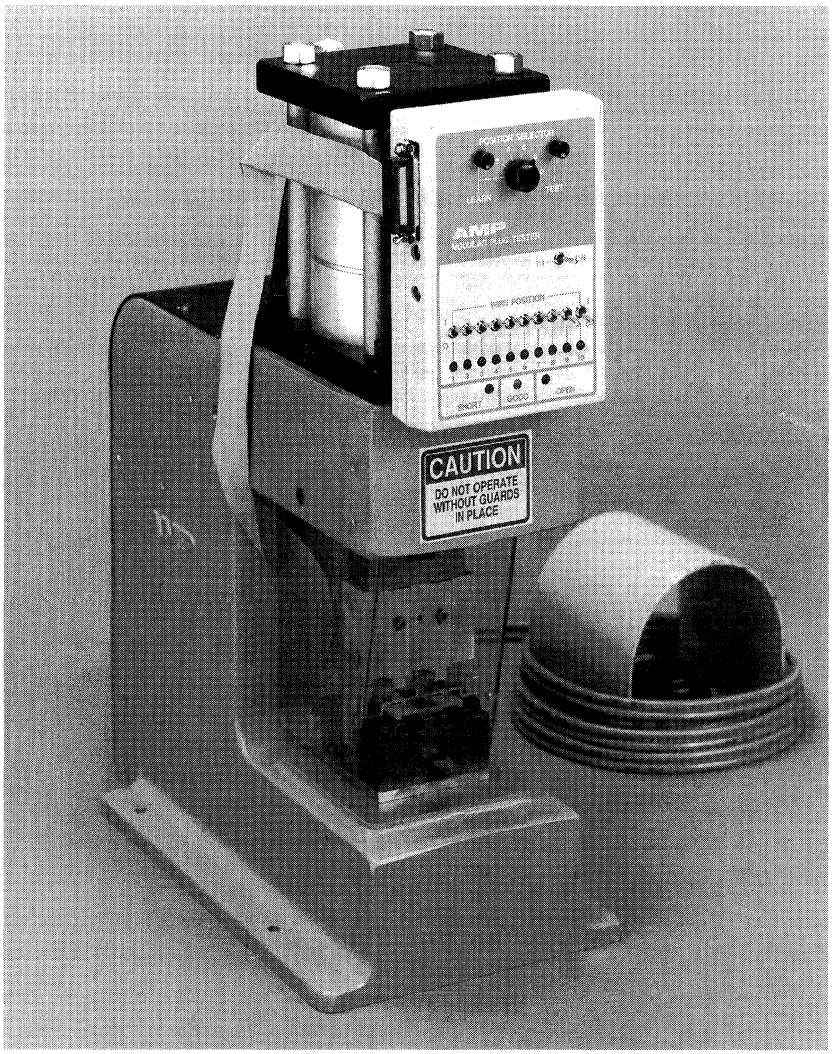
Platform Die Hand Tool, Part No. 58078-3

- Same frame configuration as TETRA-CRIMP Hand Tool
- Dies are interchangeable
- Adjustable terminal locator
- Approximate weight 1.4 lb. [0.64 kg]

Modular Plug Dual Terminator

Product Facts

- Checks continuity/shorts on each active plug position to provide quality terminations
- Learn mode allows crossover testing
- A terminated and tested cable or two single-ended cables every machine cycle
- Dedicated termination modules for quick product changeover
- Up to 200 completed cables per hour, depending on operator dexterity
- Individually adjusted primary and secondary strain reliefs
- Easy operation



The AMP Modular Plug Dual Terminator machine is a compact semiautomatic bench unit used for applying and testing loose-piece AMP modular plugs. A highly reliable tester may be programmed to check individual active contact positions and crossovers through the use of switches or a learn mode. Lights indicate a good or bad connection. If it becomes necessary to run a different product size, the use of termination modules allows easy, quick changeovers.

Operation is simple. The operator places both ends of a pre-stripped cable into the desired modular plugs, pushes the two plugs into the machine until latched. A foot pedal is actuated to cycle the machine, terminating and testing the two plugs. The operator then presses the unlatch lever and removes a completed cable from the machine. Two single-ended cables can be made by doubling the required cable length and cutting the cable in half after terminating and testing.

Field Engineering Service is provided under the warranty. This includes machine setup and installation assistance. This service can also be provided after warranty. For information about this service and other tooling mattters, call the AMP Tooling/Technical Assistance Center.

SOURCE: Catalog 82954

Specifications subject to change.

1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

Specifications:

Height: 23.5 [59.7 cm]

Width: 5.5 [14.0 cm]

Depth: 13.75 [34.9 cm]

Weight: 56 lb [25.4 kg]

Air Requirements: 80 psi [5.52 bars] minimum constant air pressure, filtered-lubricated

Electrical Requirements:
120 VAC, 60 Hz, single phase

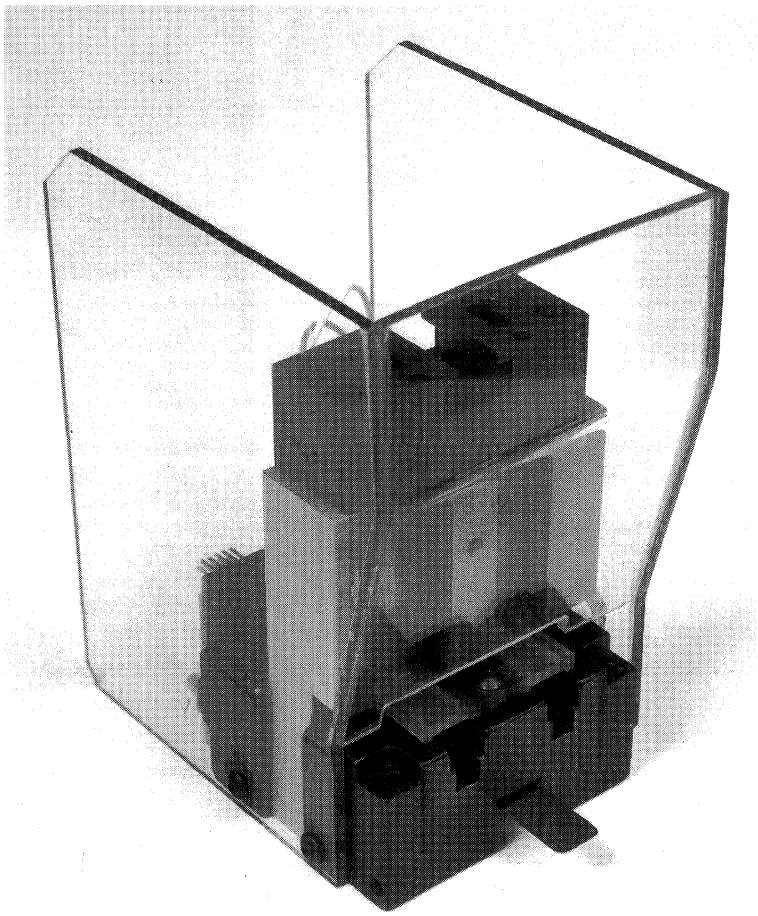
Production Rates: 200 dual-ended or 400 single-ended tested cables per hour possible, depending on operator training and dexterity

Power Unit/Tester:
Includes 2700 lb [1225 kg] power unit, tester, tester power supply, tester cable, and adapter parts to install termination module

Termination Module: Each machine requires installation of the appropriate tooling for the product being terminated.

	Part Number	
Modular Plug Applied	**Termination Module**	**Power Unit/Tester**
4/6-Pos. Line	856196-1	856195-1
8-Pos. Line	856196-2	
4-Pos. Handset	856196-3	
6-Pos. Long Body	856196-4	
6-Pos. Offset	856196-5	

A complete machine requires the power unit/tester and a termination module.



Termination Module

SOURCE: Catalog 82954

AMP-O-MATIC Side-Feed Stripper-Crimper, Model II Machine

Product Facts

- **Quick-change applicators for fast product changeover**
- **Compatible with AMP Crimp Quality Monitor**
- **Easy shut height adjustment, in increments of .0005 [0.0127], to simplify quality control of terminations**
- **Crimp height can be held to ±.001 [±0.0254]**
- **Fast setup time: 10 minutes or less**
- **Toolless, detented adjustment of forward and back strip-feed positions**
- **Front adjustment access for wire position, wire strip length, and blade closing depth**
- **Keyed stripping blades for fast, accurate setup**
- **32 to 14 AWG [0.03-2 mm²] wire range**
- **Target area illuminated by optical fiber**
- **Chute/scrap removal system**
- **Modern guards and cover**
- **Select between either a foot switch or wire-sensor mode of operation**
- **Lock-Out/Tag-Out Device per OSHA Standards #29CFR1910.147**
- **Internal work light reduces glare**

The AMP-O-MATIC Side-Feed Stripper-Crimper Model II Machine is an improved version of the most commonly used bench machine for terminating jacketed cable.

The machine has been redesigned to be more productive, easier to use, and more flexible than its predecessor. Setup and adjustment are faster and simpler. Quick-change applicators allow fast changeover of terminals while keyed strip blades also aid faster, more accurate setup. Contoured blades are available for a 32 to 26 AWG [0.03-0.15 mm²] wire range. End-of-wire position, wire strip length, and blade closing depth are also easily adjusted from the front of the machine—without special tools.

A precision-adjust feature allows the machine shut height to be adjusted in .0005 [0.0127] increments over a ±.008 [±0.203] range from the nominal shut height. This simplifies small adjustments to keep crimp heights within specification. This feature gives the machine the process capability of holding a crimp height of ±.001 [±0.0254].

In addition, an optional Crimp Quality Monitor can be added to measure the crimp height of each termination, and to alert the operator when the height falls outside control limits or when the crimp quality is questionable.

The breakout has been reduced to .72 [18.29] minimum or .75 [19.05] typical for standard jacketed cable.

Other significant improvements include a chute and removal system for scrap, a target area illuminated by optical fiber for easier viewing, and a wider range of wire-gripping pressures to reduce wire slippage. The modern guards and cover also enhance overall appearance.

The Stripper-Crimper Model II Machine reduces down-time, speeds setup and adjustment, and improves the quality of terminations.

Field Engineering Service is provided under the warranty. This includes machine setup and installation assistance. This service can also be provided after warranty. For information about this service and other tooling matters, call the AMP Tooling/Technical Assistance Center.

SOURCE: Catalog 65004

Specifications subject to change.

1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

Specifications:

Height: 33 [838] (without reel)

Width: 14 [355]

Depth: 18 [457]

Weight: 150 lb [68 kg]

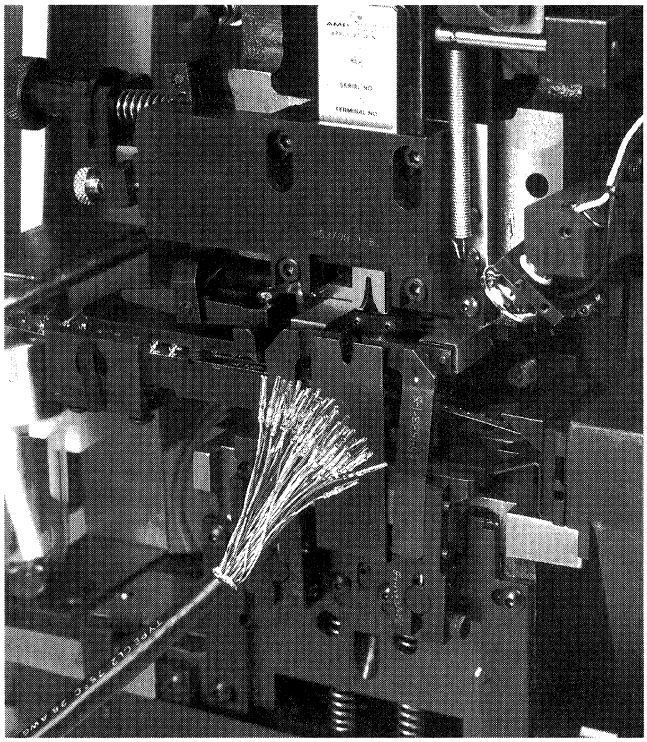
Air Requirements:
80-100 psi [5.52-6.90 bar] minimum constant air pressure, filtered, 3.5 scfm [.00165 m^3/s]

Electrical Requirements:

120 VAC, 50/60 Hz, .5 A

Item	Description	Part Number
1	Stripper-Crimper, Model II	854040-3
2	Stripper-Crimper, Model II with Crimp Quality Monitor (CQM) Attachment Kit	854040-4
3	CQM* (Monitor Only) Domestic: 120 VAC, 60 Hz	856170-1
4	CQM* (Monitor Only) International: 240 VAC, 50 Hz	856170-2
5	CQM Attachment Kit (Includes Mounting Bracket, Cabling and Hardware)	856046-1
6	CQM* (Domestic Monitor) and CQM Attachment Kit	856046-2

*Requires CQM applicators; call the Customer Tooling/Technical Assistance Center for further information.
When needed, you may upgrade Item 1 to CQM capability by ordering Item 6 or Items 5 plus 3 or 4.
Note: For CQM capability now, order Items 2 plus 3 or 4.



Machine shown with guard open for clarity.

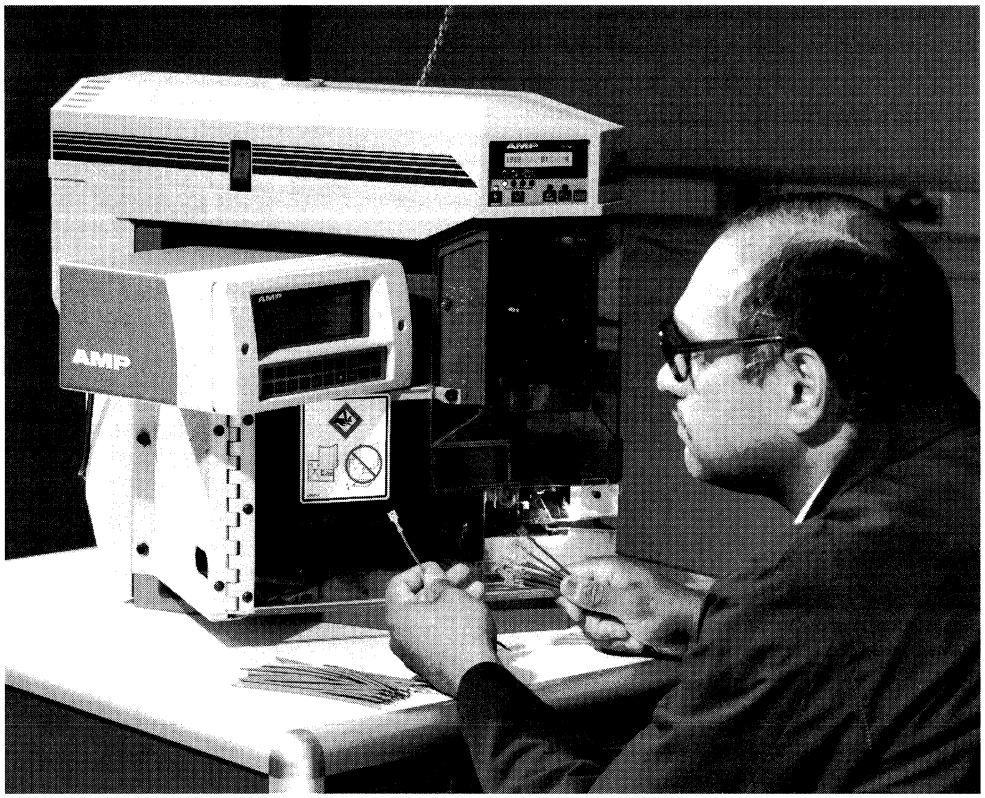
AMP-O-LECTRIC Model "G" Termination Machine

Product Facts

- Quieter
- Improved guarding and lighting
- Toolless changeover of applicators
- Precision manual- or auto-adjust for crimp height
- Total and batch counter
- Accepts all existing AMP miniature applicators
- Reduced maintenance requirements
- Split-cycle operation for both lead-making and bench-top use
- Standardized 1-5/8 [41.3] stroke
- Cannot be operated during normal production with guards open
- Operate on either 120 or 220 VAC, 50 or 60 Hz
- Available with CQM G-Adapter for crimp quality monitoring using regular miniature applicators
- Produced under a Quality Management System Certified to ISO 9001

A copy of the certificate is available upon request

ISO 9001 Certified



The Model "G" is the newest and most advanced design in the long-standing series of AMP-O-LECTRIC machines for terminating wire using reeled terminals and contacts. It's a totally new design—we've even replaced our conventional flywheel drive with a more reliable direct motor drive system. Its modular construction also enables us to provide versions for use either as bench-top units, or in combination with fully-automatic lead-making equipment.

It's been restyled as well, keeping in mind operator convenience and safety. We've improved access to, and lighting in the target area, and moved the Crimp Quality Monitor (CQM) to eye level for bench-top use. More importantly, the Model "G" is quieter, plus the guarding meets European as well as domestic safety requirements.

All Model "G" versions include precision adjustment for crimp height—an important feature, which, in combination with the optional CQM, will enable you to maintain the tight tolerances required for today's demands for higher levels of quality. By simply resetting a dial, an operator can adjust crimp height in .0005 [0.013] increments over a .018 [0.457] range. When used with CQM, automatic adjustment is also available.

Another new feature is its control system. At the push of a button, you can power the motor on or off, jog forward or reverse, switch to split-cycle operation, turn the work light off or on, or reset the batch counter. And, it's all reported on an LCD display. The controls will also detect and report errors in the machine, and stop cycling when a bad crimp is detected by the CQM. The operator must then push the reset button to continue.

The Model "G" will accept all existing AMP miniature applicators with minor modifications. See Applicator Instructions 408-8053, Conversion Guide for AMP Miniature Quick-Change Applicators, for details.

Existing applicators may be used for crimp quality monitoring on models equipped with CQM and CQM G-Adapter. You can't use CQM to monitor the application of closed-barrel pre-insulated terminals.

SOURCE: Catalog 65828

Specifications subject to change.

1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

Models

Part Number	Air Subassembly*	Precision Adjust**	CQM G-Adapter
354500-1	Yes	Manual	No
354500-9	Yes	Manual	Yes
1-354500-1	Yes	Auto	Yes

* Required for use with air-feed applicators.
** Subassembly **Part Number 354531-1** available to convert from manual to automatic precision adjust.

For crimp quality monitoring using models equipped with CQM G-Adapter, order, in addition, either CQM Assembly **Part Number 764632-2** for 120 VAC, 50 or 60 Hz, or **764632-3** for 220 VAC, 50 or 60 Hz, plus CQM Interface Kit **Part Number 679535-3**. Regular AMP miniature applicators may be used with this system. To use CQM applicators, you also require Sensor Cable Assembly **Part Number 354452-1**.

Older models (Model "G") may be equipped with CQM G-Adapter. Field conversions require AMP Field Engineering Service assistance. Call the AMP Tooling/Technical Assistance Center for further information at 1-800-722-1111.

Specifications

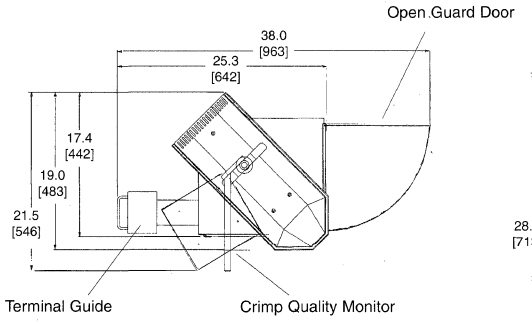
Capacity: 5,000 lb [2,268 kg] Maximum Crimp Force

Deflection: .003 [0.076] Maximum per 1,000 lb [454 kg] Crimp Force

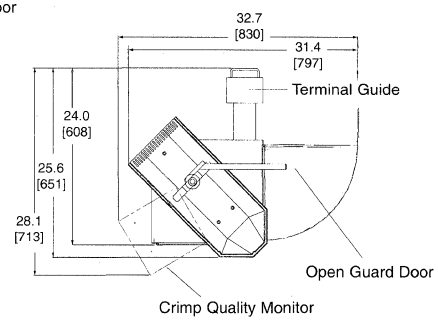
Noise: 76 dB Maximum at 5,000 lb [2,268 kg] Full Capacity

Weight: Approximately 240 lb [110 kg]

Height: 20 [508]



With Side-Feed Applicator



With End-Feed Applicator

Electrical: 120/220 VAC, 50/60 Hz

- Average 2.6 A at 120 VAC when used as a bench-top unit at 2,000 cycles per hour operating rate
- Average 6.5 A at 120 VAC when used in combination with automatic lead-making equipment at 5,000 cycles per hour operating rate

Air: 90-110 psi [6.21-7.59 bar], 6 scfm [0.00283 m^3/s] (when required for use with air-feed applicators)

CQM:

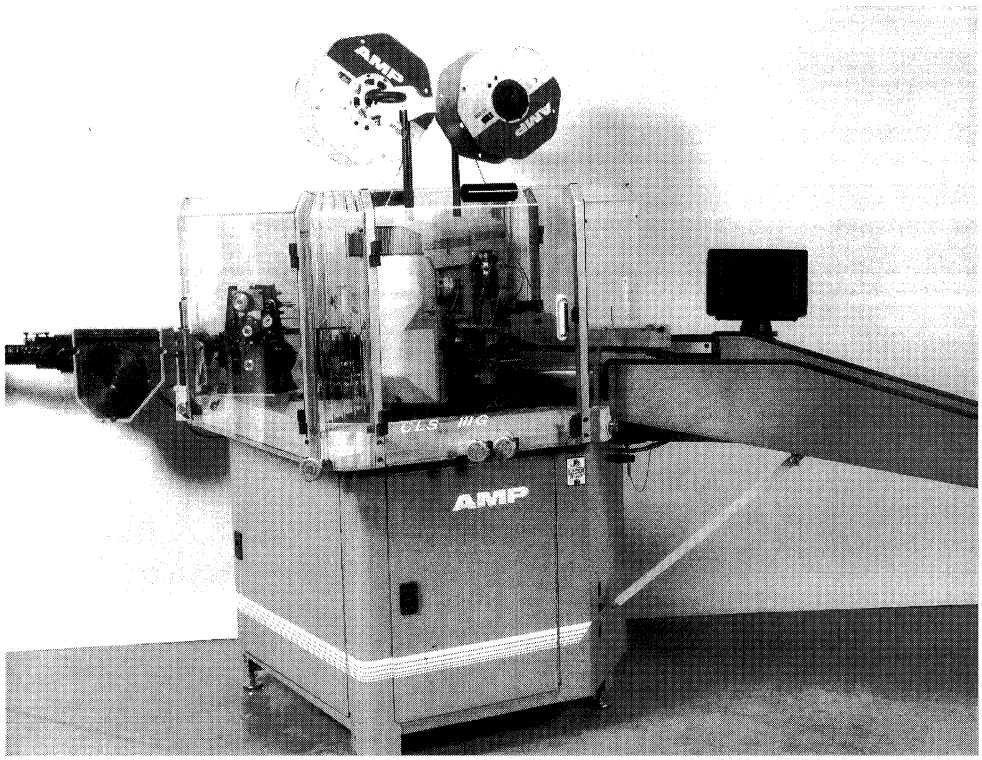
- .0002 [0.0051] average error, .0002 [0.0051] standard deviation for crimp height measurements using CQM applicators
- .0005 [0.0127] average error, .0005 [0.0127] standard deviation for crimp height measurements using regular applicators in a CQM G-Adapter system

Error is the difference between CQM measurements and measurements using a micrometer. These specifications are based on properly following the applicable AMP procedures for wire preparation and termination.

AMPOMATOR CLS IIIG Lead Making Machine

Product Facts

- **Fast production rates: up to 4,000 leads per hour for 3 [76.2] lengths**
- **Microprocessor controlled with improved self diagnostics accessed through a menu-driven touchscreen**
- **Touchscreen displays U.S. customary or metric units, and in English, Spanish, Portuguese or Dutch**
- **Equipped with AMP-O-LECTRIC Model "G" Terminating Units with own internal self diagnostics**
- **Quick setup and changeovers for cost-effective short runs**
- **Terminating units swing out easily on air for fast applicator changeovers**
- **Uses existing AMP miniature applicators**
- **Change wire lengths quickly through the touchscreen**
- **Terminates one or both ends of a lead**
- **Wire run-out detection**
- **Sliding collection tray for easy removal of finished leads**



The popular CLS fully-automatic lead-making machine just got better. It now incorporates the revolutionary new AMP-O-LECTRIC Model "G" Terminating Units, featuring a direct motor drive system. This system is more reliable than conventional flywheel drives, and considerably quieter.

Other improvements to the CLS IIIG machine include more reliable pneumatics and a heavier duty wire ejection cylinder. For operator convenience, we've also made wire threading easier, improved access for the removal of short leads, plus we've gone to clear guarding for greater visibility of the operating area.

Basically, the CLS IIIG produces single-wire leads in lengths from 1.62 [41.15] to 1000 [25 400]. Optional conveyors are required for lead lengths over 90 [2 286]; an optional short lead kit is recommended for leads less than 3 [76.2]. The machine measures, cuts, strips and terminates wire sizes from 26 to 10 AWG [0.12 to 6 mm^2] stranded and 26 to 16 AWG [0.12 to 1.4 mm^2] solid. It can handle the most popular wire insulation materials, and a wide variety of terminal and contact configurations: open or closed barrel, and ladder or end-to-end reeling with plastic tape or metal carrier strip.

However, the CLS IIIG is more than just a basic machine. It is microprocessor controlled, and programmed and operated with an easy-to-follow, menu-driven touchscreen. It can retain data for up to 200 lead assemblies. In addition to the usual information about the type of wire and terminals or contacts being used, each file can contain critical machine settings when required, such as wire feed rates and wire-marker duration to provide fast, accurate, and consistent machine setup. Off-line programming is also possible with optional software.

Another important feature of the Model "G" Terminating Units incorporated with all CLS IIIG machines is precision adjustment for crimp height. By simply resetting a dial, you can adjust crimp height in .0005 [0.013] increments over a .018 [0.457] range. This feature, in combination with the AMP Crimp Quality Monitor (CQM), will enable you to maintain the tolerances required for today's demands for higher levels of quality.

The CQM is integrated into the machine control system. See page 12016 for the basic machine part numbers that include CQM. It can be added later. For future machine conversions, see the table on page 12018.

Additionally, these crimp height adjustments can be made automatically with our automatic adjustment option. In combination with the CQM, a closed-loop system automatically compensates for changing trends in crimp height. By maintaining crimp heights near the nominal, you can minimize the number of questionable crimps identified by the CQM.

SOURCE: Catalog 82659

Specifications subject to change.

1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

Specifications

WIRE RANGE

Stranded
26-10 AWG [0.12-6 mm²]

Solid
26-16 AWG [0.12-1.4 mm²]

INSULATION

Outside Diameter
.040 - .250 [1.02 - 6.35]

Types
Polyvinyl chloride (PVC)
Cross-link polyethylene
Vulkene
(Contact AMP
for other insulation types.)

WIRE TENSILE STRENGTH

10 lb [44.4N] min.

(Wires with a lower tensile strength should be evaluated by AMP Engineering.)

STRIP LENGTHS

Both Ends, Normal
.12 - .5 [3.0 - 12.7]

Optional Short Strip Kit
.10 [2.54]

Max. One End
.75 [19.05]

LEAD LENGTHS

Standard Machine
3 - 90 [76.2 - 2,286]

With Long Lead Conveyor(s)
90 - 1,000 [2,286 - 25,400]
(Leads over 240 [6,096] may not experience optimum stacking.)

With Short Lead Kit
Down to 1.62 [41.15]

AIR REQUIREMENTS

Pressure
90 psi [6.21 bar] min. at 24 scfm [0.0113 m³/s] sustained. Lower air supplies will reduce production rates.

Air Drop Supply Line
.75 [19.05] min. dia.

ELECTRICAL REQUIREMENTS

220 (±10%) VAC, 50/60 Hz, single phase, 20 A with neutral and ground.

Production Rates

Lead Length		Leads/Hour (Max.)	
inch	mm	Barrel Wire	Spooled Wire
3	76.2	4 000	4 000
10	254	3 900	3 830
20	508	3 700	3 550
40	1 016	3 250	3 000
60	1 524	2 900	2 680
120	3 048	2 200	1 740
200	5 080	1 650	1 150
240	6 096	1 500	980

Notes:
1. Air supply must be maintained at 90 psi [6.21 bar] at 24 scfm [0.0113 m³/s] to achieve maximum production rates.
2. Rates apply to wire with average stiffness and characteristics.
3. AMP recommends using barrel wire on the CLS IIIG. Lower rates may be experienced on some wire sizes and types, or when using a dereeler or prefeeder.
4. Rates for leads over 120 [3 048] may also be reduced if long lead conveyors are used.

Recommended Lubricants (Not Shipped With Machine)*

Description	Supplier Part Numbers	Supplier
Air Line Lubricant (Type DTE Light)	4ZF32 (qt.) 4ZF33 (gal.)	W.W. Grainger, Harrisburg, PA, 717-238-8314
Spray Solvent/Cleaner	#590	Orb Industries, Upland, PA, 215-874-2537
Grease	81EP-2	Keystone Division Pennwalt Corp., Philadelphia, PA, 1-800-344-2241 (for distributors)

* The machine is shipped without lubricant installed. We recommend you have lubricants on hand when the machine arrives.

Basic Machine Part Numbers (Customer Manual: 409-5806)

Tooling kits and strip blades are **not** supplied with the base machine; they must be purchased separately. Two strip blade holders and two shear blades **are** included with the base machine.

Description	Part No.
AMPOMATOR CLS IIIG Machine with Manual Precision-Adjust Terminating Units	122500-1
AMPOMATOR CLS IIIG Machine with CQM and Manual Precision-Adjust Terminating Units	122500-2
AMPOMATOR CLS IIIG Machine with CQM and Auto Precision-Adjust Terminating Units	122500-3

Tooling Kits

A minimum of one tooling kit is required per machine. Contains front and rear wire guides.

Wire Outside Diameter		Part No.
inch	mm	
.040 - .050	1.02 - 1.27	854591-1
.045 - .070	1.14 - 1.91	854591-2
.070 - .115	1.78 - 2.92	854591-3

Wire Outside Diameter		Part No.
inch	mm	
.090 - .125	2.28 - 3.18	854591-7
.110 - .156	2.79 - 3.96	854591-4
.150 - .200	3.81 - 5.08	854591-5
.190 - .250	4.83 - 6.35	854591-6

Strip Blade Kits (Perishable Tooling)

A minimum of one set of stripping blades is required per machine. Each kit contains two each of long and short strip

Wire Size		Part No.
AWG	mm²	
10	5-6	856695-1
12	3	856695-2
14	2	856695-3
16	1.2-1.4	856695-4

Wire Size		Part No.
AWG	mm²	
18	0.8-1	856695-5
20	0.5-0.6	856695-6
24-22	0.2-0.4	856695-7
26	0.12-0.15	856695-8

SOURCE: Catalog 82659

Optional Accessories

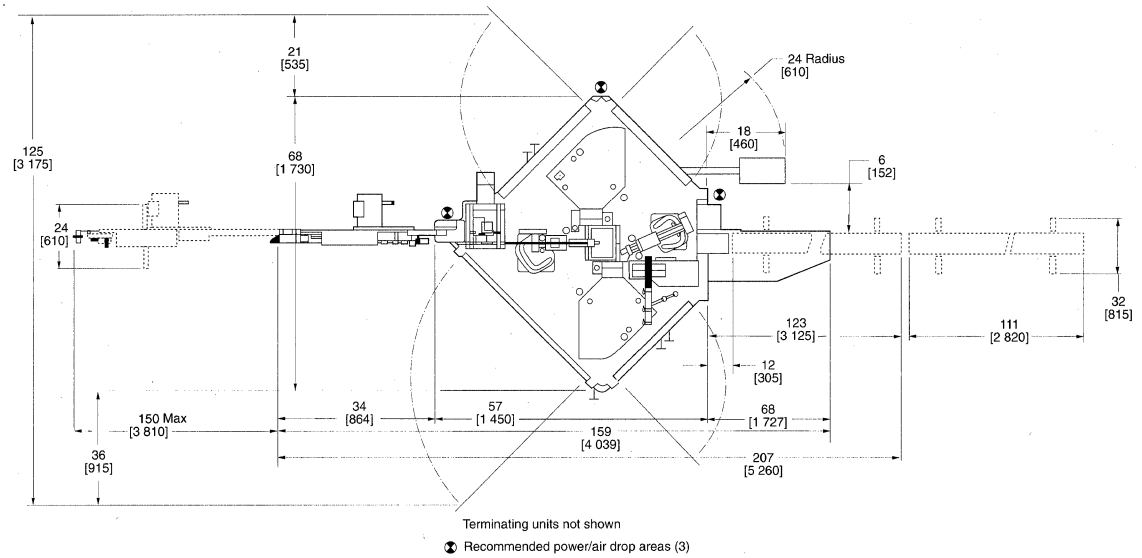
Description	Comments	Part No.
Spare Parts Kit [Strip Blade Holder Kit]	2 cut and strip blade holders, 4 eject blades, 1 bag of spacers, and 2 padded screws (1 set included with base machine).	814039-2
Shear Blade, .062 [1.58] Thk	Perishable tooling.	844764-1
Shear Blade, .125 [3.18] Thk	Perishable tooling.	844764-2
Short Strip Kit, 20 AWG [0.5-0.6 mm²]	.100 [2.54] min. strip length.	856696-1
Short Strip Kit, 24-22 AWG [0.2-0.4 mm²]	.100 [2.54] min. strip length.	856696-2
Short Strip Kit, 26 AWG [0.12-0.15 mm²]	.100 [2.54] min. strip length.	856696-3
Short Strip Kit, 16 AWG [1.2-1.4 mm²]	.085 [2.16] min. strip length.	856696-4
Short Strip Kit, 18 AWG [0.8-1 mm²]	.085 [2.16] min. strip length.	856696-5
Short Strip Kit, 20 AWG [0.5-0.6 mm²]	.085 [2.16] min. strip length.	856696-6
Short Strip Kit, 24-22 AWG [0.2-0.4 mm²]	.085 [2.16] min. strip length.	856696-7
Spacers	1 bag of spacers for cut and strip blade holders.	20676-1
Partial Strip Kit	Available for one end only (feed side), up to .750 [19.05].	856084-1
Partial Strip Kit	Available for one end only (feed side), .750 [19.05] to 1.50 [38.1].	856084-2
Wire Marker (Hot Stamp) Kit	Used with Artos WH-6 Wire Marker Head, which is not included with this kit and must be purchased from Artos Engineering. End marking only.	854678-2
Primary Long-Lead Conveyor	Attaches to base machine to handle leads up to 150 [3 810] long. (The standard tray should be used with lead lengths less than 90 [2 286].	854217-3
Additional Long-Lead Conveyor	Attaches to conveyor **Part No. 854271-3** or **-4** for leads over 150 [3 810] long. Each additional conveyor adds approximately 111 [2 820] additional length capability.	854217-4
Short Lead Kit	For lead lengths from 1.62 to 3.00 [41.15 to 76.2], .300 [7.62] wide terminal max.	856085-1
Spare Parts Kit	Common items to have available for repair.	854768-5
Powder Can Kit	Required for some limp or tacky wire.	768498-1
Wire Splice Detect Kit	Shuts down machine when a wire splice is detected.	122586-1
MIL Spec Overseas Packaging	For CLS IIIG base machine. Recommended for overseas shipments.	114097-1
MIL Spec Overseas Packaging	For long-lead conveyor. Recommended for overseas shipments.	114097-2
Urethane-Coated Gripper, Right	For hard-durometer insulation such as Teflon.	856082-1
Urethane-Coated Gripper, Left	For hard-durometer insulation such as Teflon.	856083-1
Urethane-Coated Feed Wheel	For hard-durometer insulation such as Teflon (2 required).	856096-1
Heavy-Duty Gripper, Right	For heavy-coated wire.	856094-1
Heavy-Duty Gripper, Left	For heavy-coated wire.	856095-1
Dereeler, Vertically Mounted	General-purpose for most applications.	461745-1
Dereeler, Small Gauge	Preferred for wires under 20 AWG [0.5 mm²]. Vertically mounted.	461745-2
Dereeler, Horizontally Mounted	Similar to dereeler **Part No. 461745-1**, except wire reels are horizontally mounted.	461745-3
Eubanks Prefeeder	Preferred for wires under 20 AWG [0.5 mm²]	354792-1
Transformer	Primary 190, 200, 208, 220, 380, 400, 416, 440, VAC 50/60 Hz, 5 kVA.	985136-1

SOURCE: Catalog 82659

Specifications subject to change.
1-800-522-6752 Product Information Center/ AMP FAX Service
1-800-722-1111 Tooling/Technical Assistance Center

Dimensions and Part Number Conversion Information

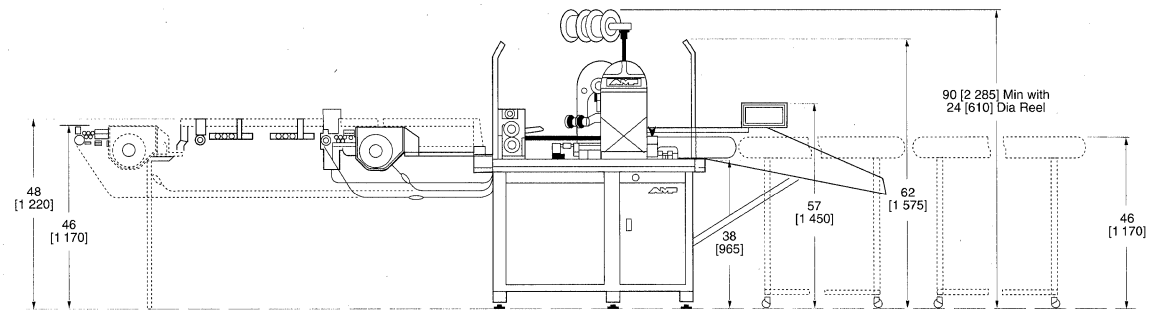
Top View



Terminating units not shown

Recommended power/air drop areas (3)

Side View



Notes: 1. Allow sufficient space at rear of machine for initial wire handling (barrels, dereeler, prefeeder, etc.)
2. Allow 3 ft. [1 m] of clearance around the entire machine for operator access.
3. Weight— 2000 lb [907 kg]

Conversion Table

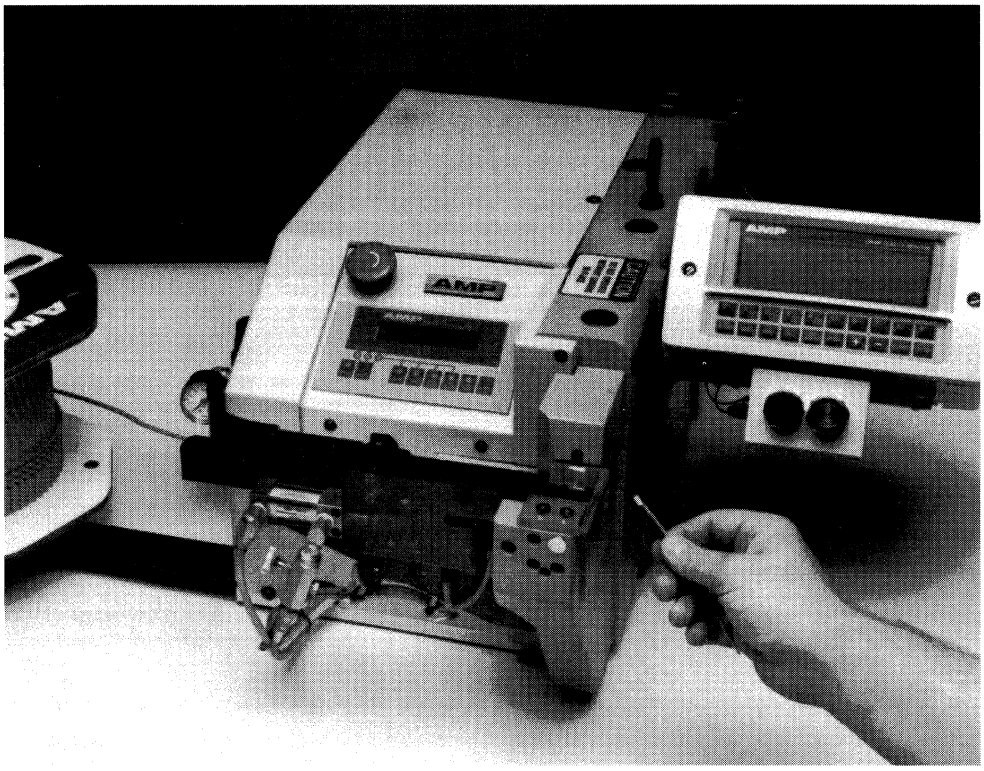
This table lists the additional equipment required to change the CLS IIIG from one base configuration to another.

Existing Machine Part No.	Additional Equipment Required			To Make Machine Part No.
	Crimp Quality Monitor 854587-1	Auto Adjust Kit 354531-1	Upgrade Kit 122945-1	
122500-1	2	–	1	122500-2
122500-1	2	2	1	122500-3
122500-2	–	2	–	122500-3

SOURCE: Catalog 82659

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

AMPLIVAR Product Terminators (APT)



Product Facts

- **No need to strip magnet wire**
- **Connects up to 3 wires in 1 splice**
- **Crimp Quality Monitor (CQM) system measures crimp heights**
- **Machine shut height easily adjusts in .0005 [0.013] increments**
- **Quick-change tooling without major shut-height adjustments**

The AMPLIVAR Product Terminator (APT) is a semi-automatic bench machine used to apply strip-form AMPLIVAR pigtail-type splices and direct connect contacts.

To apply a splice or contact, you simply place the wires in the target area, and depress the foot switch. The machine automatically shears the splice or contact from the strip, crimps it, shears off excess wire, and advances the next splice or contact into position.

To maintain tight tolerances on crimp heights, the APT models are equipped with manual or automatic precision adjustments. Used in combination with the AMP Crimp Quality Monitor (CQM), this will assist you in achieving crimp heights to a 6 sigma processing capability. In addition to providing 100% inspection of crimp heights, the CQM also evaluates the quality of each crimp. When a questionable crimp is detected, the CQM alerts the operator with both visual and audible alarms.

To adjust for variations in wire sizes, our top-of-the-line model, the APT IIIA, features programmable sequencing of different crimp height settings. You can store up to 2,000 different programs of 7 different settings each. The maximum sequence cycle time is 2 seconds.

A wire stuffer assembly is available for crimping wires that are smaller than the CMA range of the splice or contact to be applied. This assembly inserts wire into the splice or contact prior to crimping, increasing the CMA to the recommended range.

Note: Depending on wire combinations, the CQM may not detect missing wires or strands. Also, magnet wires may require stripping when using a wire stuffer. Contact AMP for recommendations.

SOURCE: Catalog 65474

Specifications subject to change.

1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

Machine Ordering Information

A "Base Part Number" is selected from the Basic Machine Part Numbers table. Then, a dash number or numbers are selected from one of the other two tables depending on the type of product to be applied.

Basic Machine Part Numbers

Machine Features				Base Part Number*	
Precision Adjust	Crimp Quality Monitor	Programmable Crimp-Height Sequencing	Model	Pigtail-Type Splice	Direct Connect Contact
Manual	Not Included	Not Included	APT II	❑-679450-❑	❑-679454-❑
Manual	Included	Not Included	APT II/CQM	❑-679451-❑	❑-679455-❑
Automatic	Included	Not Included	APT IIA	❑-679452-❑	❑-679456-❑
Automatic	Included	Included	APT IIIA	❑-679453-❑	❑-679457-❑

*See tables below for suffix and prefix dash numbers which indicate product to be applied, voltage requirement and wire stuffer option.
Note: Kits are available to upgrade the basic machines listed above.

Specifications

Weight: Approximately 150 lb [68 kg] with CQM
Width: 38 [965] with CQM and product reel
Depth: 35 [889]
Height: 14 [356]
Electrical: 120 VAC, 60 Hz, 1 A 1ø, or 240 VAC, 50 Hz, .5 A, 1ø
Air: 80-100 psi [5.52- 7.59 bar], 22 scfm [0.0104 m³/s]

Pigtail-Type Splice (AMPLIVAR) Suffix and Prefix Dash Numbers

Pigtail-Type Splice Base Number**	Crimp Width	120 VAC Machine	120 VAC Machine with Wire Stuffer	240 VAC Machine	240 VAC Machine with Wire Stuffer
62295	.250 [6.35]	( )-1	1-( )-4	2-( )-7	4-( )-0
62310	.220 [5.59]	( )-2	1-( )-5	2-( )-8	4-( )-1
62002	.180 [4.57]	( )-3	1-( )-6	2-( )-9	4-( )-2
62310	.180 [4.57]	( )-4	1-( )-7	3-( )-0	4-( )-3
62309	.180 [4.57]	( )-5	1-( )-8	3-( )-1	4-( )-4
62001	.180 [4.57]	( )-6	1-( )-9	3-( )-2	4-( )-5
62001	.140 [3.56]	( )-7	2-( )-0	3-( )-3	4-( )-6
42779, 62201	.140 [3.56]	( )-8	2-( )-1	3-( )-4	4-( )-7
62308	.140 [3.56]	( )-9	2-( )-2	3-( )-5	4-( )-8
62306	.140 [3.56]	1-( )-0	2-( )-3	3-( )-6	4-( )-9
42775, 42776, 62040, 62306, 62307	.110 [2.79]	1-( )-1	2-( )-4	3-( )-7	5-( )-0
42777, 42778, 62000, 62157, 62200, 62304, 62305	.110 [2.79]	1-( )-2	2-( )-5	3-( )-8	5-( )-1
62303	.080 [2.03]	1-( )-3	2-( )-6	3-( )-9	5-( )-2

Direct Connect Contact (AMPLIVAR) Suffix and Prefix Dash Numbers

Direct Connect Contact Base Number**	120 VAC Machine	240 VAC Machine
63455	( )-1	( )-6
63454	( )-2	( )-7
63453	( )-3	( )-8
63549	( )-4	( )-9
63548	( )-5	1-( )-0

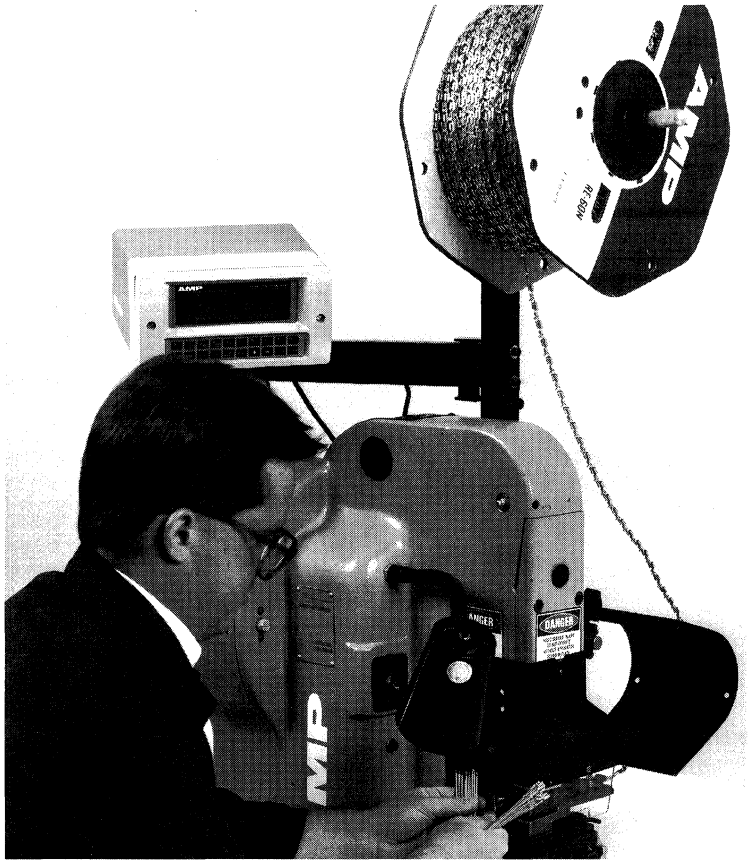
**See Catalog 82221 for product specifications.

SOURCE: Catalog 65474

Applicators for Wire Termination

Product Facts

- **Designed to exacting specifications to produce consistent, high-quality terminations**
- **Manufactured using high quality materials to provide long service life**
- **Quickly interchangeable to minimize costly down times**
- **Handle a wide variety of products**
- **Versions now available for use with the AMP Crimp Quality Monitor**



AMP produces many different styles and sizes of terminals, contacts and special wiring devices. The majority of these products are available in strip form and/or tape mounted for use with AMP automatic and semi-automatic terminating machines, in combination with interchangeable applicators.

AMP currently offers six basic styles of applicators. The choice depends on the product being applied, and/or your production requirements.

The first and original AMP applicators are called Standard Applicators (coded STD in the AMP description file). Most have been replaced by our newer style Heavy-Duty Miniature Applicators. Today, Standard Applicators are used primarily with semi-automatic bench machines for applying splices and FASTON Flag Terminals with Tab-Lok crimps.

The most popular applicators are Heavy-Duty Miniatures (coded HDM). They handle a wide variety of products, and can be adapted for use with either semi-automatic bench or fully-automatic equipment. Also, HDMs are capable of applying similar products over a range of wire sizes by simply dialing-in wire and insulation crimp-height settings. They are quickly interchangeable, and easily repaired, thereby reducing maintenance costs. Earlier versions of HDMs are called Miniature Applicators (coded M).

There are two types of HDMs: end-feed and side-feed. This relates to whether the product being applied is connected end-to-end or side-by-side in strip form. When applying end-feed product with an AMP-O-LECTRIC Model K Terminating Unit, the target area for the operator is at the side of the machine. For side-feed product, the target area is at the front of the machine.

As the names imply, Stripper-Crimper Applicators (coded SCA) and AUTO-PRO Applicators (not coded) are used with their respective machines. SCAs handle side-feed products with open termination barrels. Similar to HDMs, SCAs feature dial-in settings, and are quickly interchangeable and easily repaired. AUTO-PRO Applicators handle products with closed termination barrels mounted on tape or plastic carriers. Also, dies are required for use with AUTO-PRO Applicators.

Special applicators (not coded) are designed for products requiring special handling and/or assembly operations. For example, applicators for Ultra-Pod FASTON Terminals feature a special air-powered feed mechanism plus a mechanism to assemble the crimped terminals into their insulation housings.

The final category is applicators (coded CQM) for use with the AMP Crimp Quality Monitor. Basically they are the HDM or SCA styles designed specifically for use with the Monitor. Regular HDMs may be used for crimp quality monitoring on AMP-O-LECTRIC Model G Terminating Units equipped with CQM G-Adapter.

SOURCE: Catalog 65404

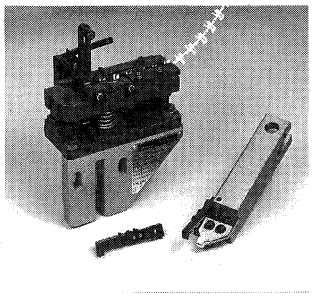
Specifications subject to change.

1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

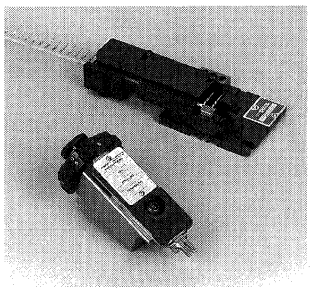
Applicator Styles

Standard (STD) Applicators



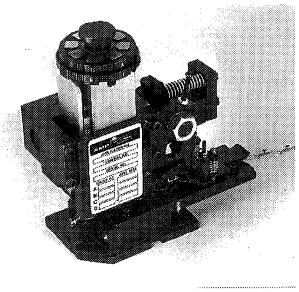
- Dedicated bench operation
- Good accessibility
- Used for special applications such as splices and FASTON Flag Terminals with Tab-Lok crimps

Stripper-Crimper (SCA) Applicators



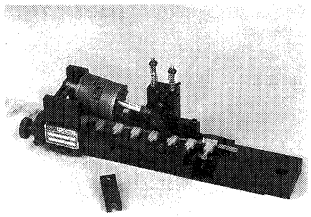
- For use with AMP-O-MATIC Side-Feed Stripper-Crimper Machines
- Terminate a wide variety of open-barrel products
- Quickly interchangeable to run different products
- Easily repaired
- Simple dial-in settings to handle similar products and various wire sizes
- CQM applicators are available

End- and Side-Feed Heavy-Duty Miniature (HDM) Applicators



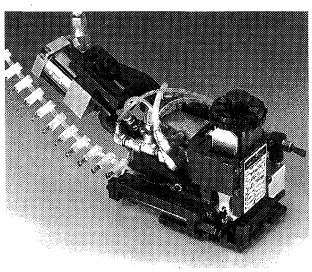
- Handle a wide variety of products
- Used with both semi- and fully-automatic machines
- Quickly interchangeable to run different products
- Easily repaired
- Simple dial-in settings to handle similar products and various wire sizes

AUTO-PRO Applicators



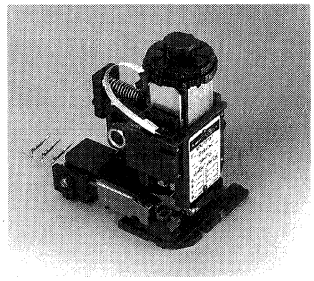
- For use with AUTO-PRO Terminating Machines
- Accept die sets for a variety of closed-barrel products
- Air-operated feed system
- Easily repaired
- Cost effective

Special Applicators



- Designed to perform special and/or additional operations
- Options include special feeding operations, simultaneous crimping of side-by-side terminals, bending, and assembly

Crimp Quality Monitor (CQM) Applicators



- Same basic features as regular HDM and SCA applicators
- Recommended for use with machines featuring manual or automatic precision-adjust
- Use two built-in sensors to provide the Crimp Quality Monitor with data to measure crimp height, and evaluate the quality of each crimp

SOURCE: Catalog 65404

Applicator Selection Guide

Applicator Type

A - Standard (STD) Applicators

B - End- and Side-Feed Heavy-Duty Miniature (HDM) Applicators

C - Special Applicators

D - Stripper-Crimper (SCA) Applicators

E - AUTO-PRO Applicators

F - Crimp Quality Monitor (CQM) Applicators

Product	Applicator Type					
	A	B	C	D	E	F
AMP Locking Clip, Low Force		X		X		X
AMP Locking Clip		X		X		X
AMP-BLADE Contacts		X		X		X
AMP-IN Terminals		X		X		X
AMP-LEAF Contacts		X		X		X
AMP-LOK Terminals		X		X		X
AMP-TAB Contacts		X		X		X
AMP-UNYT Contacts		X		X		X
AMPEEZ Contacts		X		X		X
AMPLIMATE Contacts		X		X		X
AMPLIMITE Contacts, HD-20 and HD-22		X		X		X
AMPLIVAR Terminals and Splices	X					
AMPMODU Contacts		X		X		X
Automotive Terminals		X		X		X
Automotive Timer Terminals		X		X		X
Bifurcated Leaf Contacts		X		X		X
Box Connector Contacts		X		X		X
COMBO LINE Connector Contacts		X		X		X
Commercial Pin and Socket Contacts		X		X		X
Contact and Weld Tabs		X				X
DIAMOND GRIP Terminals and Splices		X			X	
DIAMOND GRIP STRATO-THERM Terminals					X	
DUALATCH Contacts		X		X		X
DUO-TYNE Flag Contacts		X		X		X
FASTIN-FASTON Receptacles		X				X
FASTON Flag Receptacles	X	X				X
FASTON Receptacles and Tabs		X				X
FFC Contacts		X		X		X
High Current Edge Connector Contacts		X				X
Identification Bands	X					
Insulation Piercing Rings and Spades		X				
Junior Timer Connector Contacts		X		X		X
MATE-N-LOK Connector Contacts, .140 Connector Contacts		X		X		X
MATE-N-LOK Connector Contacts, Automotive Connector Contacts	X		X		X	
MATE-N-LOK Connector Contacts, Commercial Connector Contacts		X		X		X
MATE-N-LOK Connector Contacts, Mini Universal Connector Contacts		X		X		X
MATE-N-LOK Connector Contacts, Universal Connector Contacts		X		X		X
MATE-N-LOK Connector Contacts, Universal II Connector Contacts		X		X		X

Product	Applicator Type					
	A	B	C	D	E	F
Modified Fork Contacts		X		X		X
Modular Plugs			X			
MR Connector Contacts		X		X		X
MTA-100 Contacts			X			
MTA-156 Contacts			X			
MULTI-LOCK .070 Connector Contacts		X		X		X
Multiple-Interlock Connector Contacts		X		X		X
Open Barrel Rings and Spades		X				X
PC Board Tab Receptacles		X		X		X
PIDG and PLASTI-GRIP FASTON Receptacles		X			X	
PIDG Knife Disconnects		X			X	
PIDG Terminals and Splices		X			X	
Pins, Plugs and Receptacles		X				X
PLASTI-GRIP Terminals and Splices		X			X	
Positive Lock Economy Receptacles		X				X
Positive Lock Receptacles		X				X
Serpent Connector Contacts	X	X				X
SOLISTRAND Terminals and Splices		X			X	
Splices	X					
Standard Power Timer Connector Contacts		X				X
Tandem Spring Connector Contacts		X		X		X
Taper Pins and Receptacles		X		X		X
TERMI-FOIL Barrel Terminals	X					
TETRA-CRIMP, PIDG FASTON Receptacles		X			X	
TETRA-CRIMP PIDG Rings and Spades		X			X	
TETRA-CRIMP, PLASTI-GRIP FASTON Receptacles		X			X	
TETRA-CRIMP PLASTI-GRIP Rings and Spades		X			X	
Timer Connector Terminals		X				X
Twin Leaf Connector Contacts		X		X		X
Type III+ Contacts		X		X		X
Type IV Contacts		X		X		X
Type X Contacts		X		X		X
Type XII Contacts		X				X
Ultra-Fast Flag Receptacles		X			X	
Ultra-Fast Plus Receptacles		X			X	
Ultra-Fast Receptacles		X			X	
Ultra-Fast Tabs		X			X	
Ultra-Pod Flag Receptacles			X			X
Ultra-Pod Receptacles			X			X
Uninsulated SHUR-PLUG Plugs and Receptacles		X				X

Note: This listing is for reference purposes only, and does not include all product lines. To obtain part numbers for specific applicators, call the Tooling/Technical Assistance Center or query the AMP Customer Dial-up Information System, PRODUCT-TOOLING-DOCUMENTATION XREF.

SOURCE: Catalog 65404

Specifications subject to change.

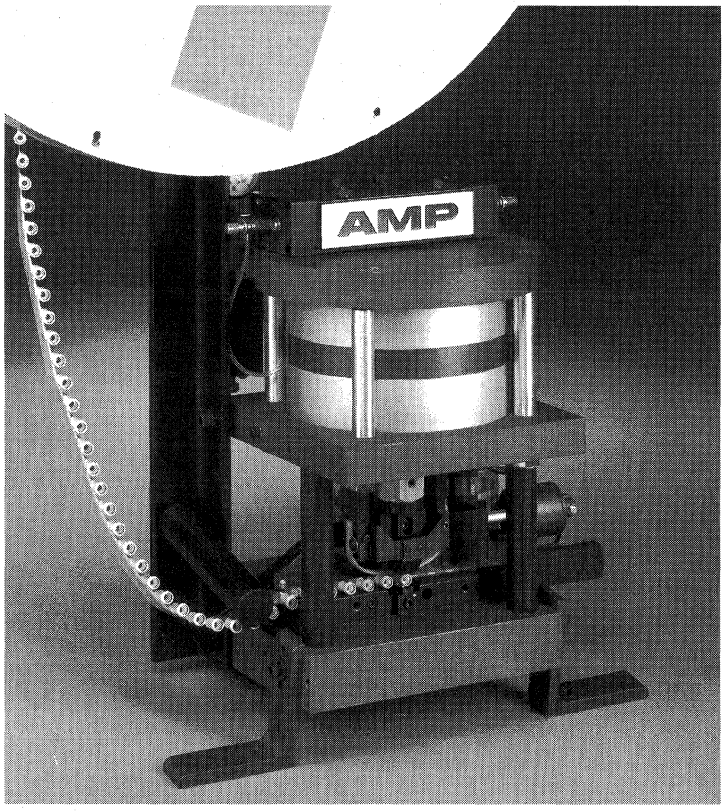
1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

AUTO-PRO Terminating Machine

Product Facts

- **Compact and portable**
- **Quiet**
- **Uses existing dies**
- **Up to 1,000 terminations per hour, depending on operator training and dexterity**
- **Applicators available for PIDG, PLASTI-GRIP, PLASTI-STRIP, and Ultra-Fast FASTON terminals and splices on tape or plastic carrier**
- **Quick, easy applicator/die set changeover**
- **All pneumatic—no electrical power required**
- **26 to 10 AWG [0.12 to 6 mm²] wire range**



AUTO-PRO Terminating Machine

Part Number 818380-1

Specifications

Height: 14.5 [368]

Width: 17.5 [444]

Depth: 11 [279]

Weight: 56 lb [25.4 kg]

Air Requirements: 85 psi [5.86 bar]* at 1 scfm [0.00047 m3/s]

*One bar = 100 kPa

The AMP AUTO-PRO terminating machine is a compact, air-powered, semi-automatic bench unit for applying a variety of AMP terminals and splices to wire. It handles PIDG, PLASTI-GRIP, PLASTI-STRIP, and Ultra-Fast FASTON terminals and splices mounted on tape or plastic carriers.

The machine uses existing die sets. Applicators allow easy changeover to run different products.

Operation is simple. The operator places a stripped wire into the terminal positioned between the crimping dies. A foot pedal is actuated to cycle the machine, crimping the terminal, separating it from its carrier, and advancing the next terminal into position.

The machine is fully guarded for safety and offers high visibility to enhance productivity. Plus, it is quiet, typically offering a noise level of only 72 to 74 dB.

Applicators and Die Sets

Each machine requires installation of the appropriate applicator and die set for the product being terminated.

Product	Wire Range		Part Numbers	
	AWG	[mm²]	Die Set	Applicator
PIDG & PLASTI-GRIP Terminals	26-24	0.12-0.2	69877	818057-2
	22-18	0.3-0.9	59826-1*	
	16-14	1.25-2	59827-1*	
	12-10	3-6	59828-1*	
PLASTI-STRIP Terminals	22-18	0.3-0.9	58268-1	818058-1
	16-14	1.25-2	58268-2	
	12	3	58268-3	
	10	5-6	58268-4	
Ultra-Fast FASTON Terminals (Without Insulation Crimp)	26-22	0.12-0.4	58269-1	818058-2
	22-18	0.3-0.9	58269-2	
	16-14	1.25-2	58269-3	
	12	3	58269-4	
	10	5-6	58269-5	
Ultra-Fast FASTON Terminals (With Insulation Crimp)	22-18	0.3-0.9	58268-1	818058-2
	16-14	1.25-2	58268-2	
Ultra-Fast FASTON Flag Terminals	22-18	0.3-0.9	58308-1	818058-3
	16-14	1.25-2	58308-2	

*TETRA-CRIMP tool termination style; consult AMP for availability of other crimp configurations.

SOURCE: Catalog 82220.

Specifications subject to change.

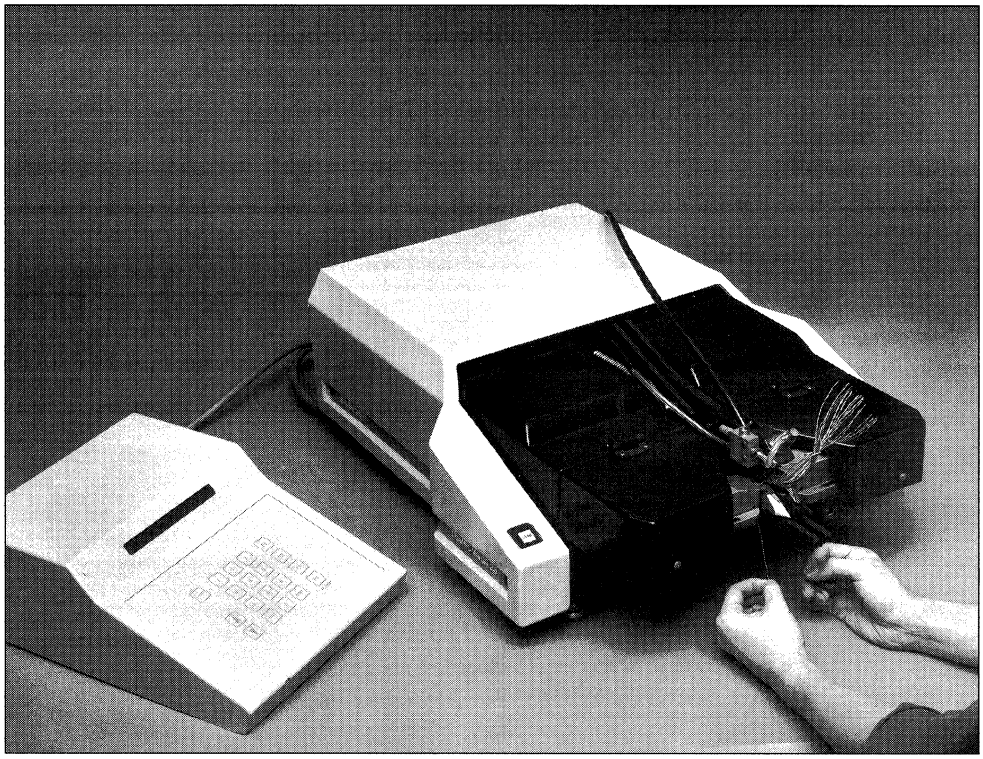
1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

CHAMPOMATOR 2.5 Terminating Machine

Product Facts

- **Terminates most jacketed cable**
- **Straight (180°) or right-angle (90°) wire dress**
- **Microprocessor controlled**
- **Stored program capability**
- **Selective termination of connector positions**
- **Rapid tooling changeover for different connector types**
- **Potential machine rate is one pair of wires per second**



Specifications

Base Machine

Length—24 [610]

Width—24 [610]

Height—12 [305]

Weight—75 lb [34 kg]

Electrical Requirements—120 VAC, 60 Hz, 5 A

Air Requirements—80 psi [5.52 bars] at .75 scfm [.000354 m^3/s]

Control Module

Length—17 [438]

Width—11 [286]

Height—6 [152]

Weight—21 lb [9 kg]

Electrical Requirements—120 VAC, 60 Hz

The CHAMPOMATOR 2.5 Terminating Machine is a compact, semi-automatic bench machine for terminating multi-conductor, jacketed cable with a variety of AMP connectors having insulation displacement contacts. It is microprocessor controlled, and programmed using a membrane-switch keyboard. All pertinent information for operation, including diagnostics and error conditions, are displayed on the control module.

You can store data for up to 350 cable assemblies in the controller's memory. This data is automatically retained when the controller is turned off. When programming an assembly, you can use all or some of the connector contacts, such as for various RS-232 wiring patterns. The machine will automatically index the connector through the programmed termination sequence.

Simple operation is a desirable feature of this machine. First, you clamp the cable end on the machine, and load the appropriate connector. Cable clamps are available for straight (180°) or right-angle (90°) wire dress, depending on connector style. The clamps are air-operated and interchangeable. Next, you locate the pair of wires corresponding to the connector positions displayed on the control module. You then pull the wires downward—one in each hand on each side of the connector—along a pair of wire guides into the inserter assemblies. When the wires reach bottom, they are automatically terminated and trimmed. Depending on the wiring pattern, you can also terminate just one wire at a time.

Net production rates for fully-loaded connectors depend on cable type and connector style and size, as well as operator dexterity and work flow. The potential machine rate is one pair of wires per second.

Field Engineering Service is provided under the warranty. This includes machine setup and installation assistance. This service can also be provided after warranty. For information about this service and other tooling matters, call the AMP Tooling/Technical Assistance Center.

SOURCE: Catalog 82247

Specifications subject to change.

1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

CHAMPOMATOR 3A Terminating Machine

Product Facts

- **Low applied costs**
- **Automatic termination of jacketed cable**
- **Automatic continuity check and shorts test**
- **Single- or double-ended assemblies**
- **Microprocessor controlled with touch input screen**
- **Stored program capability**
- **Selective termination of connector positions**
- **Rapid tooling changeover for different connector types**
- **Handles a variety of AMP insulation-displacement connectors**
- **Terminates both multicolor and single-color wires**
- **Remote programming capability**
- **Straight or right-angle wire dress**

The CHAMPOMATOR 3A terminating machine is the high-productivity way to terminate a variety of AMP connectors using insulation-displacement contacts. The machine automatically sorts wires from multiconductor jacketed cables and terminates them in a user-determined sequence. The sequence may include full termination of all contacts or selective termination of some, such as for various RS-232 wiring patterns.

All cable assemblies are tested for continuity and shorts.

The machine is microprocessor controlled and programmed by a touch input screen. The easy programming simplifies the process and reduces training requirements. The machine's internal storage capability can retain up to 50 cable assemblies, which can be easily retrieved by number or name. Production and diagnostics can also be accessed through the touch-screen. Off-line programming is also possible with a host or personal computer.

The machine can accommodate a variety of connectors through a simple tooling change. Changeover between connector families takes only 30 minutes and requires no special tools. Tooling is curently available for CHAMP, AMPLIMITE HDE, and AMPMODU MT connectors. Consult AMP for other connector families.

Connectors can be terminated with straight or right-angle wire dress.

Accessories include a commercially available cable jacket stripper, a wire detwister, and a decoupler for the cable reel core.

Field Engineering Service is provided under the warranty. This includes machine setup and installation assistance. This service can also be provided after warranty. For information about this service and other tooling matters, call the Tooling/Technical Assistance Center.

CHAMPOMATOR 3A Terminating Machine

Part Number 761420-□

Note: Consult AMP for appropriate suffix number □.

Each machine includes

- Free-standing base machine
- Wire sorting system
- Microprocessor controls with touchscreen
- One set of tooling for one product family

Production Rates

Net production rates for fully-loaded connectors, including load and unload of connectors:

Number of Connector Positions	Connectors/ Hour
25	76
50	55
100	36

Specifications

Length: 58 [1473]

Width: 21 [533]

Height: 53 [1346]

Weight: 300 lb [136 kg] approx.

Electrical Requirements: 120 VAC, 50/60 Hz, single phase, 1 A

Air Requirements: 80 psi [5.52 bar]* at 4 scfm [0.00188 m^3/s]

*One bar = 100 kPa

SOURCE: Catalog 82219

Comp-U-Sertor II Insertion Machine

Product Facts

- **Accepts interchangeable insertion heads to handle a variety of AMP products**
- **High production rates — up to 14,000 insertions per hour**
- **Easily programmed**
- **Remote programming capability**
- **Adjustable board-holding fixture**
- **Accepts multiple boards, with 12- by 18-inch insertion area**
- **Clinch and nonclinch lower tooling**
- **Minimal investment, maximum productivity**
- **Menu-driven touchscreen**

The Comp-U-Sertor II machine is a computer-numerical-control positioning system used with interchangeable AMP insertion heads to insert a variety of products into printed circuit boards.

This affordable machine is ideal for both moderate- and high-volume production.

Production rates range up to 14,000 contacts per hour.

The machine's compact, microprocessor-controlled X-Y positioning table handles boards up to 13 inches by 19 inches, with a 12-inch by 18-inch insertion area. It is programmed and operated with an easy-to-use, menu-driven touchscreen.

Typical AMP products include:

- 0.025 [.635] square posts [both stamped (Part No. Series 87022) and bandolier type (Part No. Series 103577)]
- 0.025 [.635] square receptacles
- Mini-Spring sockets (Part No. Series 645953)
- 250 Series FASTON tabs (Part No. Series 62650)
- Gage Clip receptacles (Part No. Series 63566)
- Switch contacts
- .093 Round Pins (Part No. Series 61137)

Changeover of insertion heads is easily and quickly accomplished.

To operate, you first position a pc board on the table fixture. To start the machine, you press the start box on the touchscreen. The machine will now load the board completely according to the selected program. For each insertion, the lower tooling moves up underneath the board to support it and to verify the presence of the inserted product by checking continuity. After the board is completely loaded, the table moves to a pre-programmed park position. You can now remove the completed board, and replace it with a new board for processing.

AMP can help you integrate the Comp-U-Sertor II machine and other labor-saving equipment into your production area. Training of setup and operating personnel by AMP Field Engineers will assist you in maintaining the equipment for maximum productivity.

Comp-U-Sertor II Insertion Machine

Part No. 122300-1

System includes positioning system, lower tooling, adjustable board holding fixture. It does not include the insertion head. Consult AMP for information on insertion heads.

Specifications

Maximum Board Size	13 x 19 [330.2 x 482.6]
Maximum Insertable Area	12 x 18 [305 x 457]
Maximum Board Thickness	0.125 [.381]
Insertion Rate	5,000 to 14,000 contacts per hour, depending on product type, board loading, board patterns, etc.
Height	63 [1.6 m]
Width	52 [1.3 m]
Depth	80 [2.0 m]
Weight	500 lb. [227 kg]
Electrical Requirements	120 VAC, 50 or 60 Hz, 7 A
Air Requirements minimum	2-15 scfm [0.00094-0.00708 m^3/s] at 80 psi [5.52 bar]

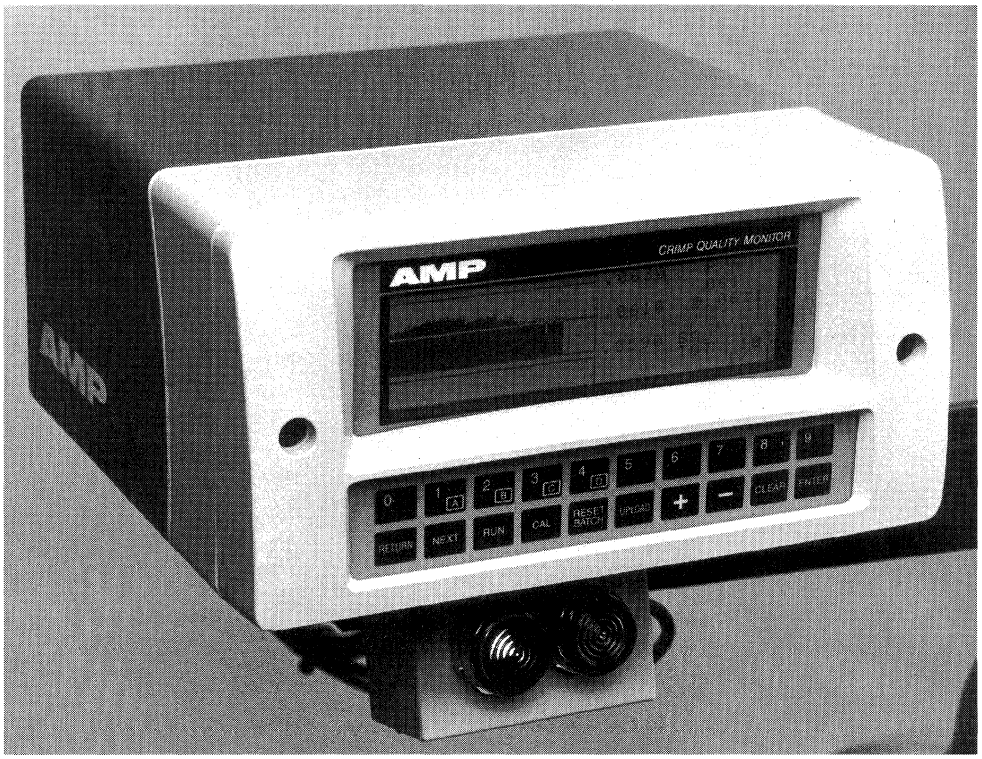
SOURCE: Catalog 82186

Specifications subject to change.

1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

Crimp Quality Monitor (CQM)



Product Facts

- **Low-cost, stand-alone module**
- **100% crimp height inspection**
- **Crimp quality based on monitoring of actual crimp height and of quality aspects of termination**
- **Crimp height measurements to four decimal places in inches or metric equivalent**
- **Out-of-tolerance crimp height indicated both visually and audibly**
- **Monitors up to 5,000 crimps per hour**
- **Easy to use and operator friendly**
- **Menu-driven programming with a variety of options**
- **Built-in serial printer interface**
- **Built-in serial network interface for downloading crimp data and SPC information**
- **Results in savings in reduced scrap and better use of operator's time**

Specifications

Height—4.5 [114]

Width—8.5 [215]

Depth—9 [228]

Power Requirements

Domestic—120 VAC, .5 A, 50/60 Hz

International—240 VAC, .25 A, 50/60 Hz

Printer Port—Serial Interface

The AMP Crimp Quality Monitor performs on-line crimp quality evaluations. A low-cost, stand-alone module that attaches to AMP terminating units, the CQM monitors crimp height and crimp quality of terminations as they are made.

The CQM uses information provided by force and position sensors either mounted on the quick-change applicators or to the terminating unit itself to calculate the crimp height of each termination. Beyond crimp height, the CQM also monitors quality aspects of crimps and may detect the possibility of missing strands, short wire brush, and crimped insulation. When an incorrect crimp height or questionable termination is detected, the CQM alerts the operator through an audible alarm and indicator lights. The lights can be remotely mounted.

The CQM is available in two basic versions. The standard version contains a built-in LCD display that provides an X-bar/R graph of recent crimp trends. It also features front-panel keyboards for programming and operating the CQM. The unit can display, through menu-driven screens, batch averages, running averages, tolerance extremes, and control limits. It can store data for up to 200 part numbers and applicators. This unit can be used with both automatic and semiautomatic terminating and lead making equipment.

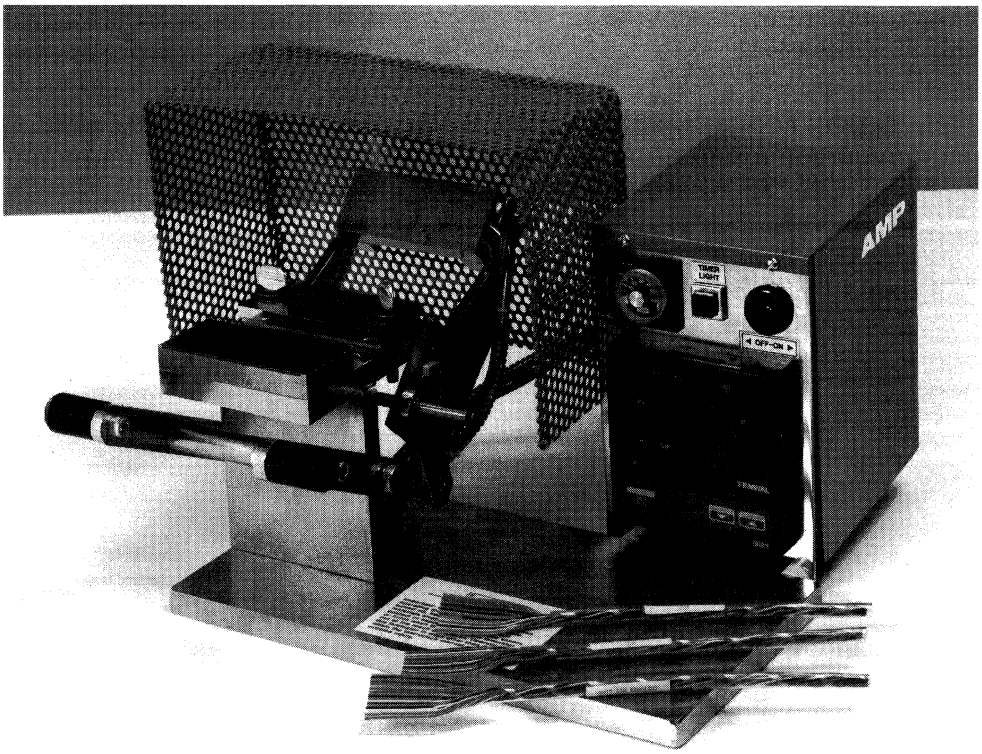
The second version is a "black box" used on lead making machines. The built-in CQM interfaces with the machine's software and is programmed and controlled through the machine's control panel. The CQM is available as a retrofit for machines ordered without one.

The CQM is easy to use, powerful, and flexible in its programming capabilities. Tolerance extremes and control limits are programmable to match your specific statistical process control requirements.

Field Engineering Service is provided under the warranty. This includes machine setup and installation assistance. This service can also be provided after warranty. For information about this service and other tooling matters, call the Tooling/Technical Assistance Center.

SOURCE: Catalog 82275

100 Series Laminator



Product Facts

- **Easily convert cable ends from round to flat for mass terminating**
- **Pressure and heat-seal lamination process**
- **Laminate ends with up to 68-positions on .025 [0.63], .050 [1.27] and .100 [2.54] centers**
- **Up to 1.5 [38.1] lamination length**
- **Over-center safety lock on platen handle**

The 100 Series Laminator provides a convenient and inexpensive method of converting the ends of round multiconductor cable to flat cable for termination with AMP-LATCH, AMPLIMITE HDF and .050 Series, and CHAMP .050 Series ribbon cable connectors. It's a portable unit consisting basically of a cable clamp, wire comb, heated platen and control unit. The simple design keeps tooling and maintenance costs to a minimum.

The laminator is also simple to operate, requiring minimum training time. To laminate an end, you first clamp the cable in position and lace the wires into the comb in the desired color sequence. Next, you place a strip of the proper laminating film over the laced wires and close the heated platen. When the timer light comes on, you open the platen and cable clamp, and remove the assembly. If necessary, you can then trim excess wire from the laminated end.

Wire insulations compatible with this system include PVC, polyethylene, polypropylene, and polyolefin. For proper bonding, your laminating film should be the same material as your wire insulation. Laminating films are available from AMP; call for further information.

Specifications

Weight: Approximately 19 lb [8.6 kg]
Width: 12 [305]
Depth: 8 [203]
Height: 12 [305]
Electrical: 120 VAC, 60 Hz, 5 A

Item	Part Number	Insul. Dia. Range	Total No. of Positions	Pitch
Base Unit	679691-1	—	—	—
Comb Fixtures[1]	679692-1	**.018-.022** [0.46-0.56]	68	**.050** [1.27]
	679692-2	**.026-.029** [0.66-0.74]	68	**.050** [1.27]
	679692-3	**.033-.037** [0.84-0.94]	68	**.050** [1.27]
	679692-4	**.039-.040** [0.99-1.02]	68	**.050** [1.27]
	679692-5	**.033-.037** [0.84-0.94]	50	**.050** [1.27]
	679692-6	**.018-.020** [0.46-0.51]	68	**.025** [0.63]

[1]Other comb configurations may be specially ordered; call for further information.

Laminating Films: PVC, **Part Number 679699-1**
1½ [38.1] Wide Polyethylene, **Part Number 679701-1**
Polypropylene, **Part Number 679702-1**

SOURCE: Catalog 124206

Specifications subject to change.

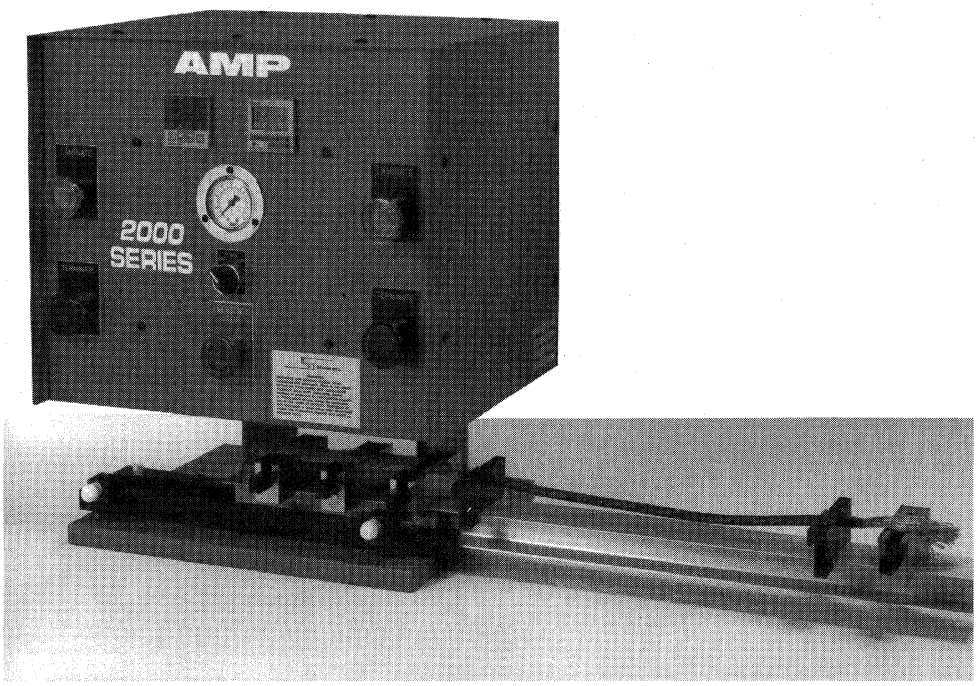
1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

2000 Series Laminator/Terminator

Product Facts

- **Combines mass terminating with round-to-flat cable lamination**
- **Pressure and heat-seal lamination process**
- **Laminate and terminate cables with up to 68 positions on .025 [0.63], .050 [1.27] and .100 [2.54] centers**
- **Produce daisy-chain assemblies as close as 1 [25.4] from connector center to center**



The 2000 Series Laminator/Terminator combines mass terminating using ribbon cable connectors with the round-to-flat lamination process in a single semiautomatic bench machine. You can produce daisy-chain assemblies as well as jumpers. And, for maximum productivity, you can prepare your cables for assembly off line.

Like the 100 Series unit, the laminator/terminator is simple to operate, requiring minimum training time. To produce an assembly, you first prepare your cable on an off-line fixture. The fixture consists of an aluminum I-beam plus adjustable wire lacing combs and cable clamps. The combs are also used as terminating modules, and will accept different size connectors up to the total positions listed. The combination of combs and clamps required depends on the configurations of your cable assemblies.

After loading connectors and lacing wires, you slide the fixture into the machine. The comb modules are easily positioned at the lamination station, and then at the terminating station using spring-loaded plungers.

Compatible wire insulations and requirements for laminating films are the same as the 100 Series unit.

Specifications

Weight: Approximately 105 lb [47.6 kg]
Width: 24 [610]
Depth: 16 [406]
Height: 16 [406]
Electrical: 120 VAC, 60 Hz, 5 A
Air: 40-120 psi [2.76-8.27 bar]

Item	Part Number	Insul. Dia. Range	Total No. of Positions	Pitch
Base Unit[1]	679712-1	—	—	—
Comb Modules[2]	679713-1	**.018-.022** [0.46-0.56]	68	**.050** [1.27]
	679713-2	**.026-.029** [0.66-0.74]	68	**.050** [1.27]
	679713-3	**.033-.037** [0.84-0.94]	68	**.050** [1.27]
	679713-4	**.039-.040** [0.99-1.02]	68	**.050** [1.27]
	679713-5	**.033-.037** [0.84-0.94]	50	**.050** [1.27]
	679713-6	**.018-.020** [0.46-0.51]	68	**.025** [0.63]
Cable Clamp	679734-1	—	—	—
Off-Line Fixture	679715-1	—	—	—

[1]Includes one off-line fixture.
[2]Includes custom-made connector carriers; specify connector type when ordering. Other comb configurations may be specially ordered; call for further information.

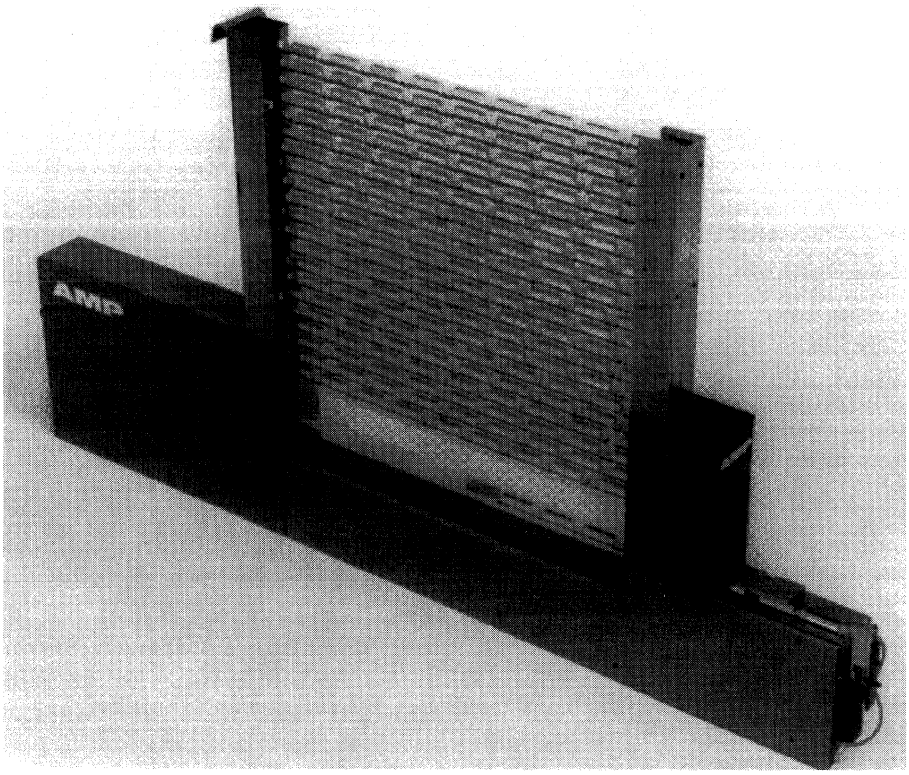
Laminating Films: PVC, **Part Number 679706-1**
13/16 [20.6] Wide Polyethylene, **Part Number 679707-1**

SOURCE: Catalog 124206

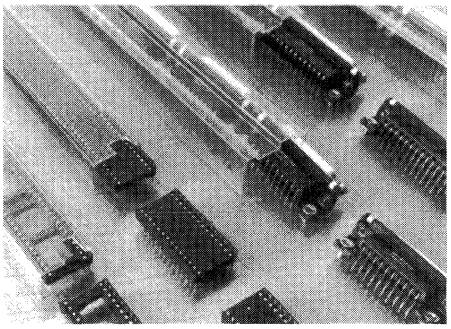
High Volume Tube Feeder for Robotic Applications

Product Facts

- Positive feed mechanism advances parts
- Components are accurately positioned for pickup
- Tubes loaded and ejected from rear
- Tubes automatically indexed into position
- Slender design reduces feeder footprint (3.0 [76.2] min. centerline spacing for mounting)
- Totally electric feeder
- Ability to feed multiple sizes/positions of the same product in the same feeder
- Feeder tooling can be designed to clamp the connector housing or pins (must be specified)
- Optional adapter plate for quick change out
- Optional robot simulator for bench top setup and maintenance



Typical Product Packages



The AMP High Volume Tube Feeder is designed to deliver a variety of AMP connectors for presentation and pickup by robotic and pick-and-place units in a work cell environment. The feeder automatically advances connectors for pickup accurately and repeatedly.

The High Volume Feeder automatically presents connectors from an individual tube until the tube is empty. It then discharges the empty tube and places a full tube of connectors in the feed position, placing the next part for pickup. As parts are presented for pickup, they are positioned and clamped in both axes for highly accurate placement.

The High Volume Feeder features a base capable of being mounted to an optional adapter plate. When used, this does not change the connector seating plane. This feature provides the ability to remove and replace a variety of feeders without reteaching pickup points. This also allows for easy off-line set-up and maintenance.

An integral microprocessor feeder controller optimizes cycle time and saves machine I/O for other tasks. The feeder interfaces with the robot or pick-and-place machine using either a parallel or a serial port, both of which are provided as standard features.

Each feeder is fully tested and conditioned in an operating environment and passes stringent quality inspection and operating tests before shipment.

High Volume Tube Feeder Part No. 764800- □

(Consult AMP for specific suffix numbers)

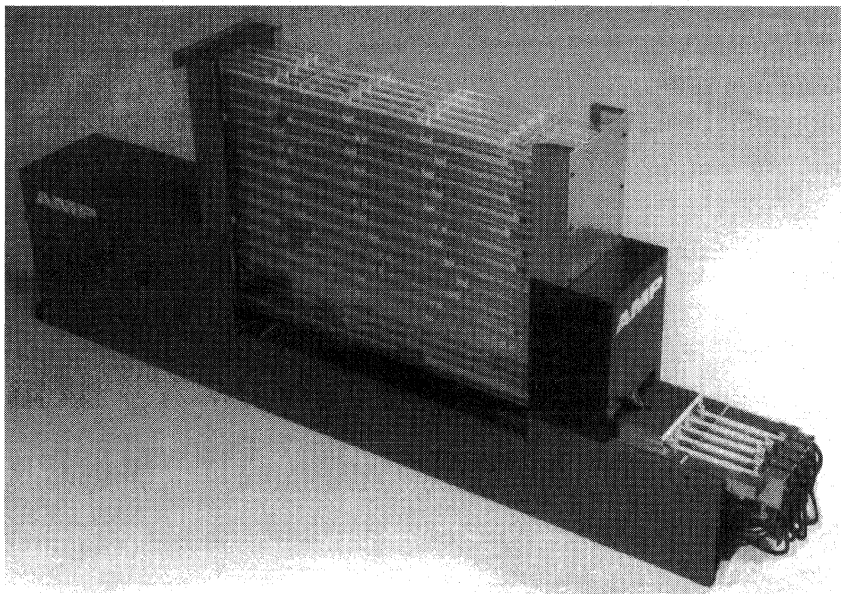
SOURCE: Catalog 82068

Specifications subject to change.

1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

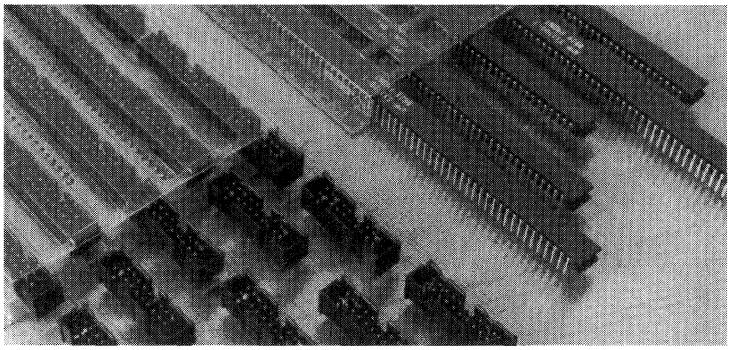
High Volume Gang of Tubes (GOT) Feeder for Robotic Applications



Product Facts

- **Positive feed mechanism advances parts**
- **Components are accurately positioned for pickup**
- **GOT tubes loaded and ejected from rear**
- **GOT tubes automatically indexed into position**
- **Slender design reduces feeder footprint (6.0 [153.4] min. centerline spacing for mounting)**
- **Totally electric feeder**
- **Ability to feed multiple sizes/positions of the same product in the same feeder**
- **Feeder tooling can be designed to clamp the connector housing or pins (must be specified)**
- **Optional adapter plate for quick change out**
- **Optional robot simulator for bench top setup and maintenance**

Typical Product Packages



The AMP High Volume GOT Feeder is designed to deliver a variety of AMP connectors for presentation and pickup by robotic and pick-and-place units in a work cell environment. The feeder automatically advances connectors for pickup accurately and repeatedly.

The High Volume GOT Feeder automatically presents connectors in multiple tracks from a GOT tube until the GOT tube is empty. It then discharges the empty GOT tube and places a full GOT tube of connectors in the feed position, placing the next part for pickup. As parts are presented for pickup, they are positioned and clamped in both axes for highly accurate placement. Each track in the GOT Feeder is independently controlled for maximum flexibility.

The High Volume GOT Feeder features a base capable of being mounted to an optional adapter plate. When used, this does not change the connector seating plane. This feature provides the ability to remove and replace a variety of feeders without reteaching pickup points. This also allows for easy off-line set-up and maintenance.

An integral microprocessor feeder controller optimizes cycle time and saves machine I/O for other tasks. The feeder interfaces with the robot or pick-and-place machine using either a parallel or a serial port, both of which are provided as standard features.

Each feeder is fully tested and conditioned in an operating environment and passes stringent quality inspection and operating tests before shipment.

High Volume GOT Feeder Part No. 768105-□

(Consult AMP for specific suffix numbers)

SOURCE: Catalog 82068

Specifications subject to change.

1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
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Appendix Index

	Page
Wire Comparison Data (CMA/AWG/mm²)	13002-13004
COPALUM Terminals and Splices	13005
End Tap Terminals for Aluminum and Copper Foil or Strip (TERMI FOIL)	13006
Power Connector Selection Guide	13007-13009
Computer Standards Reference Guide	13010-13015
Terminator Selection Guide	13016-13017
Wire-to-Board — Product Line Selection Guide	13018-13019
Wire-to-Wire — Product Line Selection Guide	13020
Board-to-Board (One-Piece) — Product Line Selection Guide	13021
Board-to-Board (Two-Piece) — Product Line Selection Guide	13022
I/O Connector — Product Line Selection Guide	13023
Blindmate Connector — Product Line Selection Guide	13024
PCB Parallel Stacking Guide	13025-13028
Coaxial Cable-to-Connector Selection Guide	13029-13030
Connector Selection Guide	13031
IC Socket Product Selection Guide	13032-13033
Termination Machine Selection Guide	13034-13038

Specifications subject to change.
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1. Purpose

This Wire Comparison Technical Data provides a listing of known AWG and mm² wires, listed in a logical order, to assist in comparing one wire system with the other.

2. Terms

a.) AWG - American Wire Gage (AWG) is the term normally used to define the size of wire related to components designed in inch units of measurement.

b.) mm² - Millimeters squared (mm²) is the term normally used to define the size of wire related to components designed in metric units of measurement.

c.) CMA - Circular Mil Area (CMA) is the term used to define the cross sectional area of a wire. A "Circular Mil" is the area of a circle .001 inch or .0254 millimeters in diameter.

3. Comparison

The data shown in Figure 1 is primarily a comparison between AWG wire sizes and metric wire sizes. All wire sizes have been tabulated in CMA order (smallest to largest). This provides a common denominator for both wire size systems.

Unshaded blocks in Figure 1, show the preferred or common industry usage wires, either AWG or mm², with the mathematically converted AWG or mm² data in shaded blocks. This mathematical conversion is for reference use only to show the physical relationship between AWG and mm² wires.

In attempting a conversion from AWG to mm² or vice versa, design parameters such as number of strands, overall conductor diameter, etc., must be considered.

CMA	Nominal Wire Size		Strands			Approximate Conductor Diameter	
			Number	Diameter			
	AWG	mm²		inch	mm	inch	mm
2.5	46	0.0013	1	.00157	0.040	.0016	0.040
3.1	45	0.0015	1	.00176	0.045	.0018	0.045
3.8	44	0.002	1	.00195	0.050	.0020	0.050
4.0	44	0.002	1	.0020	0.050	.0020	0.050
4.8	43	0.002	1	.0022	0.056	.0022	0.056
6.3	42	0.003	1	.0025	0.063	.0025	0.063
7.8	41	0.004	1	.0028	0.071	.0028	0.071
9.6	40	0.005	1	.0031	0.079	.0031	0.079
12	40	0.005	3	.0020	0.050	.0034	0.863
12.3	39	0.006	1	.0035	0.089	.0035	0.089
15.5	38	0.008	1	.0039	0.102	.0039	0.102
16	38	0.008	1	.0040	0.102	.0040	0.102
17.3	38	0.009	7	.00157	0.040	.0040	0.102
20.3	37	0.010	1	.0045	0.114	.0045	0.114
25	36	0.013	1	.0050	0.127	.0050	0.127
26.6	36	0.014	7	.0020	0.050	.0051	0.129
31.4	35	0.016	1	.0056	0.142	.0056	0.142
39.7	34	0.020	1	.0063	0.160	.0063	0.160
44.1	34	0.025	7	.0025	0.063	.0065	0.165
50.1	33	0.03	1	.00707	0.180	.0071	0.180
50.4	33	0.03	1	.0071	0.180	.0071	0.180
64.0	32	0.03	1	.0080	0.203	.0080	0.203
67.2	32	0.03	7	.0031	0.079	.0082	0.21
79.2	31	0.04	1	.0089	0.226	.0089	0.226
100	30	0.05	1	.0100	0.254	.0100	0.250
101	30	0.05	26	.0020	0.050	.012	0.30
112	30	0.06	7	.0040	0.102	.112	0.30
128	29	0.07	1	.0113	0.287	.011	0.29
155	29	0.08	1	.0126	0.320	.013	0.32
155	29	0.08	10	.0039	0.100	.013	0.32
159	28	0.08	1	.0126	0.320	.013	0.32
175	28 AN	0.09	7	.0050	0.127	.015	0.38
181.5	28	0.09	19	.0031	0.079	.016	0.40
198	27	0.10	51	.0020	0.050	.016	0.42
202	27	0.10	1	.0142	0.361	.014	0.36
238	26	0.12	6	.0063	0.160	.018	0.46
250	26	0.13	10	.0050	0.127	.018	0.46
250	26	0.13	26	.0031	0.079	.018	0.46
251	26	0.13	8	.0056	0.142	.018	0.46
253	26	0.13	1	.0159	0.404	.016	0.40
256	26	0.13	16	.0040	0.100	.018	0.46
278	26	0.14	7	.0063	0.160	.019	0.48
279	26	0.14	72	.0020	0.050	.022	0.56
279	26	0.14	18	.0039	0.102	.022	0.56
300	26	0.15	3	.0100	0.254	.020	0.51
304	26 AN	0.15	19	.0040	0.100	.020	0.51
314	25	0.16	1	.0177	0.450	.018	0.45
314	25	0.16	10	.0056	0.142	.020	0.51
318	25	0.16	8	.0063	0.160	.021	0.53
320	25	0.16	1	.0179	0.455	.018	0.46

Figure 1

CMA	Nominal Wire Size		Strands			Approximate Conductor Diameter	
			Number	Diameter			
	AWG	mm²		inch	mm	inch	mm
388	24	0.2	1	.0197	0.500	.020	0.50
395	24	0.2	102	.0020	0.050	.020	0.51
397	24	0.2	10	.0063	0.160	.023	0.58
400	24	0.2	16	.0050	0.127	.023	0.58
400	24	0.2	4	.0100	0.254	.023	0.58
403	24	0.2	8	.0071	0.180	.023	0.58
404	24	0.2	1	.0201	0.510	.020	0.51
408	24	0.2	13	.0056	0.142	.023	0.58
475	24 AN	0.2	19	.0050	0.127	.023	0.58
634	22	0.3	8	.0089	0.226	.029	0.74
635	22	0.3	16	.0063	0.160	.029	0.74
640	22	0.3	10	.0080	0.203	.029	0.74
640	22	0.3	1	.0253	0.643	.025	0.64
650	22	0.3	26	.0050	0.127	.033	0.84
700	22	0.4	7	.0100	0.254	.030	0.76
754	22 AN	0.4	19	.0063	0.160	.033	0.84
812	21	0.4	1	.0285	0.724	.029	0.72
992	20	0.5	1	.0315	0.810	.032	0.80
992	20	0.5	16	.0080	0.203	.039	1.00
992	20	0.5	256	.0020	0.050	.039	1.00
1003	20	0.5	20	.0071	0.180	.039	1.00
1000	20	0.5	10	.0100	0.254	.038	0.97
1020	20	0.5	1	.0320	0.813	.032	0.81
1025	20	0.5	41	.0050	0.127	.038	0.97
1032	20	0.5	26	.0063	0.160	.039	0.99
1111	20	0.6	7	.0126	0.320	.039	0.99
1186	20 AN	0.6	19	.0079	0.201	.041	1.04
1289	19	0.6	1	.0359	0.912	.036	0.91
1485	18-1/2	0.75	7	.0146	0.370	.047	1.20
1488	18-1/2	0.75	24	.0080	0.200	.047	1.20
1488	18-1/2	0.75	384	.0020	0.050	.047	1.20
1504	18-1/2	0.75	30	.0071	0.180	.047	1.20
1600	18	0.8	16	.0100	0.254	.049	1.24
1608	18	0.8	19	.0092	0.234	.049	1.24
1617	18	0.8	7	.0152	0.386	.042	1.07
1624	18	0.8	1	.0403	1.024	.040	1.02
1625	18	0.8	65	.0050	0.127	.040	1.02
1627	18	0.8	41	.0063	0.160	.049	1.24
1639	18	0.8	7	.0153	0.389	.042	1.06
1792	18	0.9	7	.0159	0.404	.048	1.22
1900	18 AN	1	19	.0100	0.254	.052	1.32
1972	17	1	1	.0445	1.130	.045	1.13
1984	17	1	32	.0080	0.203	.047	1.20
1984	17	1	512	.0020	0.050	.049	1.25
2004	17	1	7	.0169	0.430	.047	1.20
2052	17	1	1	.0453	1.151	.045	1.15
2426	16 AN	1.2	19	.0113	0.287	.061	1.55
2510	16	1.25	50	.0071	0.180	.059	1.50
2537	16	1.25	16	.0126	0.320	.059	1.50
2580	16	1.3	65	.0063	0.160	.059	1.50

CMA	Nominal Wire Size		Strands			Approximate Conductor Diameter	
			Number	Diameter			
	AWG	mm²		inch	mm	inch	mm
2581	16	1.3	1	.0508	1.290	.051	1.29
2600	16	1.3	26	.0100	0.254	.061	1.55
2625	16	1.3	105	.0050	0.127	.059	1.50
2800	16	1.4	7	.0200	0.508	.061	1.55
2906	15-1/2	1.5	30	.0100	0.254	.059	1.50
2934	15-1/2	1.5	7	.0205	0.520	.059	1.50
2952	15-1/2	1.5	1	.0543	1.380	.054	1.38
2974	15-1/2	1.5	392	.0028	0.070	.061	1.55
3260	15	1.6	1	.0571	1.450	.057	1.45
3831	14 AN	2	19	.0142	0.360	.076	1.93
3902	14	2	7	.0236	0.600	.071	1.80
4079	14	2	37	.0105	0.266	.073	1.85
4099	14	2	7	.0242	0.614	.076	1.93
4100	14	2	41	.0100	0.254	.077	1.96
4106	14	2	19	.0147	0.373	.076	1.93
4109	14	2	1	.0641	1.628	.064	1.63
4123	14	2	26	.0126	0.320	.075	1.90
4167	14	2	105	.0063	0.160	.073	1.85
4234	14	2	84	.0071	0.180	.074	1.85
4844	13-1/2	2.5	50	.0098	0.25	.087	2.20
4871	13-1/2	2.5	7	.0263	0.67	.079	2.01
4935	13-1/2	2.5	1	.0701	1.78	.070	1.78
5184	13	2.6	1	.0720	1.83	.072	1.83
6088	12 AN	3	19	.0179	0.45	.096	2.44
6475	12	3	259	.0050	0.13	.105	2.67
6500	12	3	65	.0100	0.25	.096	2.44
6501	12	3	41	.0126	0.32	.094	2.40
6503	12	3	19	.0185	0.47	.092	2.34
6512	12	3	7	.0305	0.77	.086	2.18
6529	12	3	1	.0808	2.05	.081	2.05
6545	12	3	37	.0133	0.34	.093	2.36
6549	12	3	165	.0062	0.16	.095	2.41
6654	12	3	84	.0089	0.23	.094	2.40
6939	11-1/2	3.5	7	.0315	0.80	.094	2.40
7812	11-1/2	4	56	.0012	0.03	.102	2.60
7839	11-1/2	4	7	.0335	0.85	.100	2.55
7896	11-1/2	4	1	.1004	2.55	.100	2.55
7963	11-1/2	4	19	.0205	0.52	.101	2.57
8227	11	4	1	.0907	2.30	.091	2.30
9072	10	5	7	.0360	0.91	.096	2.44
9472	10	5	37	.0160	0.41	.109	2.77
10309	10	5	65	.0126	0.32	.118	3.00
10319	10	5	37	.0167	0.42	.109	2.77
10365	10	5	41	.0159	0.40	.122	3.10
10376	10	5	7	.0385	0.98	.096	2.44
10384	10	5	1	.1019	2.59	.102	2.59
10404	10	5	19	.0234	0.59	.117	2.97
10500	10	5.5	105	.0100	0.25	.116	2.95
10842	10	5.5	7	.0394	1.00	.118	3.00
11718	10	6	84	.0118	0.30	.130	3.30

Figure 1 (continued)

Specifications subject to change.

1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

CMA	Nominal Wire Size		Strands			Approximate Conductor Diameter	
			Number	Diameter			
	AWG	mm²		inch	mm	inch	mm
11735	10	6	7	.0409	1.04	.128	3.25
11844	10	6	1	.1087	2.76	.109	2.76
12063	10	6	19	.0252	0.64	.126	3.20
12943	9	6.5	7	.0430	1.09	.130	3.30
13087	9	6.5	1	.1144	2.91	.114	2.90
13125	9	7	525	.0050	0.13	.140	3.56
14175	8	7	7	.0450	1.14	.146	3.71
15105	8	7.5	19	.0275	0.70	.145	3.68
15612	8	8	7	.0472	1.20	.142	3.60
15681	8	8	50	.0177	0.45	.146	3.70
16387	8	8	13	.0111	0.28	.167	4.24
16434	8	8	7	.0486	1.23	.146	3.71
16473	8	8	37	.0211	0.54	.150	3.81
16512	8	8	1	.1285	3.26	.129	3.26
16535	8	8	19	.0295	0.75	.148	3.76
16589	8	8	49	.0184	0.47	.150	3.81
16983	8 AN	8.5	133	.0113	0.29	.167	4.24
18848	7	10	19	.0315	0.80	.161	4.10
19740	7	10	1	.1406	3.57	.141	3.57
19755	7	10	49	.0201	0.51	.161	4.10
19774	7	10	7	.0531	1.35	.159	4.05
19840	7	10	80	.0157	0.40	.165	4.20
26179	6	13	37	.0266	0.68	.174	4.42
26220	6	13	7	.0612	1.55	.184	4.67
26250	6	13	1	.1620	4.11	.162	4.11
26866	6 AN	14	133	.0142	0.36	.210	5.33
27765	6	14	7	.0630	1.60	.189	4.80
30860	6	15	19	.0372	0.94	.202	5.13
31357	5-1/2	16	7	.0669	1.700	.197	5.00
31496	5-1/2	16	126	.0157	0.400	.209	5.30
31584	5-1/2	16	1	.1772	4.500	.177	4.50
32259	5	16	37	.0295	0.750	.197	5.00
33090	5	15.5	1	.1819	4.620	.182	4.62
40642	4-1/2	20	41	.0315	0.800	.236	6.00
41718	4	21	7	.0772	1.961	.232	5.89
41740	4	21	1	.2040	5.182	.204	5.18
41771	4	21	33	.0336	0.853	.240	6.10
41792	4	21	19	.0469	1.191	.226	5.74
42613	4	21	133	.0179	0.455	.272	6.90
43364	3-1/2	22	7	.0787	2.000	.236	6.00
49414	3	25	783	.0079	0.200	.280	7.10
49600	3	25	196	.0157	0.400	.260	6.60
49689	3	25	7	.0843	2.140	.253	6.42
50049	3	25	84	.0244	0.620	.260	6.60
57365	2-1/2	30	7	.0906	2.300	.272	6.90
66363	2	34	19	.0590	1.499	.332	8.43
66370	2	34	1	.2570	6.528	.257	6.53
66407	2	34	7	.0904	2.296	.292	7.42
66516	2	34	37	.0424	1.077	.300	7.62
66832	2 AN	34	633	.0100	0.254	.345	8.76

CMA	Nominal Wire Size		Strands			Approximate Conductor Diameter	
			Number	Diameter			
	AWG	mm²		inch	mm	inch	mm
68464	2	35	276	.0157	0.400	.307	7.80
68650	2	35	1107	.0079	0.200	.335	8.50
68886	2	35	19	.0602	1.530	.301	7.65
73353	1-1/2	38	7	.1024	2.600	.307	7.80
81700	1	41	817	.0100	0.254	.382	9.70
83600	1	42	836	.0100	0.254	.386	9.80
84263	1	40	85	.0315	0.800	.339	8.60
95344	0	50	19	.0709	1.800	.354	9.00
97952	0	50	702	.0118	0.300	.370	9.40
98231	0	50	396	.0157	0.400	.406	10.30
104500	0	53	1045	.0100	0.254	.431	10.95
106400	0	54	1064	.0100	0.254	.435	11.05
117728	0	60	19	.0787	2.000	.394	10.00
133000	00	67	1330	.0100	0.254	.486	12.34
134765	00	70	19	.0843	2.140	.421	10.70
139394	00	70	999	.0118	0.300	.488	12.40
139533	00	70	360	.0197	0.500	.488	12.40
155689	000	80	19	.0906	2.300	.453	11.50
167200	000	85	1672	.0100	0.254	.545	13.84
184107	000	95	475	.0118	0.300	.571	14.50
185859	000	95	1332	.0197	0.500	.571	14.50
186875	000	95	19	.0992	2.520	.496	12.60
198974	0000	100	19	.1024	2.600	.512	13.00
210900	0000	105	2109	.0100	0.254	.635	16.13
235657	0000	120	608	.0197	0.500	.630	16.00
236151	0000	120	37	.0799	2.030	.571	14.50
247846	0000	125	19	.1142	2.900	.571	14.50

$CMA = D^2 \times N$

Where: D = diameter of a single strand (in mils)

N = number of strands

CONVERSION TABLE

To Convert From	To	Multiply By
CMA	mm²	.0005067075
CMA	in²	.0000007854
mm²	in²	.001550003
mm²	CMA	1973.525

Figure 1 (continued)

Specifications subject to change.

1-800-522-6752
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1-800-722-1111
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Pressure Type Wire/Connector Reference Chart

AMP Wire Range		UL 486 Listed		Connector Marking and Aluminum Wire Size		Copper Wire Size		Strip Length Nominal	
AWG	mm²	AWG	mm²	AWG	mm²	AWG	mm²	inch	mm
10-16 Solid or Stranded Copper or Aluminum	1.25-6	12-10 Solid Aluminum 14-10 Solid or Stranded Copper	3-6 2-6	16-14	1.25-2	18-14	0.8-2	3/16	4.75
				12-10	3-6	14-10	2-6	3/8	9.53
8-500 MCM Solid or Stranded Aluminum or Copper	8-253	8-500 MCM Stranded Aluminum or Copper	8-253	8	8	10	5	7/16	11.11
				6	14	8	8	7/16	11.11
				4	21	6	14	19/32	15.08
				2	35	4	21	3/4	19.05
				1/0	50	2	35	3/4	19.05
				2/0	70	1/0	50	3/4	19.05
				3/0	85	2/0	70	3/4	19.05
				4/0	105	3/0	85	25/32	19.64
				250 MCM	127	4/0	105	1-3/16	30.16
				300 MCM	152	250 MCM	127	1-5/16	33.34
				400 MCM	203	300 MCM	152	1-7/16	36.51
				500 MCM	253	400 MCM	203	1-9/16	39.69

Notes: For use with bar crimp tooling. Perforated liner must be present in wire barrel.

SOURCE: Catalog 82020

Specifications subject to change.

1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

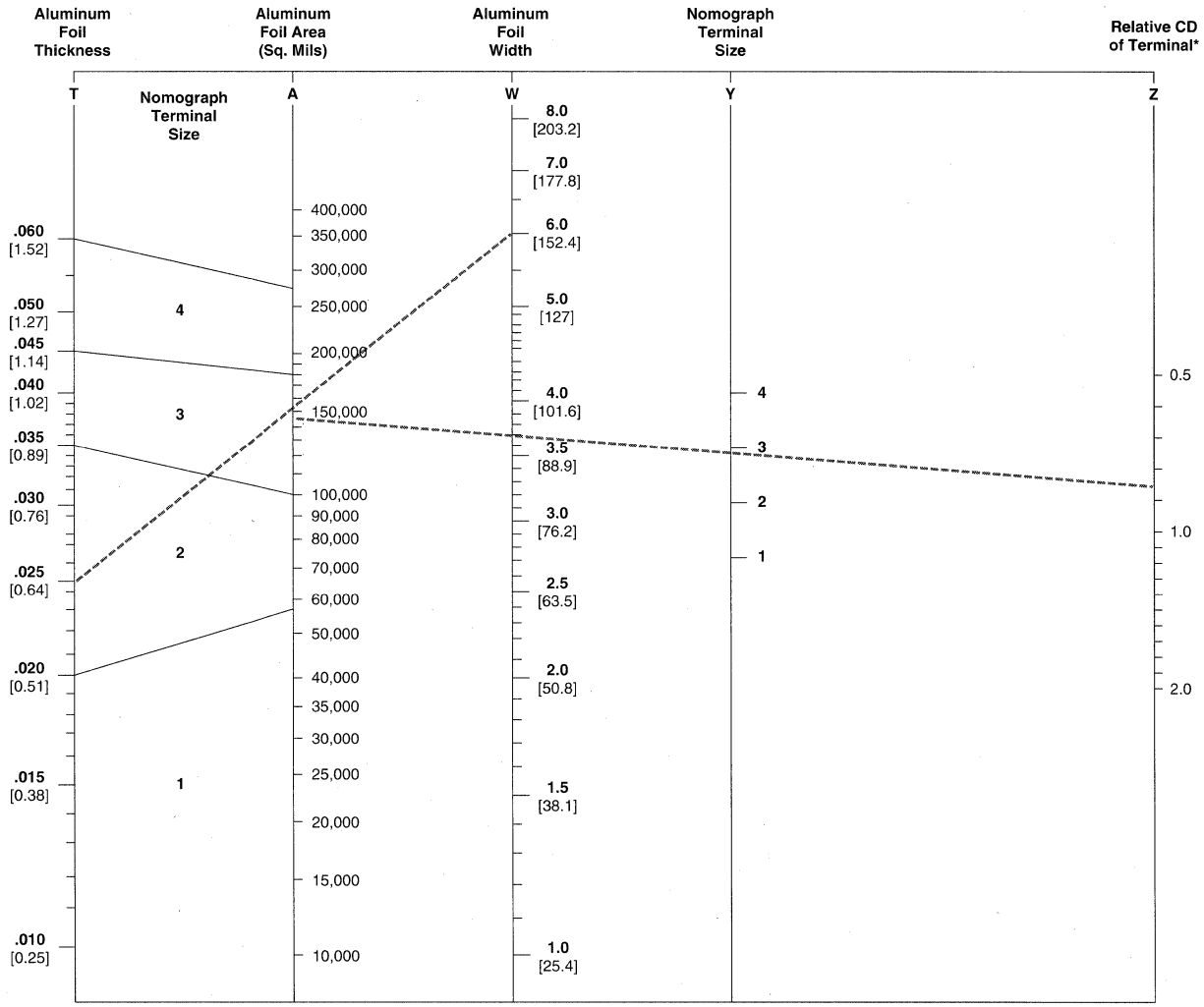
Nomograph

For the selection of proper size TERMI-FOIL Terminals for end tapping only.

1. To find the nomograph terminal size:
Draw a line from the determined aluminum foil thickness on Scale T to the determined aluminum foil width on Scale W. Read the foil area in square mils directly from Scale A. The terminal size is then the highest numbered area (on the Nomograph Terminal Size Scale) through which the drawn line passes.

2. To find the Relative CD (current density) of the terminal:
Draw a line from the determined foil area on Scale A (as found in step 1), through the corresponding nomograph terminal size (also found in step 1) on Scale Y, and continue the line to Scale Z. Read the Relative CD directly from Scale Z.

3. Example (dotted line shown on nomograph):
Find the nomograph terminal size and Relative CD of a large size end tap terminal used to terminate aluminum foil with a thickness of .025 [0.64] and a width of 6.0 [152.4].
Nomograph Terminal Size = 3 Relative CD = 0.85 approx.



*Relative CD of Terminal = (current density of terminal) / 1.6 (current density of foil)

13 Appendixes

SOURCE: Catalog 82039

Power Connector Selection Guide (Contacts Capable of Carrying 10 Amps and Higher)

Description	CBL-to-CBL	CBL-to-PC Board	BRD-to-BRD	Amps	Volts AC	AWG (MCM)	Circuits/ Positions	Housing		Lug or Special
								Plastic	Metal	
AMP C-LOK Connectors	X			AWG	AWG	4,6,10 & 12			X	Ground
AMP Circular Multi-Pin Connector	X	X		in testing	600	10	10 and 13	circular		
AMP Circular Multi-Pin Connector	X			in testing	600	10	5	circular		*
AMP Drawer Connectors	X			12 & 15	250	16-14	8 to 24	rectangular		
AMP Positive Lock 250 & 187 Tab		X		18 & 30	250	20-10	1 to 4	rectangular		Tab
AMP Pulse Lock		X		10	250	20-16	10, 12 & 18	rectangular		
AMP Universal Power Connectors				8, 9 & 12	600	26-16	1 to 18	rectangular		
AMPOWER Terminals & Splices	X-Splice			50 to 625	AWG	6-1500 MCM				Lug
AMPOWER Wave Crimp System	X	X	X	70 to 110	250/600	13-06	8 or 21 Signal 4 to 8 Power	rectangular		Flat Bus
AMPOWER II Terminals & Splices	X-Splice			AWG	600	8-750 MCM	1			Lug
Closed End Splices	X-Splice			AWG		22-6	1			Lug
AMPLIVAR and MAG-MATE				AWG	n/a	20-14	1	rectangular		Lug
AMPSEAL (Automotive) Connectors		X		10	250 UL	20-16	23	rectangular		Sealed
Appliance Connectors				13 to 65	250	16-6	3 pos.	rectangular	X-Ring	
Bus Bar - Pluggable 125 or 125F2				200	n/a	Various				Bus Bar
Convenience Outlets		X		15	125	18-12	3	square		
COPALUM Sealed Terminals & Splices	X-Splice			15 to 380	AWG	16 to 500 MCM				Lug
CPC Series 3 & 4, 5 & 6	X			35	250	16-08	2 to 7	circular	circular	*
FASTIN-FASTON Connectors				depends on the AWG	600	16-10	1 to 8	Insulated		
FASTON Open Barrel Tab					n/a	24-10	Specials are available	Uninsulated & Insulated		Tab
FASTON PIDG Tab					300	22-10		Insulated		Tab
FASTON Ultra-Fast Tab					600	26-10		Fully Insulated		Tab
FASTON Ultra-Pod Tab					600	22-12	1	Fully Insulated		Tab
Flexible Power Supply Backplane										
15 amp Modules				15	300		2 per Module	rectangular		Power Brd.
50 amp Modules				50	300		1 per Module	rectangular		Power Brd.

*High current product available featuring Louvertac bands.

(Chart Continued Next Page)

Specifications subject to change.
1-800-522-6752 Product Information Center/ AMP FAX Service
1-800-722-1111 Tooling/Technical Assistance Center

Power Connector Selection Guide (Contacts Capable of Carrying 10 Amps and Higher) (Continued)

Description	CBL-to-CBL	CBL-to-PC Board	BRD-to-BRD	Amps	Volts AC	AWG (MCM)	Circuits/ Positions	Housing		Lug or Special
								Plastic	Metal	
"G" Series Modular (Multimate)	X			13 to 25	750 rms	18-10	4 to 24	rectangular	rectang.	*
AMP-HDI Two-Piece Connectors		X	X	30	250	10	3 or 6	rectangular		
High Current Commercial	X			15 to 40	600	16-06	4	rectangular		
High Current Product - Louvertac Bands				25-1400	n/a	8-1000 MCM				Special
AMP Power Lock Connectors	X	X	X	20 & 50	600	18-08	1 to 6	rectangular		
AMPINNERGY Wire-to-Wire Connectors	X			10 to 55	600	18-10	1 to 9	rectangular		
AMPINNERGY Wire-to-Board Connectors		X		35	600	18-10	2 to 8	rectangular		
LGH High Voltage Lead Assys.	X	In devlpmnt		10	—	Various	1 thru 15	rectangular & circular		Optional
Undercarpet Cabling System				20 or 30	300	12 or 10	1 or 3 ckt.			
MATRIX 5015	X			13 to 150	n/a	20-0	1 to 85		circular	Military
MATRIX 26482	X			13 to 23	n/a	20-12	3 to 61		circular	Military
MATRIX 38999	X			13 to 23	n/a	20-12	3 to 128	circular	circular	Military
M Series Pin & Socket	X			25	250	32-08	3 to 20	rectangular		
Metrimate Drawer				45	600	18-08	8 and 15	rectangular		*
Metrimate Pin & Socket	X	X		7.5-13	600	18-08	3 and 8	rectangular		
MTA		X	X	5-12.5	250	22-18	2 to 12	rectangular		
Multiple Interlock Mark I & II	X	X		10	250	22-14	5 to 22	rectangular		
High Current Edge Connectors		X	X	30	250	16-10	3 to 12	rectangular		
PCB Terminals and Disconnects		X		15 & 25	n/a	Various	6 & 10	rectangular		Power Tap
Posi-Mate Connectors	X	X		10	n/a	26-18	2 & 12	rectangular		
Power Cord Receptacle				15	250	20-16	3	rectangular		
Relay Sockets				10	250	20-16	11	rectangular		
Universal MATE-N-LOK Connectors	X	X		15 cbl/cbl	600	10 to 30	2,3,4,5,6,8,9,12,15	rectangular		
Universal MATE-N-LOK II Connectors	X	X		12 cbl/brd	600	10 to 30	2,3,4,5,6,9,12,15	rectangular		*
Commercial MATE-N-LOK Connectors	X	X	X	15	250	14-30	2,3,4,6,9,12,15	rectangular		
.093 Pin and Socket	X			15 cbl/cbl	250	14-24	2,3,4,6,9,12,15	rectangular		
.070 MULTILOCK Connector	X	X		10	12	16	2 to 20	rectangular		

*High current product available featuring Louvertac bands.

(Chart Continued Next Page)

Specifications subject to change.

1-800-522-6752 Product Information Center/ AMP FAX Service

1-800-722-1111 Tooling/Technical Assistance Center

Power Connector Selection Guide (Contacts Capable of Carrying 10 Amps and Higher)
(Continued)

Description	CBL-to-CBL	CBL-to-PC Board	BRD-to-BRD	Amps	Volts AC	AWG (MCM)	Circuits/ Positions	Housing		Lug or Special
								Plastic	Metal	
AMPLI-BOND Terminals				depends on the size	AWG	8 to 4/0		Insulated		Lug
TERMINYL Terminals					AWG	8 to 4/0		Insulated		Lug
PIDG Terminals	X-Splice				300	26-10		Insulated		Lug
PLASTI-GRIP Terminals	X-Splice				600	22-2/0		Insulated		Lug
DIAMOND GRIP Terminals	X-Splice				AWG	22-10		Uninsulated		Lug
SOLISTRAND Terminals	X-Splice				AWG	22-600 MCM		Uninsulated		Lug
Budget Terminals	X-Splice				AWG	26-10		Uninsulated		Lug
Subminiature D MIL-C-24308	X	X		10 to 45		18-08	1 thru 8		rectang.	D-Sub
Subminiature D Connectors		X		45	600	18-08	2 Power	rectangular	rectang.	D-Sub
Terminal Blocks				10	AWG	24 and 12	1 to 10	rectangular		Stackable
Wire-to-Board Dynamic Series		X		15	250	16 only	2 to 20	rectangular		

Specifications subject to change.

1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

Computer Standards Reference Guide

Category	Standard	Description	Committee/Standard #	Application	AMP Product Line	Size
Buses - PC	ISA	Industry Standard Architecture	Defacto (IBM)	PC system bus – 16 bit	Standard Edge .100	52 dual
	EISA	Extended Industry Standard Architecture	Defacto (Consortium led by Compaq & HP)	PC system bus – 32 bit	EISA Standard Card Edge Connector (Taiwan)	188 dual
	MCA	MicroChannel Architecture	Defacto (IBM)	PC system bus – 32 bit	Standard Edge .050	56, 66, 91, 97, 101 dual
	NuBus		IEEE 1196	Strong graphics and Artificial Intelligence controls – 32 bit	Eurocard	96 pos
	PCI	Peripheral Component Interconnect	Defacto (PCI Interest Group)	PC local bus – 32 bit - 3.3 V 32 bit - 5 V 64 bit - 3.3 V 64 bit - 5 V	Standard Edge .050	60 dual 60 dual 92 dual 92 dual
	SPCI	Small PCI	Defacto (PCI Interest Group)	Small form factor interface plugs onto PCI adapter cards connected to the motherboard	{NOM} INFOPORT Series II AMP-LATCH 2mm	108 pos 15, 33 pos 10, 16, 34
	VESA VL	Video Electronic Standards Association	Defacto (VESA)	PC local bus – 32 bit	Standard Edge .050	56 dual
	PC 104		Defacto (PC 104 Consortium)	Compact embedded PC standard	{NOM} (.025" square headers)	40 pos 64 pos
	S100		IEEE 696	Early bus for PC hobbyists	Standard Edge .125	50 dual
Buses - Other	CIMBUS	C-MOS Industrial Microprocessor		Industrial control – 8 bit	Eurocard Type B	64 pos
	Fastbus		IEEE 960	Originated by U.S. Department of Energy – 32 bit	AMPMODU 2 Piece	130, 195 pos
	Futurebus +		IEEE 896.2	Very high performance bus/ scalable 16/32/64/128/256 bit	Z-PACK 2mm FB	
	HIC	Heterogeneous Interconnect Serial Bus	IEEE 1355	Scalable Serial Interconnect for Parallel System	Race Connector {NOM} MINI-SC	10 pos Duplex
	Mezzanine Bus		IEEE 1386	1mm pitch mezzanine board to host interface for VME and Futurebus. 7–18mm stack heights. 2, 3, or 4 per card.	{NOM} (pending)	64 pos
	MIB	Medical Information Bus	IEEE P1073.4	Medical device communication	SDL ("D" keyed)	6 pos
	Multibus I		IEEE 786	Industrial Control and Processing applications – 16 bit	Standard Edge .100 {NOM - .156" card edge}	30 dual 43 dual
	Multibus II		IEEE 1296	Competes with VME – 32 bit	Eurocard	96 pos

(Chart Continued Next Page)

Specifications subject to change.
1-800-522-6752 Product Information Center/AMP FAX Service
1-800-722-1111 Tooling/Technical Assistance Center

Computer Standards Reference Guide (Continued)

Category	Standard	Description	Committee/Standard #	Application	AMP Product Line	Size
Buses - Other (continued)	Quick Ring		Defacto (National Semiconductor Corp., Apple)	Architecture for high performance data streaming between devices, cards and systems. Point to point & Twisted Ring.	CHAMP .8mm AMPLIMITE .050 .8mm FH	50 pos 26 pos 40 pos
	Sbus	Sunbus	Defacto (Sun)	Sun Micro Workstations	AMPLIMITE .050	96 pos
	SCI	Scalable Coherent Interface	IEEE 1596	Next generation Futurebus+	Z-PACK 2mm FB	
	STD Bus	Standard Bus	IEEE 961	Industrial control - 8 bit	Standard Edge .125	28 dual
	STE Bus I	STD European	IEEE 1000	European version of STD bus using Eurocard - 8 bit	Eurocard Type B	64 pos
	TurboChannel		Defacto (DEC)	Proprietary Workstation bus	Eurocard	96 pos
	VERSA Bus		IEEE P970	Competes with Multibus I -16 bit	Standard Edge .100	60, 70 dual
	VMEBus	Versa Module Europa	IEEE 1014	Major industrial bus - 32 bit	Eurocard	96 pos
	VME64	Versa Module Europa 64		Upgrade to VME bus - 64 bit	{NOM}	160 pos
	VXI	VMEbus eXtensions for Instrumentation	IEEE 1155	Adaptation of VMEbus for instrumentation market	Eurocard	96 pos
CPU Sockets	Intel CPU and OverDrive Processors		Defacto (Intel)	Sockets for Intel CPU and OverDrive Processors: Socket 1 Socket 2 Socket 3 Socket 4 Socket 5 Socket 6 Socket 7	 SL ZIF PGA Socket SL ZIF PGA Socket SL ZIF PGA Socket SL ZIF PGA Socket SL ZIF PGA Socket SL ZIF PGA Socket SL ZIF PGA Socket	 169 pos 238 pos 237 pos 273 pos 320 pos 235 pos 321 pos
Disk Drive and Storage Device I/O	ATA	AT Attachment	ASC-X3.221-199X, X3T10	IBM disk drive interface used originally in the AT computer	AMP-LATCH MATE-N-LOK	40 pos 4 pos
	Enhanced IDE	Enhanced Integrated Device Electronics	ASC-X3T10 SFF	Interface to disk drives, CD-ROMs, scanners and other peripherals	AMP-LATCH MATE-N-LOK	40 pos 4 pos
	FC-SCA	FibreChannel – Single Connector Attach	SFF-8045	Supports direct plugging of Fibre Channel Drives into the motherboard	CHAMP .050 Series I Blindmate	40 pos
	FDD	Floppy Disk Drive	Defacto	Bussing to 3.5 & 5.25" drives: Internal (desktops) External (portables)	 AMP-LATCH AMP-LATCH Card Edge CHAMP .050 Series II	 34 pos 34 pos 26 pos
	HIPPI-EP	High Performance Parallel	ASC-X3T11/X3.183	Very high speed interface for	AMPLIMITE .050	100 pos

(Chart Continued Next Page)

Computer Standards Reference Guide (Continued)

Category	Standard	Description	Committee/Standard #	Application	AMP Product Line	Size
Disk Drive and Storage Device I/O (Continued)	HIPPI-EP (Continued)	Interface — Enhanced Physical		supercomputers and high speed graphics, 200, 400, and 800 Mbps		
	IPI-2	Intelligent Peripheral Interface	ASC-X3T11 ASC-X3.201-1992	High speed interface for main-frames and large computers	AMPLIMITE .050	50, 100 pos
	RAID	Redundant Array of Inexpensive Disks	ASC-X3T10 TC	Employs numerous small, inexpensive disks to create a large storage capacity	CHAMP .050 Series I Blindmate	80 pos
	SCA 1	Single Connector Attachment	ASC-X3T10 SFF 8015	Single connector interface (includes signal and power) for 3.5 & 2.5" SCSI Disk Drives	CHAMP .050 Series I	80 pos
	SCA 2	Single Connector Attachment	SFF 8046	Blindmate interface for 3.5" SCSI Disk Drives. Includes ESD protection and sequential contact mating for hot insertion	CHAMP .050 Series I Blindmate	80 pos
	SCSI -1, -2, -3	Small Computer Systems Interface	ASC X3T10 TC	PC parallel I/O interface:		
				Low density	CHAMP (.085")	50 pos
					AMP-LATCH	50 pos
				High Density	AMPLIMITE .050	50, 68 pos
				Low and high density	Terminators	50, 68 pos
	SCSI VHDCI	Very High Density Cable Interconnect	ASC-X3T10 SFF 8441	Very high density SCSI-3 cable and connectors to be used with smaller enclosures such as laptops and notebooks	CHAMP .8mm (pending)	68 pos
	SFF	Small Form Factor Committee		An Ad hoc group formed to address the needs of the Disk Industry in a prompt manner		
	SPI-2	SCSI - 3 Parallel Interface	ASC X3T10	High density PC Parallel I/O Interface	CHAMP .8mm (pending)	68 pos
	SSA-PH	Serial Storage Architecture - Physical Interface	ASC-X3T10.1 W.G.	IBM SSA-UIG User's Industry Group, 80MBps serial interface	Micro D Precision Interconnect	9 pos
					AMPMODU	10(6) pos
					4 Bay Internal unitized (16/10/6/6)	38 pos
Other I/O	Access.bus	Access Bus Industry Group	Defacto (ABIG User's Group)	Low speed daisy chain I/O bus	SDL ("D" Keyed)	4 pos
	Fibre Channel		ASC-X3T11 TC	High performance serial link:		
				Fiber	AMP SC Duplex	2 pos
				Coax	BNC (75 ohm), TNC	
				Twisted pair copper	AMPLIMITE HD-20	9 pos

(Chart Continued Next Page)

Specifications subject to change.

1-800-522-6752 Product Information Center/ AMP FAX Service

1-800-722-1111 Tooling/Technical Assistance Center

Computer Standards Reference Guide (Continued)

Category	Standard	Description	Committee/Standard #	Application	AMP Product Line	Size
Other I/O (continued)				Active devices	Transceivers (Lytel)	
	EPP ECP	Enhanced Parallel Port Enhanced Capabilities Port	IEEE 1284-A IEEE 1284-B IEEE 1284-C	Enhanced parallel port that offers bi-directional capability. Includes backward compatibility.	AMPLIMITE HD-20 CHAMP (.085") CHAMP .050 Series II	25 pos 36 pos 36 pos
	GeoPort/ Versit		Defacto (Apple/ATT/IBM/Rolm)	Computer/Telephony integration	CHAMP .050 Series II	14 pos
	Keyboard		Defacto	Keyboard interconnect	Mini DIN	6 pos
	IrDA	Infrared Data Association	Defacto (IrDA)	Specification for infrared I/O for personal computers	(pending)	
	Modem			Telephone line interconnect	Modular Plug & Jack	
	Mouse		Defacto	Mouse interconnect	Mini DIN	6 pos
	Parallel Port		Defacto (Centronics)	PC parallel port Printer	AMPLIMITE HD-20 CHAMP (.085")	25 pos 36 pos
	RS-232		ANSI/EIA 232D ANSI/EIA/TIA-232-E ANSI/EIA/TIA-530A	Serial port (DTE/DCE) Serial port (Alternate A) Serial port (Alternate A)	AMPLIMITE HD-20 AMPLIMITE .050 AMPLIMITE .050	25 pos 26 pos 26 pos
	Serial Bus		IEEE 1394	High speed daisy chain I/O bus (up to 400Mbps) This is Apple's "FireWire"	Shielded External 4 Bay Unitized Combo (Internal) (16/10/6/6)	6 pos 38 pos
	Tablet		Defacto	Tablet interconnect	Mini DIN	8 pos
	USB	Universal Serial Bus	Defacto (Compaq, DEC, IBM, Intel, Microsoft, NEC, Northern Telecom)	Universal PC I/O bus (includes signal & power). Lower cost than P1394. 12 Mbps.	(pending)	4 pos
	V.35		CCITT V.35	Data Transmission at 48 Kbps	M Series	34 pos
Memory Sockets	SIMM	Single In-Line Memory Module	JEDEC JC11.14 MO-064	DRAM (8 & 16 bit) Available in vertical, low profile and R/A configurations	MICRO-EDGE (.100) DIPLOMATE SIMM (.100)	30, 42 pos
	SIMM	Single In-Line Memory Module	JEDEC JC11.14 MO-116	DRAM, VRAM (16 & 32 bit) Available in vertical, low profile and R/A configurations	MICRO-EDGE (.050) Full-Force SIMM (.050) SIMM II Cam-In (.050)	64, 68, 72 80, 84, 100 pos
	DIMM	Dual In-Line Memory Module	JEDEC JC11.14 MO-167	DRAM, VRAM, SRAM, SDRAM (32 & 64 bit) (Type I - single key)	Dual ReadOut SIMM (.050) DIMM II (.050)	52, 64, 68, 72, 80, 84, 100 dual
	DIMM, 8 Byte	Dual In-Line Memory Module	JEDEC JC11.14 MO-161	DRAM, VRAM, SDRAM (32 & 64 Bit) (Type II - double key)	8 Byte DIMM (.050) M64 (.050)	168 pos
	DIMM, 8 Byte	Dual In-Line Memory Module	JEDEC JC11.14 Item	SDRAM, VRAM - Special for	8 Byte DIMM (.050)	112, 200

(Chart Continued Next Page)

Computer Standards Reference Guide (Continued)

Category	Standard	Description	Committee/Standard #	Application	AMP Product Line	Size
Memory Socket (Continued)	DIMM, 8 Byte (Continued)		14-019	high speed memory and video appls. (Type II - double key)	(pending)	pos
	S.O. DIMM	Small Outline Dual In-Line Memory Module	JEDEC JC11.14 MO-160	DRAM	M3 (Mini Memory Module .050)	72, 88 pos
Networks	ATM	Asynchronous Transfer Mode	ATM Forum	High speed networking using packet switching and scalable bandwidth. 25 Mbps plus SONET standards of 51.8, 155, and 622 Mbps.	FSD, AMP SC Modular Plug & Jack Transceivers (Lytel) Connectware Enterprise Switches, Servers, Adapters, Stackable Hubs	Duplex 8 pos
	Ethernet		IEEE 802.3	Local area network using Carrier Sense Multiple Access with Collision Detection (CSMA/CD)		
	1BASE5	Starlan	IEEE 802.3		Modular Plug & Jack	8 pos
	10BASE2	Thinnet	IEEE 802.3		BNC, Adapter, Tap	
	10BASE5	Thicknet	IEEE 802.3		AMPLIMITE HD-20, N Series	15 pos
	10BASE-F	Fiber Optics	IEEE 802.3		ST Connector	Simplex
	10BASE-T	Twisted Pair	IEEE 802.3		Modular Plug & Jack	8 pos
	10BROAD36	Broadband	IEEE 802.3		75 Ω F Series	
	100BASE-T	Twisted Pair, 100 Mbps	IEEE 802.3u (proposed)		AMPLIMITE .050	40 pos
	TokenPassing Bus		IEEE 802.4	Local Area Network using a token passing protocol on a bus architecture.	AMPLIMITE HD-20 F Series	37 pos
	Token Ring		IEEE 802.5	Local Area Network using a token passing protocol on a ring architecture. 4 & 16 Mbps	Four-Position Data Connector	4 pos
	MAN	Metropolitan Area Network	IEEE 802.6	Metropolitan Area Network	AMP SC	Duplex
	Wireless LAN		IEEE 802.11	Local Area Network using RF spread spectrum techniques	(pending)	
	100 BASE VG AnyLAN	Voice Grade	IEEE 802.12	4 pair voice grade wire for hub control & token ring frames	AMPLIMITE HD-20 (pending)	9 pos
	CATV MAN	Cable Television Metropolitan Area Network	IEEE 802.14	Standard protocol for CATV based broadband communi-cations network.	(pending)	
	FDDI	Fiber Distributed Data Interface	ASC - X3T12 TC	Token ring type backbone and high end workstation connection. (100Mbps)	ST Connector, FSD, AMP SC Modular Plug & Jack Transceivers (Lytel)	Simplex/ Duplex 8 pos
PCMCIA	PCMCIA 2.0	Personal Computer Memory Card International Association	PCMCIA	16 bit memory and I/O bus	Memory Card Headers & Receptacles	68 pos

(Chart Continued Next Page)

Computer Standards Reference Guide (Continued)

Category	Standard	Description	Committee/Standard #	Application	AMP Product Line	Size
PCMCIA (continued)	PC Card (Card Bus)		PCMCIA & JEIDA	32 bit memory and I/O bus (33 MHz)	Enhanced Memory Card Headers & Receptacles	68 pos
	Modem		PCMCIA	Shielded interface to attach cable to a PC Card modem	INFOPORT Series III	15 pos
	Modem		Defacto	Unshielded interface to attach cable to a PC Card modem	INFOPORT Series I AMP Taiwan (1mm pitch)	9, 15 pos 4 pos
	LAN		PCMCIA	Shielded I/O port of PC Card. Single row connector on 0.8mm pitch	INFOPORT Series III (type 2 cards) AMP Taiwan (types 1&2)	15 pos 15 pos
	SCSI	Small Computer Sys. Interface	PCMCIA	SCSI-2 interface via PC Card	INFOPORT Series II	33 pos
Set Top Box	CATV MAN	Cable Television Metropolitan Area Network	IEEE 802.14	Standard protocol for CATV based broadband communi-cations network.	(pending)	
	DAVIC	Digital Audio-Visual Council	Defacto (Digital Audio-Visual Council)	Interactive TV set top interface	(pending)	
	EIA Decoder Interface	Electronic Industries Association/National Cable TV Association	EIA/NCTA	Set top box interface mandated by FCC	CHAMP .050 Series II (pending)	20 or 26 pos
	Set Top Interface		Defacto (Bell Atlantic, NYNEX, Pactel)	Interactive TV set top interface	(pending)	
	VOST	VESA Open Set Top	Defacto (VESA)	Incorporates VMC standard into Set Top Box	(pending)	
Video I/O	EVC	Enhanced Video Connector	Defacto (VESA)	Next generation I/O connector for high performance monitors (.075" pitch)	{NOM} (pending)	30+4 pos
	FPDI	Flat Panel Display Interconnect	Defacto (VESA)	Connector for Flat Panel Displays	CHAMP .8mm (pending)	31,41 pos
	VAFC	VESA Advanced Feature Connector	Defacto (VESA)	Graphics/video subsystem interface	CHAMP .050 Series I	80 pos
	VESA DDC	Video Electronic Standards Association Display Data Channel	Defacto (VESA)	Video Monitor Interconnect	AMPLIMITE HD-22 AMPMODU .100	15 pos 5 pos
	VGA	Video Graphics Adapter	Defacto (IBM)	Video Monitor Interconnect	AMPLIMITE HD-22	15 pos
	VMC	VESA Media Channel	Defacto (VESA)	Graphics/video subsystem interface	CHAMP .050 Series I	68 pos

Terminator Selection Guide

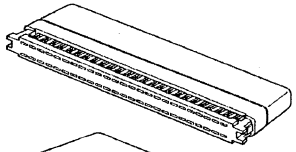
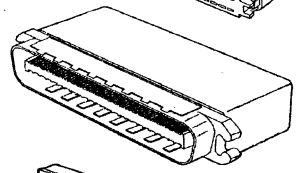
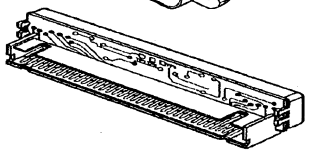
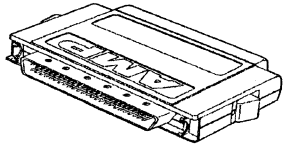
Passive
In some applications **Passive** terminators have been used successfully. However, as clock rates and signal transition speeds increase, and noise margins decrease, the passive terminator can no longer ensure a reliable signal.

Active
To create a reliable signal with longer cable runs up to 6 meters and higher data rates, you need **Active** SCSI Terminators. Through the use of a voltage regulator, the terminator has immunity to Term-PWR voltage variations. Additionally, the lower impedance of the active Terminator, typically 110 ohms, more closely matches that of the cable.

Active Negation
If you're using an **Active Negation** driver to insure cleaner signals, you need our Active Negation Compatible Terminators, which can sink the current being sourced by the driver.

Forced Perfect (FPT)
If the cabling has different impedances or lengths exceeding 6 meters, a better choice may be a **Forced Perfect** Terminator. The resistors and diodes work together to push impedance higher and lower than the line impedance. This happens so quickly that it convinces the signal that it is seeing a perfect impedance match.

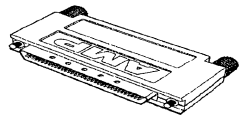
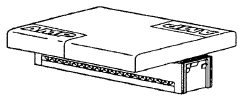
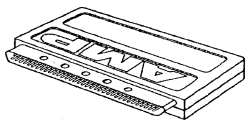
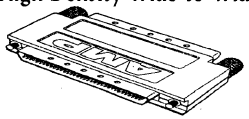
Differential
A resistor network that provides a reliable signal for cable lengths up to 25 meters.

Type	AMP P/N	Product Description	Version	Application		Termination				
				Internal (Unshielded)	External (Shielded)	Single Ended				Differential
						Passive	Active	Active Negation	FPT	
Low Density Narrow 	869574-1	AMP-LATCH 50 position IDC Terminator for use with .050 center line ribbon cable	SCSI 1,2	X			X			
	556578-1	CHAMP style plug Terminators that mate with .085" centerline SCSI ports	SCSI 1,2		X	X				
	555867-1		SCSI 1,2		X					X
	869906-1		SCSI 1,2		X			X		
	869924-2*		SCSI 1,2		X		X			
	869587-1	50 position plug Terminators that mate with .100" c/l ribbon cable receptacle connectors	SCSI 1,2	X		X				
	869884-1		SCSI 1,2	X			X			
	869758-1		SCSI 1,2	X				X		
High Density Narrow 	750881-1	50 position AMPLIMITE .050 Series plug Terminators	SCSI 1,2		X	X				
	869546-1		SCSI 1,2		X		X			
	869545-1		SCSI 1,2		X					X
	869593-1		SCSI 1,2		X				X	

*w/LED

(Chart Continued Next Page)

Terminator Selection Guide (Continued)

Type	AMP P/N	Product Description	Version	Application: Internal (Unshielded)	Application: External (Shielded)	Termination: Single Ended: Passive	Termination: Single Ended: Active	Termination: Single Ended: Active Negation	Termination: Single Ended: FPT	Termination: Differential
High Density Wide 	869515-1	68 position AMPLIMITE .050 Series plug Terminators	SCSI 3		X					X
	869516-1		SCSI 3		X		X			
	869725-1		SCSI 3		X			X		
	869867-1		SCSI 3		X				X	
	869705-1	68 position IDC Terminator for use with .025" centerline ribbon cable	SCSI 3	X				X		
	869794-1		SCSI 3	X						X
	869888-1		SCSI 3	X			X			
	869866-1	68 position AMPLIMITE .050 Series receptacle Terminator designed to mate with ribbon cable header connectors	SCSI 3	X				X		
	869899-1	68 position AMPLIMITE .050 Series plug Terminator designed to mate with ribbon cable receptacle connectors	SCSI 3	X			X			
High Density Wide to Wide 	869684-1	AMPLIMITE .050 Series Feed-Thru Terminator, 68 position plug to 68 position receptacle	SCSI 3		X			X		
	869682-1		SCSI 3		X					X
High Density Wide to Narrow	869680-1	AMPLIMITE .050 Series Feed-Thru, 68 position receptacle to 50 position plug (9 lines Terminated)	SCSI 2,3		X			X		
	869678-1		SCSI-2,3		X					X

AMP-LATCH, AMPLIMITE and CHAMP are trademarks.

Feed-Thru — If you have one Input/Output port, and you need to keep your external SCSI bus terminated, you need our **Feed-Thru** Terminators. For connecting 8 & 16-bit devices we have adaptors with 9-lines terminated.
.025/.050 Pitch — For internal applications, where light-weight, flexible ribbon cable is preferred or Plug and Play (PnP) compatibility is needed.
Low Density Narrow — Refers to a 50 position AMP-LATCH or CHAMP style Terminator.
High Density Narrow — Refers to a 50 position AMPLIMITE .050 Series Terminator.
High Density Wide — Refers to a 68 position AMPLIMITE .050 Series Terminator.

Wire to Board — Product Line Selection Guide

AMP Product Line	Discrete Wire	Ribbon Cable	Flexible Circuit	Centerline Spacing	# of Positions	Wire Gauge	Cable Termination	Current Rating (max)	Cycle Life	Features
0.5mm FPC	No	No	Yes	0.5mm	10-30	—	Insert	.3 Amps	20-Tin	R/A only
1.0mm FPC	No	No	Yes	1.0mm	4-30	—	Insert	1 Amp	30-Tin	Vertical and R/A
1.25mm FFC	No	No	Yes	1.25mm	4-40	—	Insert	1 Amp	20-Tin	Vertical and R/A
AMP-LEAF	Yes	No	No	.156"	6-36	26-16	Crimp	5 Amps	250-30Au	
AMP-Latch Pin I/O	No	Yes	No	.100 x .100"	10-64	28,26	IDC	1 Amp	100-30Au	With & without mounting ears
AMP-LATCH 2mm	No	Yes	No	2mm x 2mm	8-50	28	IDC	1 Amp	150	RCAM compatible
AMP-LATCH Card Edge	No	Yes	No	.100 x .100"	10-64	28,26	IDC	1 Amp	150	Slotted mounting ears available
AMP-LATCH Dip Plug	No	Yes	No	.100 x .1,.3,.6"	10-64	28,26	IDC	1 Amp	150	Kinked legs on .100 x .100"
AMP-LATCH Novo	No	Yes	No	.100 x .100"	10-64	28, 26	IDC	1 Amp	150-30Au	RCAM compatible
AMP-LATCH Uni-Beam	No	Yes	No	.100 x .100"	10-64	28,26	IDC	1 Amp	150-30Au	RCAM compatible
AMP-LATCH System 50	No	Yes	No	.050 x .100"	10-100	32,30	IDC	.5 Amp	150-30Au	Smallest pitch
AMPLIMITE .050	Yes		No	.050"	20-120	30, 28	IDC	1 Amp	500-30Au	Shielded
		Yes	No	.050"	50,68	30, 28	IDC	1 Amp	500-30Au	Shielded
AMPMODU MOD I	Yes	No	No	.156"	2-25	26-18	Crimp	5 Amps	200-30Au	Polarized
AMPMODU MOD IV, IV 1/2, V	Yes	No	No	.100"	1-70	32-20	Crimp	3 Amps	200-30Au	Offered in 3 mating pressures
AMPMODU MT	Yes	Yes	No	.100"	6-64	30-20	IDC	3 Amps	200-30Au	Mass terminated
AMPMODU MTE	Yes	Yes	No	.100"	2-25	30-22	IDC	3 Amps	200-30Au	Improved header hold down
AMPMODU Short Point	Yes	No	No	.100"	4-52	32-20	Crimp	3 Amps	200-30Au	Reliable contact retention
AMPMODU System 50	No	See AMP-LATCH	Yes	.050"	8-100	—	Multiple Crimp	1.5 Amps		
AMPMODU Wire Lock	Yes	No	No	.156"	2-8	24-20	Strip & Poke	100mA	3-Tin	One piece Wire to Board Conn.
CHAMP .050 Series I	No	Yes	No	.050"	50-100	32-30	IDC	1 Amp	500-30Au	.025" centerline cable
Crimp Snap Twin Leaf	Yes	No	No	.100"	6-50	28-20	Crimp	5 Amps	250-30Au	Available with and without
	Yes	No	No	.125"	6-44	22-18	Crimp	5 Amps	100-15Au	mounting ears
	Yes	No	No	.156"	6-36	20-16	Crimp	5 Amps		
Eurocard	Yes	No	No	.100"	32,64,96	30-22	IDC	1 Amp	200	Preloaded housing
EUROLATCH	No	Yes	No	.100"	64	30-26	IDC	1 Amp	150	
FFC PCB Edge Connector	No	No	Yes	.100"	18-70	—	Multiple Crimp	2 Amps		With and without mounting ears
FFC Receptacle Contact	No	No	Yes	.050"	unlimited		Multiple Crimp	1.5 Amps	100-30Au	

(Chart Continued Next Page)

Wire to Board — Product Line Selection Guide (Continued)

AMP Product Line	Discrete Wire	Ribbon Cable	Flexible Circuit	Centerline Spacing	# of Positions	Wire Gauge	Cable Termination	Current Rating (max)	Cycle Life	Features
FFC Receptacle Housing	No Yes	No No	Yes Yes	.050" .100"	4-100 3-64	—	Multiple Crimp Multiple Crimp	1.5 Amps 2 Amps		Single and dual row available
FFC Solder Tabs	No	No	Yes Yes	.050" .100"	unlimited	—	Multiple Crimp Multiple Crimp	1.5 Amps 2 Amps		90 degree bend
HDF-20	No	Yes	No	.109"		28	IDC	1 Amp	150	RCAM Compatible
Hi-Current Edge	Yes	No	No	.312"	3-12	16-10	Crimp	30 Amps		
I/O Screw Terminal PCB Edge	Yes	No	No	5mm	8,12,16, 18,20		Screw	5 Amps	100	
Locking Clip	Yes		No	.100"	1-20	30-20	Crimp	3 Amps	50-30Au	Reliability
Modified Fork	Yes	No	No	.156"	3-22	26-18	Crimp	5 Amps	50-30Au 25-Tin	
RV100	Yes	Yes	No	.100"	9-96	30-22	IDC	1.5 Amps		Mates to connector tails on rear side of backplane
Tandem Spring	Yes	No	No	.100"		32-20	Crimp	3 Amps	200-30Au	Mates to posts as short as .125"
TERMI-BLOK	Yes	No	No	.200" & 5mm	1-10	24-12	Screw	10 Amps		One & two piece configurations
Trio-Mate	No	No	Yes	.100"	2-22	—	Insert	1 Amp	25-Tin	Vertical and R/A
ZIF-Line .050	No	No	Yes	.050"	5-55	—	Insert	1 Amp	50-Tin	Vertical only
ZIF-Line .100	No	No	Yes	.100"	8-22	—	Insert	1 Amp	50-Tin	Vertical only

Wire to Wire — Product Line Selection Guide

AMP Product Line	Discrete Wire	Ribbon Cable	Flexible Circuit	Centerline Spacing	# of Positions	Wire Gauge	Cable Termination	Mated Connector Retention	Current Rating (max)	Cycle Life	Features
AMP-LATCH I/O Pin	No	Yes	No	.100 x .100"	10-64 (12 sizes)	30-26	IDC	Latches	1 Amp	100-30Au 50-15Au	With and w/o mounting ears
AMP-LATCH Receptacle	No	Yes	No	.100 x .100"	10-64 (12 sizes)	28-26	IDC	Latches	1 Amp	150-30Au 75-15Au	
AMPLIMATE (Serpent)	Yes	No	No	.125 x .250"	48	30-18	Crimp	Jackscrews Screwlocks		500-30Au	Shielding available
AMPLIMITE HD-20	Yes	No	No	.108 x .112"	9,15,25, 37,50	28-18	Crimp, Solder	Screwlocks	1.2-3.7 Amps	500-30Au 100-AuFl	Hardware Accessories
AMPLIMITE HD-22	Yes	No	N o	.090 x .078"	15,26,44, 62,78	32-22	Crimp	Screwlocks	.95-1.9 Amps	500-30Au 100-AuFl	Hardware Accessories
AMPLIMITE HDE-20	Yes	No	No	.108 x .112"	9,15,25, 37	30-18	Crimp IDC	Screwlocks	1.0-3.7 Amps	500-30Au 100-AuFl	Hardware Accessories
AMPMODU MOD IV	Yes	No	No	.100 x .100"	6-50	32-20	Crimp	No	3 Amps	200-30Au	Free hanging
AMPMODU MTE	Yes	Yes	No	.100"	2-25	30-22	Crimp IDC	Latch	3 Amps	200-30Au	Panel mount
CPC — Series 1	Yes	No	No	Various	4-37	30-14	Crimp	Coupling	13 Amp	500-30Au	Free hanging
CPC — Series 2	Yes	No	No		8-63	28-18	Crimp	Rings	3.7 Amp	500-30Au	and panel mount
CPC — Series 3	Yes	No	No		3,7	16-8	Crimp		25 Amp	500-30Au	
CPC — Series 4	Yes	No	No		8s5p-20s2p	30-8	Crimp		25 Amp	500-30Au	
FFC Pin & Receptacle	Yes	No	Yes	.100"	3-64	32-22	Crimp	Detents	2 Amps	100-30Au 50-Tin	With and w/o ears
Metal Shell CPC — Series 1	Yes	No	No	Various	5-37	30-14	Crimp	Coupling	13 Amp	500-30Au	Free hanging
Metal Shell CPC — Series 2	Yes	No	No		28,57,63	28-18	Crimp	Rings	3.7 Amp	500-30Au	and panel mount
Metal Shell CPC — Series 3	Yes	No	No		3,7	16-8	Crimp		25 Amp	500-30Au	in selected
Metal Shell CPC — Series 4	Yes	No	No		8s5p-20s2p	30-8	Crimp		25 Amp	500-30Au	series
Metrimate	Yes	No	No	5 x 5mm	1-36 (11 sizes)	26-16	Crimp	Plastic latches	13 Amps	500-Au 50-Tin	Square grid and In-line

Board to Board (One Piece) — Product Line Selection Guide

Product Line	Vertical	Right Angle	Straddle Mount	Center-line spacing	# of dual pos	SMT	SMT Com-patible	PTH	Press Fit	Current Rating (max)	Cycle Life	Features
.6mm Card Edge	Yes	No	No	.6mm (.0236")	100	Yes	Yes	No	No	.5 Amp	20-8Au	Accepts 1.2mm (.0472") circuit boards
AMPLIFLEX	Yes	Yes	No	.004"	various	Yes	Yes	No	No	.5A per .015"	1000 at room temp	No solder
AMP PACE	Yes	No	No	.100"	10-60	No	No	No	Yes	3 Amps	100-30Au	No solder,
and	Yes	No	No	.125"	18-50	No	No	No	Yes	3 Amps	100-30Au	Card guides,
ECONOMATE	Yes	No	No	.156"	15-43	No	No	No	Yes	3 Amps	100-30Au	Open ends, end caps
CHAMP .050 Series I Rcpt	Yes	Yes	No	.050"	20-200	No	Yes	Yes	Yes	1 Amp	500-30Au	Mates with.063" +/- .003" PCB
AMP-LEAF	No	Yes	No	.156"	6-36	No	No	Yes	No	5 Amps	100-15Au 250-30Au	Some sizes mate with .093" PCB
Crimp Snap Twin Leaf	Yes		No	.100"	6-30	No	No	Yes	No	3 Amps	250-30Au	Available with and
		Yes	No	.100"	10-50	No	No	Yes	No	3 Amps	100-15Au	without mounting
	Yes		No	.125"	18-30	No	No	Yes	No	3 Amps		ears
		Yes	No	.125"	28-40	No	No	Yes	No	3 Amps		
				.156"	6-36	No	No	Yes	No	3 Amps		
High Speed Standard Edge	Yes	No	No	.025"	30-130	Yes	Yes	Yes	No	1 Amp	25-30Au	Metal hold-down
Linear ZIF	Yes	No	No	.100"	35-175	No	No	Yes	Yes	3 Amps	250	
	Yes	No	No	.125"	32-140	No	No	Yes	Yes	3 Amps		
Low Profile	Yes	No	No	.125"	6-50	No	No	Yes	No	5 Amps	250-30Au	Keying
	Yes	No	No	.156"	6-43	No	No	Yes	No	5 Amps		Single Readout
P2 (Place and Press)	Yes	No	No	1.25mm	2, 11	Yes	Yes	No	No	1 Amp	30	1.5-6.0mm stack heights planned
Rotary ZIF	Yes	Yes	Yes	.100"	22-65	No	No	Yes	No	3 Amps	5000	Top entry
	Yes	Yes	Yes	.125"	28-50	No	No	Yes	No	3 Amps		Side entry
	Yes	Yes	Yes	.156"	15-43	No	No	Yes	No	3 Amps		
Standard Edge .050	Yes	No	No	.050"	12-120	No	Yes	Yes	No	1 Amp	100- Au	Metal hold-down
Standard Edge .050 PCI	Yes	No	No	.050"	60, 92	Yes	Yes	Yes	No	1 Amp	100- Au	Metal hold-down Special keying
Standard Edge II	Yes	Yes	Yes	.100"	3-70	No	Yes	Yes	No	3 Amps	250-30 Au	Keying available
	Yes	No	Yes	.125"	6-50	No	No	Yes	No	3 Amps	100-15 Au 5-AuFl	
Twin Leaf Mother Board	Yes	No	No	.100"	3-80	No	No	Yes	No	3 Amps	100-15Au	Keying,
	Yes	No	No	.125"	6-50	No	No	Yes	No	3 Amps	100-15Au	Open ended,
	Yes	No	No	.150"	4-50	No	No	Yes	No	3 Amps	100-15Au	Card guides,
	Yes	No	No	.156"	3-56	No	No	Yes	No	3 Amps	100-15Au	End caps

Board to Board (Two Piece) — Product Line Selection Guide

AMP Product Line	Right Angle	Parallel	Co-Planar	Centerline Spacing	# of Positions	Density (Lines/Inch)	Sequencing	SMT	SMT Comp	Press Fit	Features
.6mm FH (Free Height)	No	Yes	No	.6mm	40-200	84.7	No	Yes	Yes	No	3Q95 release
.8mm FH (Free Height)	No	Yes	No	.8mm	40-200	63.5	No	Yes	Yes	No	5-16 mm stack heights
2.0mm AF (Alignment Free)	No	Yes	No	2mm	30	25.6	No	Rcpt-Y Tab-N	Rcpt-Y Tab-N	No	Accepts angled pcb's up to 15 degrees
AMPLIMITE .050 Series I	Yes	Yes	Yes	.050"	30-96	40	No	No	No	No	All plastic housings
AMPMODU	Yes	Yes	Yes	.100"	2-80	20	No	Yes	Yes	Yes	Board retention available
AMPMODU Stacking	No	Yes	No	.100"	40,52	20	No	No	No	Yes	Not compatible with .025" product line
AMPMODU .031 x .062	Yes	Yes	Yes	.156"	2-14	6.4	No	No	No	No	
AMPMODU 50/50 Grid	Yes	Yes	No	.050"	10-100	40	No	Yes	Yes	No	.250, .320, .390" stack heights, holddowns
AMPMODU System 50	Yes	Yes	No	.050"	10-100	40	No	Yes	Yes	No	Holddowns on SMT
AMPMODU Two-Piece-2 row	Yes	Yes	Yes	.100"	12-200	20	Yes	No	Rcpt-Y	Yes	Board retention feature is available
AMPMODU Two-Piece-3 row	Yes	No	No	.100"	30-300	30	Yes	No	Rcpt-Y	Yes	
CHAMP .050 FH	Yes	Yes	Yes	.050"	40-180	40	No	Yes	Yes	No	8-18mm stack heights
CHAMP .050 High Density	No	Yes	No	.050"	140-300	80	No	No	Yes	No	4 row interface
CHAMP .050 Series I	Yes	Yes	Yes	.050"	20-200	40	Yes	No	Yes	Yes	2 row interface
Enhanced Eurocard	Yes	No	No	.100"	96+G.P.	30 + G.P.	2	No	No	Yes	Good electrical performance
Eurocard - 2 row	Yes	Yes	Yes	.100"	32-64	20	Yes	No	Yes	Yes	Boardlocks
Eurocard - 3 row	Yes	Yes	Yes	.100"	32-150	30	Yes	No	Yes	Yes	Flat rock tooling for receptacles
Eurocard - 4 row	Yes	No	Yes	.100"	128	40	No	No	No	Yes	
Eurocard - 5 row	Yes	No	Yes	.100"	160	50	No	No	No	Yes	
HDI	Yes	Yes	Yes	.100"	75-684	40	No	No	Yes	Yes	2,3 and 4 row
Metristak 1.0mm	No	Yes	No	1.0mm	20-70	50.8	No	Yes	Yes	No	Tape package, Holddown available
Micro-Strip	Yes	Yes	No	.050"	40-240	40 + G.P.	2	No	Yes	Yes plugs	Solder preforms on R/A receptacle, .430-.738" variable stack heights
MICTOR	Yes	Yes	No	.025"	38-266	76 + G.P.	2	Yes	Yes	No	Holddowns for SMT, Redundant interface
ROCKER MATE	No	Yes	No	2mm	13-26	12.7	No	No	No	No	Non-parallel boards
TBC & TBC II	Yes	No	Yes	.100"	90-540	40	Yes	No	Yes	Yes	3 and 4 row
TBC Plus	Yes	No	Yes	.100"	180-1000+	60	Yes	No	No	Yes	Good performance down to 1 nsec.
Z-PACK 2mm FB	Yes	No	Yes	2mm	24-504	50.8	Yes	No	Yes	Yes	4 row
Z-PACK 2mm HM	Yes	Yes	Yes	2mm	110-925	63.5	Yes	No	No	Yes	5 row
Z-PACK SL-100	Yes	No	Yes	.100"	120-820	40 + G.P.	Yes	No	Yes	Yes	Integral groundplanes

Specifications subject to change.

1-800-522-6752 Product Information Center/ AMP FAX Service
1-800-722-1111 Tooling/Technical Assistance Center

I/O Connector — Product Line Selection Guide

AMP Product Line	Contact Pitch	# of Positions	Vertical	Right Angle	SMT	SMT Comp	PTH	AWG Range	Cable Termination	Mated Connector Retention	Features
.8mm CHAMP	0.8mm	36-90	90 only	Yes	90 only	Yes	68 only	30	Insulation Displacement	Screwlocks Latches	High density Low profile
AMPLIMITE .050	.050"	20-120	Yes	Yes	No	Yes	Yes	30-26	Insulation Displacement	Screwlocks Latches	Shielded
AMPLIMITE Coax Mix	various	3C3 13C3	No No	Yes Yes	No No	No Yes	Yes Yes	N/A N/A	N/A N/A	Screwlocks Screwlocks	Front metal shell Boardlocks
AMPLIMITE HD-20	.109"	9,15,25, 37,50	Yes	Yes	Yes	Yes (A3)	Yes	28-20	Crimp Snap	Screwlocks Slide Latch	Stacked versions available
AMPLIMITE HD-22	.090" .095"	15,26,44,62 78	Rcpt-all Plug-15,78	Yes	No	No	Yes	28-22	Crimp Snap	Screwlocks	Board mount housing rated to 220 degrees C
AMPLIMITE HDE-20	.109"	9,15,25,37	No	No	No	No	No	30-20	Insulation Displacement	Screwlocks Slide Latch	Cable half only, Metal shell and all plastic
Audio/Instrument Connector		4,5,6	Yes	No	No	No	No	28-22	Crimp Snap	Coupling Ring	Low cost unshielded cable to panel I/O
CHAMP .050 Series 2	.050"	14-100	Yes	Yes	No	Yes	Yes	30-28	Insulation Displacement	Latches	Ribbon style contacts Includes panel mount ribbon cable receptacle
CPC	.108-.197"	3-63 (16 sizes)	4-63 (11 sizes)	No	No	No	Yes	30-10	Crimp Snap	Coupling Ring	High reliability and durability, Sealed
Econoseal		1-9 (all sizes)	No	No	No	No	No	18-14	Crimp Snap	Squeeze to Release	Low cost sealed connector, Proven contacts, Panel mount
M Series		6-160 (19 sizes)	Yes	34 only	No	No	Yes	28-10	Crimp Snap	Jackscrews Latches	
AMPLIMITE HDF	.109"	9,15,25, 37,50	No	No	No	No	No	28-26	Insulation Displacement	Screwlocks Slide Latch	Metal or Plastic shell R-Cam compatible
EUROLATCH Receptacle	.100"	64	No	No	No	No	No	28-26	Insulation Displacement		Ribbon Cable, Cost effective termination
Universal I/O Pin Connector	.100"	10-64 (13 sizes)	No	No	No	No	No	28-26	Insulation Displacement		Ribbon Cable, R-Cam compatible
Metal Shell CPC	.108-.150"	3-63 (12 sizes)	No	No	No	No	No	30-10	Crimp Snap	Coupling Ring	Rugged, High reliability
Mini Circular DIN		4,6,7,8	Yes	Yes	No	Yes	No	28-24	Crimp Snap	Detents	Shielded
SDL	.050"	4,6,8,16	Yes	Yes	No	Yes	No	28-24	Insulation Displacement	Latches	Shielded

Blindmate Connector — Product Line Selection Guide

AMP Product Line	Wire to Wire	Wire to Board	Board to Board	Bus Bar to Board	Current Rating (max)*	Voltage Rating	# of Positions	Wire Gauge	Features
AMP-LEAF Drawer	Yes	Yes	No	No	4 Amps	600 VAC (UL)	6,10	.14-.36 mm^2	Uses AMP-LEAF contacts
CHAMP .050 Series 1 Single Connector Attachment (SCA 2)	No	No	Yes	No	1 Amp	250 VAC	80	N/A	Single I/O connector for 3.5" SCSI Disk Drives (signal & power)
CHAMP 1mm Micro-Drawer	No	No	Yes	No	.5 Amp	240 VAC	20-60 102,120	N/A	Hermaphroditic Plug and Rcpt, Vert. & R/A
CHAMP .050 Series Low Profile Docking	No	No	Yes	No	1 Amp	250 VAC	72, 160, 200, 240	N/A	Sequenced contacts, +/- 2mm misalignment. Rugged guide pins
CHAMP .050 SCA2	No	No	Yes	No	1 Amp	250 VAC	40, 80	N/A	Sequenced contacts, +/- 2mm misalignment ESD protection
Eurocard	No	No	Yes	No	1 Amp	250 VAC	48, 96, 120	N/A	Industry standard interface
High Current Drawer	Yes	No	No	No	S-7 Amps P-10 Amps	250 VAC	24 (20S+4P)	S 24-20 P 20-16	Signal and power, Uses MIC contacts for power
Metrimate	Yes	Yes	No	No	S-13 Amps P-50 Amps	600 VAC (UL)	4-25	S 30-14 P 18-8	Louvertac power contacts available
Pluggable Bus Bar	No	No	No	Yes	500 Amps	—	1	N/A	
Power Drawer	Yes	No	No	No	15 Amps	240 VAC	3	18-14	Tab & Timer contacts
Standard Drawer	Yes	No	No	No	S-7 Amps P-15 Amps	250 VAC	8,12,16, 20,24	24-14	Signal and power
Z-PACK Disk Array	No	No	Yes	No	S-1 Amp P-5 Amps	S-48VAC P-75 VAC	152 (140S+12P)	N/A	Disk Array Systems RAID Systems

*S = Signal P = Power

Specifications subject to change.

1-800-522-6752 Product Information Center/ AMP FAX Service

1-800-722-1111 Tooling/Technical Assistance Center

PCB Parallel Stacking Guide
(by ascending dimension)

Dim. Between PC Boards [mm]	Connector Family	Pin Count	Base P/N Plug/Recept.	Variations Plug/Recept.	Catalog Number
.020 [0.51]	AMPMODU .025 Square	Unlimited	103577	Bandolier Post	65816
.020 [0.51]	Mini-Spring Socket	Unlimited	50864	Mini-Spring Socket	82172
.040-.380 [1.02-9.65]	AMPLIFLEX	50 to 1000 plus	485351	Resilient Surface to Surface	82161
.050 [1.27]	AMPMODU Mod I	Unlimited	86147/86477	Machine Applied/ Bottom Entry	82060
.050 [1.27]	AMPMODU Mod I	Unlimited	86147/87983	Bottom Entry	82060
.060 [1.52]	AMPMODU .025 Square	2-80	103577/ 102261 & 534267	Bandolier Post/ Bottom Entry	65816
.060 [1.52]	AMPMODU .025 Square	2-80	103577/535959	Bandolier Post/ Surface Mount Bottom Entry	65816
.090 [2.29]	AMPMODU .025 Square	2-80	102973/ 102261 & 534267	Breakaway Header/ Bottom Entry	65816
.090 [2.29]	AMPMODU .025 Square	2-80	102973/535959	Breakaway Header/ Surface Mount Bottom Entry	65816
.120 [3.05]	INTERPOSER	Unlimited	823013	Fine Pitch Compressive	N/A
.125 [3.18]	AMPMODU Mod I	Unlimited	87160/86477	Machine Applied/ Bottom Entry	82060
.125 [3.18]	AMPMODU Mod I	Unlimited	87160/87983	Bottom Entry	82060
.153 [3.89]	AMPMODU .025 Square	4-30/10-80	146130/535959	SMT/SMT (Breakaway Hdr/Mod IV Bottom Entry)	65816
.197 [5.00]	1.25 mm F-P	4-30	174642/174633	SMT/SMT	82252
.197 [5.00]	AMPMODU 1 mm Metristak	20-70	146056/535697	SMT Only	65790
.197 [5.00]	0.8 mm F-P	16-48	178749/175341	SMT Only	82252
.197 [5.00]	FH 0.8 mm	40-200	177984/177983	SMT/SMT	65981
.236 [6.00]	FH 0.8 mm	40-200	179029/177983	SMT/SMT	65981
.240 [6.10]	AMPMODU 2 mm	4-50	176264/176135	SP/SP	82771
.250 [6.35]	RA SIMM	40-84	382486/382487	—	82172
.250 [6.35]	RA SIMM	30-35	382488/382489	.100 centerline	82172
.250 [6.35]	AMPMODU 50/50 Grid	10-100	104655/104652	SMT Only	82643
.265 [6.73]	AMPMODU .025 Square	2-80	535542/103577 103577/534998	Bandolier	65816
.267 [6.78]	Hinge (Reverse)	7-30	173991/173992	2 mm	82230
.275 [7.00]	1.25 mm F-P	4-30	174820/174637	SMT/SMT	82252
.276 [7.00]	FH 0.8 mm	40-200	179030/177983	SMT/SMT	65981
.300 [7.62]	AMPMODU Mod I	Unlimited	86147/87003	Machine Applied/ Top Entry	82060
.300 [7.62]	AMPMODU Mod I	Unlimited	86147/87985	Top Entry	82060

SOURCE: Catalog 124178

Specifications subject to change.

1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

PCB Parallel Stacking Guide

(by ascending dimension)

(Continued)

Dim. Between PC Boards [mm]	Connector Family	Pin Count	Base P/N Plug/Recept.	Variations Plug/Recept.	Catalog Number
.312 [7.92]	2 mm Bottom Entry	5,6	174711/174074	SP/SP	124962
.315 [8.00]	FH Connector (CHAMP .050)	40-180	176380/176368	SP/SP	82244
.315 [8.00]	FH 0.8 mm	40-200	179031/177983	SMT/SMT	65981
.320 [8.13]	AMPMODU 50/50 Grid	10-100	104656/104652	SMT Only	82643
.354 [9.00]	FH Connector (CHAMP .050)	40-180	176380/176369	SP/SP	82244
.354 [9.00]	FH 0.8 mm	40-200	177984/179009	SMT/SMT	65981
.355 [9.02]	AMPMODU .025 Square	2-80	103186/534998	Breakaway Header/ Low Profile Top Entry	65816
.355 [9.02]	AMPMODU .025 Square	2-80	103186/535923	Breakaway Header/ Top Entry Surface Mount	65816
.385 [9.78]	AMPMODU .025 Square	10-60	103308/534998	Low Profile Shrouded Header/ Low Profile Top Entry	65816
.390 [9.91]	AMPMODU 50/50 Grid	10-100	104693/104652	SMT Only	82643
.394 [10.00]	FH Connector (CHAMP .050)	40-180	176380/176370	SP/SP	82244
.394 [10.00]	FH 0.8 mm	40-200	179029/179009	SMT/SMT	65981
.418 [10.62]	AMPMODU .025 Square	4-30/10-80	146130/535923	SMT/SMT (Breakaway Hdr/Mod IV Top Entry)	65816
.425 [10.80]	AMPMODU .031 x .062	Unlimited	87160/87003	Machine Applied	82060
.425 [10.80]	AMPMODU .031 x .062	Unlimited	87160/87985	Top Entry	82060
.430 [10.92]	AMPMODU .025 Square	2-80	102973/534206	Breakaway Header/ Top Entry	65816
.430 [10.92]	Micro-Strip	40-200	536280/536279 536302/536296	AP/SP	65194
.433 [11.00]	FH Connector (CHAMP .050)	40-180	176380/176371	SP/SP	82244
.433 [11.00]	FH 0.8 mm	40-200	179030/179009	SMT/SMT	65981
.440 [11.18]	AMPMODU .025 Square	6-60	102699 & 102618/ 534206	Shrouded Header w/ACTION PIN/Top Entry	65816
.450 [11.43]	AMPMODU System 50	5-30	104071/104192	Single Row, Thru-Hole	82178
.450 [11.43]	AMPMODU System 50	10-100	104068/104078	Double Row, Thru-Hole/Thru-Hole	82178
.470 [11.94]	AMPMODU System 50	10-100	104068/104550	Thru-Hole/SMT	82178
.472 [12.00]	FH Connector (CHAMP .050)	40-180	176380/176372	SP/SP	82244
.472 [12.00]	FH 0.8 mm	40-200	179031/179009	SMT/SMT	65981
.472 [12.00]	AMPLIMITE .050 Series	30-60	173279/173280	All Plastic	82068
.495 [12.57]	AMPMODU System 50	10-100	104549/104078	SMT/Thru-Hole	82178
.507 [12.88]	2 mm Bottom Entry	6	174075/174074	SP/SP	124962
.512 [13.00]	FH Connector (CHAMP .050)	40-180	176380/176373	SP/SP	82244

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Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

PCB Parallel Stacking Guide

(by ascending dimension)

(Continued)

Dim. Between PC Boards [mm]	Connector Family	Pin Count	Base P/N Plug/Recept.	Variations Plug/Recept.	Catalog Number
.512 [13.00]	FH 0.8 mm	40-200	177984/179010	SMT/SMT	65981
.515 [13.08]	AMPMODU System 50	10-100	104549/104550	SMT/SMT	82178
.517 [13.13]	AMPLIMITE .050 Series	50 & 100	749085/749070	Shielded	82068
.528 [13.41]	ACTION PIN Stacking	20-60	173146/173145	3 Brd.	65816
.531 [13.49]	CHAMP .050 Series 1	30-130	175473/175475	SP/SP	82244
.547 [13.89]	ACTION PIN Stacking	20-60	173146/173145	2 Brd.	65816
.550 [13.97]	AMPMODU Two-Piece	12-160	102690/534972	Shrouded Header w/ ACTION PIN	65816
.551 [14.00]	FH Connector (CHAMP .050)	40-180	176380/176374	SP/SP	82244
.551 [14.00]	FH 0.8 mm	40-200	179029/179010	SMT/SMT	65981
.590 [15.00]	FH 0.8 mm	40-200	179030/179010	SMT/SMT	65981
.590 [14.99]	Z-PACK 2 mm HM	End Stackable	106773/100141	5 Row	65911
.590 [14.99]	ROCKER MATE	20,26	176472/176473	Single Row	65816
.591 [15.00]	FH Connector (CHAMP .050)	40-180	176380/176375	SP/SP	82244
.600 [15.24]	AMP-HDI	20-200	532446/533289	2 Row	82618
.600 [15.24]	AMP-HDI	75-225†	532447/533287	3 Row	82618
.600 [15.24]	AMP-HDI	40-300†	532448/533285	4 Row	82618
.606 [15.39]	ROCKER MATE	13,20	176472/176473	Single Row	65816
.630 [16.00]	FH Connector (CHAMP .050)	40-180	176380/176376	SP/SP	82244
.630 [16.00]	FH 0.8 mm	40-200	179031/179010	SMT/SMT	65981
.651 [16.54]	AMPLIMITE	25*	745968/745458	Thru-Hole, S/P, FMS/ ACTION PIN, All Plastic	82068
.651 [16.54]	Eurocard	64	174254/650861-4	2 Row/SP	82721
.651 [16.54]	Eurocard	32-150	650889-5/535089	3 Row AP/SP	82721
.669 [17.00]	FH Connector (CHAMP .050)	40-180	176380/176377	SP/SP	82244
.708 [17.98]	ROCKER MATE	16	176472/176473	Single Row	65816
.709 [18.00]	FH Connector (CHAMP .050)	40-180	176380/176378	SP/SP	82244
.735 [18.67]	AMPLIMITE	25*	745968/745967	Thru-Hole, S/P, FMS	82068
.735 [18.67]	AMPLIMITE	25*	748146/745925	ACTION PIN, FMS	82068
.738 [18.75]	AMPLIMITE .050 Series SBus	96	178464/750295	SP/SP	82068

SOURCE: Catalog 124178

Specifications subject to change.

1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

PCB Parallel Stacking Guide

(by ascending dimension)

(Continued)

Dim. Between PC Boards [mm]	Connector Family	Pin Count	Base P/N Plug/Recept.	Variations Plug/Recept.	Catalog Number
.738 [18.75]	AMPLIMITE .050 Series SBus	96	174683/750350	SP/SP	82068
.738 [18.75]	Micro-Strip	100	121354/536279	SP/SP	65194
.741 [18.82]	2 mm Bottom Entry	6,9	174161/174074	SP/SP	124962
.748 [19.00]	ACTION PIN Stacking	20-60	173146/173145	3 Brd.	65816
.755 [19.18]	AMPMODU Stacking	40-52	102768/102766	Avail. Limited	65816
.768 [19.51]	ACTION PIN Stacking	20-60	173146/173145	2 Brd.	65816
.779 [19.79]	ROCKER MATE	13,16,20	176472/176473	Single Row	65816
.785 [19.94]	AMPMODU Stacking	40	102871/102766	Avail. Limited	65816
.793 [20.14]	CHAMP	14-64	553443/553444	ACTION PIN	82008
.868 [22.05]	AMPLIMITE	25*	205737/745458	Thru-Hole, S/P, M/S / ACTION PIN, All Plastic	82068
.939 [23.85]	AMPLIMITE	25*	745968/745187	Thru-Hole, S/P, FMS/ Thru-Hole, S/P, M/S	82068
.951 [24.16]	AMPLIMITE	25*	745968/745465	Thru-Hole, S/P, FMS ACTION PIN, All Plastic	82068
1.146 [29.11]	CHAMP	14-64	552116/552118	Solder Pin	82008
1.168 [29.67]	AMPLIMITE	25*	205737/745465	Thru-Hole, S/P, M/S / ACTION PIN, All Plastic	82068
1.169 [29.69]	AMPLIMITE	25*	205737/745187	Thru-Hole, S/P, M/S / Thru-Hole, S/P, M/S	82068
1.200 [30.48]	AMPMODU Stacking	30-40	102826/102766	Avail. Limited	65816
1.225 [31.12]	Micro-Strip	100	536280/121496	SP/SP	65194
1.533 [38.94]	Micro-Strip	100	121354/121496	SP/SP	65194
1.538 [39.06]	AMPLIMITE .050 Series SBus	96	178464/750925	SP/SP	82068
variable	CHAMP .050	20-200	175475	2 vert. Rcpts with INTERPOSER board	82244

*9, 15 & 37 position options are also available for the above configurations.
Please contact the AMP Product Information Center at 1-800-522-6752 for more details.
† Modular versions available for higher pin count.

Coaxial Cable-to-Connector Selection Guide

RF Coaxial Cable Groups

In the product section (section 4) of this catalog the connector selection charts are arranged by cable range groups, indicated by a Selection Code. Various types and styles of connectors are listed for a particular code, showing all the options for that cable range.

The following Cable-to-Connector Selection Guide has been organized for the convenience of a customer trying to find connectors that match a specific coaxial cable. This guide will assist in identifying the selection code when the RG type or manufacturers' part number is known. A manufacturers' part number-to-selection code cross reference is also provided to assist in identifying the selection code for these cables. For cables not listed, consult AMP for connector recommendations.

Connector Cable Range Selection Code	Dielectric Core Size		Center Conductor O.D.		Nominal Impedance (ohms)	Number of Shields	RG Cable Numbers	Nom. Jacket O.D.		Cable Manufacturer
	inch	[mm]	inch	[mm]				inch	[mm]	
A	.034/.036	0.86/0.91	.012	0.3	50	1	178, 178A, 178B	.072	1.83	—
	.034	0.86	.012	0.3	50	1	196, 196A	.072	1.83	—
B	.060	1.52	.019	0.51	50	1	174,174A	.100	2.54	—
	.060	1.52	.020	0.51	50	1	316, 188, 188A	.102/.105	2.60/2.67	—
B1	.057/.063	1.4/1.6	.012	0.3	75	1	179, 179A, 179B	.100	2.54	—
	.057	1.45	.012	0.3	70	1	161	.082	2.08	—
	.060	1.52	.012	0.3	75	1	187, 187A	.105	2.67	—
	.058	1.47	.012	0.3	75	1	—	.097	2.46	Belden 9221
B2	.072	1.83	.011	0.28	—	1	—	.115	2.92	IBM 5353914, Brand Rex T-209A
B3	.060	1.52	.020	0.51	50	2	—	.114	2.90	RD 316, 188 Double Braid
B4	.078	1.98	.016	0.41	75	2	—	.123	3.12	AT&T 735A
B5	.061	1.55	.012	0.30	75	2	—	.123	3.12	AT&T KS 19224 L2
C	0.96	2.44	.030	0.76	50	1	122	.160	4.06	—
C1	.102/.103	2.59/2.62	.012	0.3	95	1	180, 180A, 180B	.140	3.56	—
	.102	2.59	.012	0.3	95	1	195, 195A	.145	3.69	—
C2	.102	2.59	.037	0.94	50	1	—	.185	4.70	Belden 9907
	.095	2.41	.037	0.94	50	1	—	.165	4.19	Belden 89907
	.101	2.57	.037	0.94	50	1	—	.184	4.67	Comm/Scope 3104
	.101	2.57	.037	0.94	50	1	—	.166	4.22	Comm/Scope 2104
C3	.100	2.54	.017	0.43	75	1	—	.150	3.81	Belden 8218
C4	.110	2.79	.025	0.64	—	1	—	.156	3.96	Raychem 7524A1312
D	.116	2.95	.032/.035	0.81/0.89	50	1	58, 58A, 58B, 58C	.195	4.96	—
D1	.102	2.59	.037	.094	50	1	—	.198	5.03	Belden 8219
	.116	2.95	.036/.039	0.92/0.99	50	1	141, 141A	.190	4.83	—
	.116	2.95	.039	0.99	50	1	303	.170	4.32	—
D2	.107	2.72	.032	0.81	50	1	—	.159	4.04	Belden 88240, Berk-Tek BTDC-58
	.116	2.95	.037	0.94	50	1	—	.174	4.42	Comm/Scope 2135
E	.116	2.95	.035	0.89	50	2	223	.211	5.36	—
	.116	2.95	.032/.035	0.81/0.89	50	2	55, 55A, 55B	.200	5.08	—
E1*	.116	2.95	.036/.039	0.92/0.99	50	2	142, 142A, 142B, 400	.195	4.96	—
G	.135	3.43	.025	0.64	73	1	124 (use RG-140)	.240	6.10	—
	.146	3.71	.022	0.56	75	1	—	.220	5.59	Belden 9291, 9209
	.146	3.71	.025	0.64	75	1	140	.233	5.92	—
	.146	3.71	.025	0.64	93	1	210	.242	6.15	—
	.146	3.71	.024/.025	0.61/0.64	93	1	62, 62A, 62B	.242	6.15	—
	.146	3.71	.023/.025	0.59/0.64	75	1	59, 59A, 59B	.242	6.15	—
	.146	3.71	.025	0.64	93	1	—	.242	6.15	Belden 9269
G1	.142	3.61	.025	0.64	93	1	—	.200	5.08	Belden 89269
	.134	3.40	.023	0.58	75	1	—	.193	4.90	Belden 88241, Hi-Temp 62A, Times PL-62, Berk-Tek BTDC-59, BTDC-62
	.146	3.71	.025	0.64	75	1	302	.201	5.11	—

*Can use D group connectors if not weatherproof.

SOURCE: Catalog 82074

Specifications subject to change.
1-800-522-6752
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1-800-722-1111
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Coaxial Cable-to-Connector Selection Guide
(Continued)

Connector Cable Range Selection Code	Dielectric Core Size inch	Dielectric Core Size [mm]	Center Conductor O.D. inch	Center Conductor O.D. [mm]	Nominal Impedance (ohms)	Number of Shields	RG Cable Numbers	Nom. Jacket O.D. inch	Nom. Jacket O.D. [mm]	Cable Manufacturer
G2	.146	3.71	.032	0.81	75	1	—	.215	5.46	Hi-Temp 59, Times PL-59, PLF-59 (20 AWG C.C.)
G3	.146	3.71	.025	0.64	75	2	Double Shield	.270	6.86	—
G4	.144	3.66	.032	0.81	75	1	—	.242	6.15	Belden 9104, 9112, 9240
	.146	3.71	.030	0.76	75	1	—	.242	6.15	Belden 9167, 9259, 9266
	.146	3.71	.032	0.81	75	1	—	.242	6.15	Times FM-59
G5	.146	3.71	.032	0.81	75	1	—	.236	6.00	Belden 9145
	.148	3.76	.033	0.84	75	1	—	.236	6.00	AT&T 734A
H	.146	3.71	.025	0.64	93	2	71, 71A, 71B	.245	6.22	—
J	.185	4.7	.059	1.5	50	2	304	.280	7.11	—
J1	.180	4.57	.040	1.02	75	1	—	.270	6.86	Belden 9248, 9114
K	.185	4.7	.028	0.71	75	2	6, 6A	.332	8.43	—
K2	.200	5.08	.031	0.79	75	2	—	.305	7.75	Belden 8281, 9141, 9231 Western Electric 724, 728, 3049
L	.255	6.48	.084	2.13	50	2	115A	.415	10.54	—
	.247	6.27	.085	2.16	50	2	—	.375	9.53	Belden 89880
	.247	6.27	.085	2.16	50	2	—	.405	10.28	Belden 9880
	.247	6.27	.085	2.16	50	2	—	.375	9.53	Comm/Scope 2280
	.247	6.27	.085	2.16	50	2	—	.405	10.28	Comm/Scope 3250
M	.285	7.24	.085/.089	2.16/2.26	50	1	8, 8A, 213	.405	10.28	—
M1	.285	7.24	.048	1.22	75	1	11, 11A	.405	10.28	—
M2	.285	7.24	.103	2.62	50	1	—	.403	10.23	Belden 9914
	.285	7.24	.102	2.59	50	1	—	.405	10.28	Times FM-8
M3	.285	7.24	.064	1.63	75	1	—	.405	10.28	Alpha 9847
	.285	7.24	.064	1.63	75	1	—	.405	10.28	Belden 8213, 9292
M4	.285	7.24	.093	2.36	50	2	225, 393	.430	10.92	—
M5	.285	7.24	.108	2.74	50	1	—	.403	10.23	Belden 8214
N	.280/.285	7.11/7.24	.085/.088	2.16/2.24	50	2	9, 9A, 9B, 214	.420/.425	10.67/10.79	—
O	.119	3.02	.036	0.91	50	Tube	402 Semi-Rigid/ .141 [3.58]	—	—	—
P	.066	1.68	.020	0.51	50	Tube	405 Semi-Rigid/ .141 [3.58]	—	—	—

Manufacturers' Part Number-to-Selection Code Cross Reference

Manufacturers' Part No.	Connector Cable Range Selection Code
AT&T 734A	G5
AT&T 735A	B4
AT&T KS 19224 L2	B5
Alpha 9847	M3
Belden 8213	M3
Belden 8214	M5
Belden 8218	C3
Belden 8219	D1
Belden 88240*	D2
Belden 88241*	G1
Belden 88281*	K2
Belden 8281	K2
Belden 9104	G4
Belden 9112	G4

Manufacturers' Part No.	Connector Cable Range Selection Code
Belden 9114	J1
Belden 9141	K2
Belden 9145	G5
Belden 9167	G4
Belden 9209	G
Belden 9221	B1
Belden 9231	K2
Belden 9240	G4
Belden 9248	J1
Belden 9259	G4
Belden 9266	G4
Belden 9269	G
Belden 89269*	G1
Belden 9292	M3

Manufacturers' Part No.	Connector Cable Range Selection Code
Belden 9291	G
Belden 9880	L
Belden 89880*	L
Belden 9907	C2
Belden 89907*	C2
Belden 9914	M2
Berk-Tek BTDC-58	D2
Berk-Tek BTDC-59	G1
Berk-Tek BTDC-62	G1
Brand Rex T-209A	B2
Comm/Scope 2104*	C2
Comm/Scope 2135*	D2
Comm/Scope 2280*	L
Comm/Scope 3104	C2

Manufacturers' Part No.	Connector Cable Range Selection Code
Comm/Scope 3250	L
Hi-Temp 59	G2
Hi-Temp 62A	G1
IBM 5353914	B2
Raychem 7524A1312	C4
Times FM-8	M2
Times FM-59	G4
Times PL-59	G2
Times PLF-59 (20 AWG C.C.)	G2
Times PL-62	G1
Western Electric 724, 728, 3049	K2

*Plenum cable construction

SOURCE: Catalog 82074

Connector Selection Guide

Product	Nominal Impedance Ohms	Maximum Frequency GHz	Temperature Rating C	Cable Retention lb	Cable Retention [N]	Coupling Mechanism	Maximum Peak Voltage	Durability Cycles	Connector Body Finish	Product Specification	MIL-C39012 Qualification	Page No.
BNC Single Crimp	50	2.5	-65° to +165°	60 (RG-58C/U)	266.9	Bayonet	500	500	Silver or Nickel	108-12002	—	4003-4011
BNC Dual Crimp	50	4	-65° to +165°	60 (RG-58C/U)	266.9	Bayonet	500	500	Silver or Nickel	108-12020	Category B	4003-4011
BNC Dual Crimp Commercial	50	4	-55° to +85°	60 (RG-58C/U)	266.9	Bayonet	500	500	Nickel	108-12044	—	4003-4011
BNC Hex Crimp	50	4	-55° to +85°	60 (RG-58C/U)	266.9	Bayonet	500	500	Nickel	108-12044	—	4003-4013
BNC Field Serviceable	50	4	-65° to +165°	40 (RG-142B/U)	177.9	Bayonet	500	500	Nickel	108-12075	Category A	4007-4013
BNC 75 Ohm	75	2	-65° to +85°	60 (RG-59B/U)	266.9	Bayonet	500	500	Nickel	108-12095	—	4020-4024
TNC Single Crimp	50	7	-65° to +165°	60 (RG-58C/U)	266.9	Threaded	500	500	Silver	108-12003	—	4031-4034
TNC Dual Crimp	50	11	-65° to +165°	60 (RG-58C/U)	266.9	Threaded	500	500	Silver or Nickel	108-12001	Category B	4031-4034
TNC Commercial	50	7	-55° to +85°	60 (RG-58C/U)	266.9	Threaded	500	500	Nickel	108-12046	—	4031-4034
TNC 75 Ohm	75	2	-55° to +85°	60 (RG-59B/U)	266.9	Threaded	500	500	Nickel	*	—	4036
N Mil Type	50	11	-65° to +165°	90 (RG-214/U)	400.3	Threaded	1000	500	Silver or Nickel	108-12019	—	4038-4042
N Commercial	50	11	-65° to +85°	90 (RG-214/U)	400.3	Threaded	1000	500	Nickel	108-12056	—	4038-4039
C	50	11	-65° to +165°	90 (RG-214/U)	400.3	Bayonet	1000	500	Silver or Nickel	108-12005	—	4044
SHV	Non-constant	—	-65° to +200°	60 (RG-58C/U)	266.9	Bayonet	5000	500	Silver or Nickel	108-12012	—	4046
UHF Miniature	Non-constant	2	-55° to +85°	40 (RG-58/U)	177.9	Threaded	335	500	Nickel	108-12034	—	4048-4049
UHF Standard	Non-constant	.5	-55° to +85°	75 (RG-59B/U)	333.6	Threaded	500	500	Nickel	108-12016	—	4050
SMA Semi-Rigid 18 GHz	50	18	-65° to +105°	60 (RG-402/U)	266.9	Threaded	1000	500	Gold or Passivated Stainless Steel	108-12055	Category C	4056-4059
SMA Semi-Rigid 26.5 GHz	50	26.5	-65° to +105°	60 (RG-402/U)	266.9	Threaded	1000	500	Passivated Stainless Steel	108-12089	—	4056-4059
SMA Semi-Rigid Solder	50	26.5	-65° to +105°	60 (RG-402/U)	266.9	Threaded	1000	500	Passivated Stainless Steel	*	—	4060
SMA Flexible	50	12.4	-65° to +165°	40 (RG-58C/U)	177.9	Threaded	335	500	Passivated Stainless Steel	108-12027	—	4061-4063
Blind Mate 3.5 mm	50	26.5	-65° to +105°	60 (RG-402/U)	266.9	Slide-On	335	500	Passivated Stainless Steel	108-12106	—	4066-4067
Blind Mate 2.8 mm	50	26.5	-65° to +105°	30 (RG-405/U)	133.4	Slide-On	—	500	Gold	*	—	4068
SMB	50	4	-65° to +85°	20 (RG-316/U)	89	Snap-On	335	500	Nickel	108-12058	—	4070-4075
SMC	50	10	-65° to +85°	20 (RG-174/U)	89	Threaded	335	500	Gold or Nickel	108-12030	—	4080-4081
Micro-Miniature	50	4	-65° to +165°	10 (RG-196)	44.5	Snap-On	250	100	Tin-Lead	108-1470	—	4082
Miniature Threaded	50	1	-55° to +85°	20 (RG-174/)	89	Threaded	335	200	Silver	108-12013	—	4084
Twin BNC	Non-constant	—	-55° to +85°	25 (RG-108/U)	111.2	Bayonet	500	200	Silver or Nickel	108-12006	—	4086
Twin-Ax	Non-constant	—	-40° to +80°	75 (AWM 2498)	333.6	Threaded	500	250	Nickel	108-12050	—	4088
Twin Threaded	Non-constant	—	-55° to +85°	75 (RG-108/U)	333.6	Threaded	335	200	Silver or Nickel	108-12015	—	4090

*Consult AMP for Product Specification.

SOURCE: Catalog 82074

Specifications subject to change.
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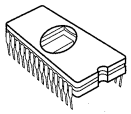
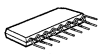
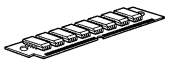
IC Socket Product Selection Guide

Device	AMP Socket	Page No.	Mounting Styles	Row-to-Row Spacing	Socket Contact Spacing	No. of Pos.	Contact Material	Contact Plating(s)	Height Above PCB	Type of Socket
DIP	DIPLOMATE DL Standard Economy	11001 11003	Thru-Hole Surface Mt.	**.300** 7.62 **.400** 10.16 **.600** 15.24 **.900** 22.86	**.100** 2.54	6-64	Beryllium Copper Phosphor Bronze	Tin Gold	**.210** 5.33 **.240** 6.10	Production
	Screw Machine*	11057	Thru-Hole	**.300** 7.62 **.400** 10.16 **.600** 15.24 **.400** 22.86	**.100** 2.54	6-64	Beryllium Copper	Tin	**.175** 4.45	Production
	Miniature Spring	11045	Thru-Hole	—	—	—	Beryllium Copper	Tin Gold	**.022** 0.56	Production
	Film Carrier	11048 11056	Thru-Hole Surface Mt.	**.300** 7.62 **.600** 15.24 **.900** 22.86	**.100** 2.54	16-64	Beryllium Copper	Tin Gold	**.031** 0.79	Production
	ZIF-Lock	11064	Thru-Hole	**.300** 7.62 **.600** 15.24	**.100** 2.54	14-40	Beryllium Copper	Tin Gold	**.500** 12.70	Burn-In Test
	Reusable Receptacles	11070	Thru-Hole	—	—	—	Beryllium Copper	Tin Gold	**.035** 0.89	Test
SIP	DIPLOMATE DL	11004	Thru-Hole	—	**.100** 2.54	3-30	Beryllium Copper Phosphor Bronze	Tin Gold	**.210** 5.33	Production
	Screw Machine	11057	Thru-Hole	—	**.100** 2.54	6-64	Beryllium Copper	Tin	**.175** 4.45	Production
	Miniature Spring	11045	Thru-Hole	—	—	—	Beryllium Copper	Tin Gold	**.022** 0.56	Production
	Film Carrier	11048 11056	Thru-Hole Surface Mt.	—	**.100** 2.54	8-100	Beryllium Copper	Tin Gold	**.031** 0.79	Production
	Reusable Receptacles	11070	Thru-Hole	—	—	—	Beryllium Copper	Tin Gold	**.035** 0.89	Test
ZIP	DIPLOMATE ZP	11005	Thru-Hole	**.100** 2.54	**.050** 1.27	16-40	Phosphor Bronze	Tin Gold	**.255** 6.48	Production
	Screw Machine	11057	Thru-Hole	—	**.100** 2.54	6-64	Beryllium Copper	Tin	**.175** 4.45	Production
	Film Carrier	11048 11056	Thru-Hole Surface Mt.	**.100** 2.54	**.050** 1.27	20-40	Beryllium Copper	Tin Gold	**.031** 0.79	Production
SIMM	DIPLOMATE SIMM	11006	Thru-Hole	**.300** 7.62 **.400** 10.16 **.500** 12.7	**.100** 2.54	22-42	Beryllium Copper	Tin Gold	**.510** 12.95	Production
	MICRO-EDGE SIMM	11007	Thru-Hole	**.100** 2.54 **.300** 7.62 **.400** 10.16 **.500** 12.7	**.100** 2.54 **.050** 1.27	22-80	Phosphor Bronze	Tin Gold	**.500** 12.70	Production
	SIMM II	11012	Thru-Hole	**.100** 2.54	**.100** 2.54 **.050** 1.27	30-84	Phosphor Bronze	Tin Gold	**.289** 7.34 to **.414** 10.52	Production
	Dual Read-Out SIMM	11015	Thru-Hole	**.075** 1.91	**.050** 1.27	64-100	Phosphor Bronze	Gold	**.800** 20.32	Production
	M3 SIMM	11017	Surface Mt.	**.050** 1.27	**.025** 0.64	72	Phosphor Bronze	Tin Gold	5.5 mm	Production
	8 Byte DIMM	11016	Thru-Hole	**.075** 1.90	**.050** 1.27	168	Phosphor Bronze	Gold	**.500** 12.70 **1.099** 27.91	Production

* Crystal Oscillator Sockets are also available; see page 11058.

Legend:

DIP — Dual In-Line Package
SIP — Single In-Line Package
ZIP — Zig-Zag Package
SIMM — Single In-Line Memory Module
DIMM — Dual In-Line Memory Module
PLCC — Plastic Leaded Chip Carrier
PQFP — Plastic Quad Flat Pack
MQFP — Metric Quad Flat Pack
CQFP — Ceramic Quad Flat Pack
LCCC — Leadless Ceramic Chip Carrier
PGA — Pin Grid Array
LIF — Low Insertion Force
ZIF — Zero Insertion Force
SL ZIF — Single Lever ZIF
TAZ — Tool Actuated ZIF
HAZ — Handle Actuated ZIF
HPT — High Pressure Tin
DL — Dual Leaf

SOURCE: Catalog 82172

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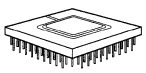
IC Socket Product Selection Guide (Continued)

Device	AMP Socket	Page No.	Mounting Styles	Row-to-Row Spacing	Socket Contact Spacing	No. of Pos.	Contact Material	Contact Plating(s)	Height Above PCB	Type of Socket
PLCC	HPT	11017	Thru-Hole	—	**.100** 2.54	20-84	Phosphor Bronze	Tin	**.360** 9.14 Max.	Production
	Low Profile PLCC	11019	Surface Mt.	—	**.050** 1.27	20-84	Phosphor Bronze	Tin	**.185** 4.70 Max.	Production
	SOJ-Style PLCC	11020	Surface Mt.	—	**.050** 1.27	28, 32, 40	Phosphor Bronze	Tin	**.185** 4.70	Production
PQFP	MICRO-PITCH	11021	Thru-Hole	—	**.025** 0.64	100 132 164	Phosphor Bronze	Tin	**.375** 9.53	Production
	MICRO-PITCH	11024	Surface Mt.	—	**.025** 0.64	196	Beryllium Copper	Tin	**.289** 7.34	Production
	MICRO-PITCH	11024	Surface Mt.	—	**.025** 0.64	80	Beryllium Copper	Tin	**.289** 7.34	Production
	MICRO-PITCH	11025	Surface Mt. Adapter	—	**.025** 0.64	100	Beryllium Copper	Tin	**.540** 13.72	Production
	MICRO-PITCH Emulator Adapt.	11023	—	—	**.025** 0.64	100 132	Phosphor Bronze	Tin	**.375** 9.53	Production
	PQFP to PGA Adapter	11025	Thru-Hole	—	**.025** 0.64	196	Phosphor Bronze	Gold	**.062** 1.57	Production
MQFP	MICRO-PITCH (Metric)	11022	Thru-Hole	—	**.026** 0.65	144 160	Phosphor Bronze	Tin	**.374** 9.50	Production
CQFP	MICRO-PITCH with Converter	11021	Thru-Hole	—	**.025** 0.64	132	Phosphor Bronze	Tin	**.375** 9.53	Production
JEDEC Type A	Gold-Gold System	11026	Thru-Hole Surface Mt.	—	**.100** 2.54 **.050** 1.27	20-84	Beryllium Copper	Hard Gold	**.320** 8.13 Max.	Production
LCCC	Low Height	11026	Thru-Hole Surface Mt.	—	**.100** 2.54 **.050** 1.27	44-100	Beryllium Copper	Gold	**.350** 8.89 Max.	Production
PGA	LIF	11029	Thru-Hole	—	**.100** 2.54	68-299	Beryllium Copper	Gold	**.280** 7.11	Production
	SL ZIF	11029	Thru-Hole	—	**.100** 2.54	168-499	Beryllium Copper	Gold	**.410** 10.4	Production
	Screw Machine	11057	Thru-Hole	—	**.100** 2.54	68-238	Beryllium Copper	Gold	**.175** 4.45	Production
	Cold Formed	11062	Thru-Hole	—	**.100** 2.54	142-320	Beryllium Copper	Gold	**.172** 4.37	Production
	Film Carrier	11048 / 11056	Thru-Hole / Surface Mt.	—	**.100** 2.54	68-280	Beryllium Copper	Gold	**.031** 0.79	Production
	TAZ	11039	Thru-Hole	—	**.050** 1.27 **.100** 2.54	168-625	Beryllium Copper	Gold	**.350** 8.89	Production
	HAZ	11065	Thru-Hole	—	**.050** 1.27 **.100** 2.54	262-1201	Beryllium Copper	Gold	**.650** 16.51	Burn-In

SOURCE: Catalog 82172

Specifications subject to change.
1-800-522-6752 Product Information Center/ AMP FAX Service
1-800-722-1111 Tooling/Technical Assistance Center

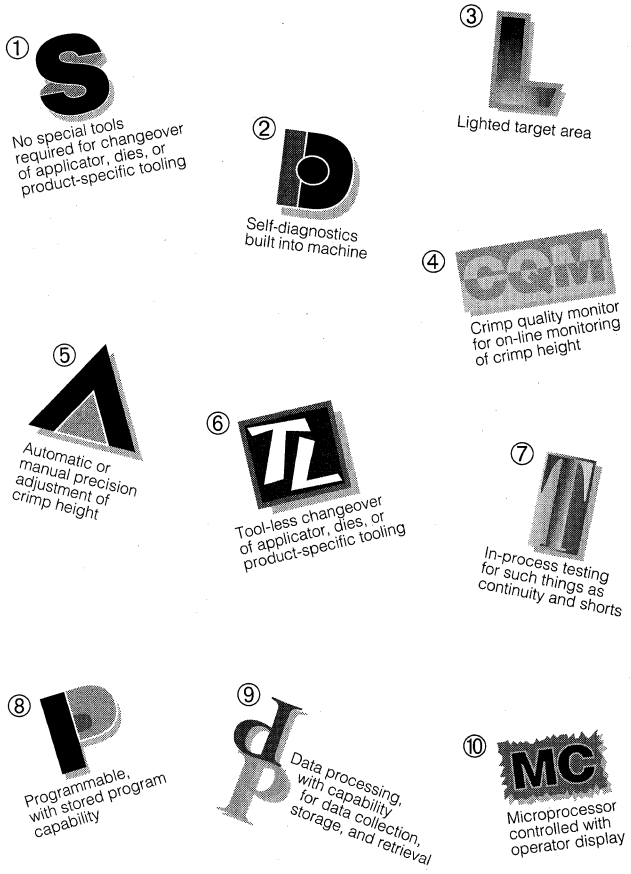
Termination Machine Selection Guide

Application Tooling: Helping You Do More

High-productivity tooling perfectly matched to our products has always been an AMP advantage in helping you achieve high-quality terminations. From bench-mount arbor units to high-speed automatic harness makers, we offer a comprehensive line of machines to meet every production need.

AMP application machines do more than produce quality terminations.

They help you manage production and quality programs. Our machines are designed to make changeovers fast and easy. And we have added features like our Crimp Quality Monitor that provides real-time monitoring of crimp height, precision adjustable crimp heights to make it easy to maintain proper crimp heights, machine self-diagnostics, in-process testing, and microprocessor control for easy programming and operation. All are aimed at making AMP machines your partner in productivity.



Connector	Termination Type	Application
AMP-LATCH Ribbon Cable Connectors	IDC Mass	Ribbon Cable
AMPLIMITE Connectors	Crimp Crimp IDC IDC Mass	Discrete Wire Jacketed Cable Jacketed Cable Ribbon Cable
AMPLIVAR Terminals and Splices	Crimp	Magnet and Discrete Wire
AMPMODU Connectors	Crimp Crimp IDC (MT) IDC (MT) IDC (MT) Mass IDC (MT) Mass IDC (MT) Mass IDC (MTE) IDC (MTE) IDC (MTE) Mass IDC (MTE) Mass	Discrete Wire Jacketed Cable Discrete Wire Jacketed Cable Discrete Wire Jacketed Cable Ribbon Cable Discrete Wire Jacketed Cable Discrete Wire Ribbon Cable
CHAMP Connectors	IDC IDC Mass	Jacketed Cable Ribbon Cable
CPC Connectors	Crimp Crimp (Tape) Crimp	Discrete Wire Discrete Wire Jacketed Cable
FASTON Terminals	Crimp (Strip) Crimp (Tape)	Discrete Wire Discrete Wire
Flexible Film Products	IDC IDC Mass	Flat Cable Flat Cable
MATE-N-LOK Connectors	Crimp	Discrete Wire
Modular Plugs	IDC Mass	Jacketed Cable
MR Connectors	Crimp	Discrete Wire
MTA Connectors	IDC IDC Mass	Discrete Wire Ribbon Cable
Open Barrel Terminations	Crimp	Discrete Wire
PIDG and PLASTI-GRIP Terminals and Splices	Crimp Crimp (Tape)	Discrete Wire
SOLISTRAND Terminals and Splices	Crimp Crimp (Tape)	Discrete Wire

SOURCE: Catalog 124198

Termination Machine Selection Guide (Continued)

Economy		Semi-Auto		Auto	
Machine	**Avg Hourly Rate***	**Machine**	**Avg Hourly Rate***	**Machine**	**Avg Hourly Rate***
Arbor	51 Assys	Auto-Cycle	55 Assys	R-CAM 2A R-CAM 3A	435 Assys 795 Assys
-- -- Arbor Arbor	-- -- 13 Assys 51 Assys	AMP-O-LECTRIC Model "G" Stripper/Crimper Model II CHAMPOMATOR 2.5 Auto-Cycle	900 Leads 8 Assys 23 Assys 55 Assys	AMPOMATOR CLS IV -- CHAMPOMATOR 3A R-CAM 2A R-CAM 3A	4,800 Leads -- 34 Assys 435 Assys 795 Assys
--	--	AMPLIVAR Product Terminator AMP-O-LECTRIC Model "G" AMP-O-LECTRIC Model "K"	530 Terms 530 Terms 530 Terms	--	--
-- -- -- -- Arbor Arbor Arbor -- -- -- --	-- -- -- -- 11 Assys 15 Assys 25 Assys -- -- -- --	AMP-O-LECTRIC Model "G" Stripper/Crimper Model II Discrete Wire Machine CHAMPOMATOR 2.5 -- -- -- Electric Power Unit Electric Power Unit MTE Mass MTE Mass MTE Ribbon Cable Terminator	900 Leads 8 Assys 13 Assys 23 Assys -- -- -- 12 Assys 16 Assys 43 Assys 40 Assys 53 Assys	AMPOMATOR CLS IV -- -- CHAMPOMATOR 3A -- -- -- -- -- -- -- --	4,800 Leads -- -- 34 Assys -- -- -- -- -- -- -- --
Arbor Arbor	13 Assys 51 Assys	CHAMPOMATOR 2.5 --	23 Assys --	CHAMPOMATOR 3A --	34 Assys --
-- -- --	-- -- --	AMP-O-LECTRIC Model "G" AMP-TAPETRONIC 4/8 Indent Stripper/Crimper Stripper/Crimper Model II	900 Leads 750 Leads 8 Assys	AMPOMATOR CLS IV -- --	4,800 Leads -- --
-- AUTO-PRO	-- 700 Leads	AMP-O-LECTRIC Model "G" AMP-O-LECTRIC Model "G" AMP-TAPETRONIC Machine	900 Leads 700 Leads 700 Leads	AMPOMATOR CLS IV AMPOMATOR CLS IV	4,800 Leads 4,200 Leads
-- --	-- --	Flexible Film Termination Machine MTF	46 Assys 63 Assys	-- --	-- --
--	--	AMP-O-LECTRIC Model "G"	900 Leads	AMPOMATOR CLS IV	4,800 Leads
Single Terminator	57 Assys	Dual Terminator	107 Assys	--	--
--	--	AMP-O-LECTRIC Model "G"	900 Leads	AMPOMATOR CLS IV	4,800 Leads
-- Arbor	 46 Assys	AMP-O-LECTRIC Model "K" Electric Power Unit 2700-lb Pneumatic Power Unit	55 Assys 58 Assys 91 Assys	-- --	-- --
--	--	AMP-O-LECTRIC Model "G" AMP-O-LECTRIC Model "K"	900 Leads	AMPOMATOR CLS IV	4,800 Leads
AUTO-PRO (no splices)	700 Leads	AMP-O-LECTRIC Model "G" AMP-TAPETRONIC Machine	700 Leads 700 Leads	AMPOMATOR CLS IV	4,200 Leads
--	--	AMP-O-LECTRIC Model "G" AMP-TAPETRONIC Machine	700 Leads 700 Leads	AMPOMATOR CLS IV	4,200 Leads

***Average Hourly Rate:** For reference only; actual rates depend on cable and wire size and type, connector size and type, as well as operator dexterity and work flow. Rates listed as Terms and Leads include wire preparation; rates listed as Assys include cable and wire preparation, loading contacts into housings when applicable, and 100% testing. All assemblies are fully loaded with 20 wires or 40 contacts per assembly, except those with Flexible Film Products, which have 12 wires or 24 contacts each, and MTA connectors, which have 4 wires or 8 contacts each.

SOURCE: Catalog 124198

Specifications subject to change.
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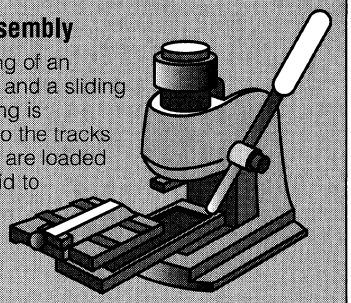
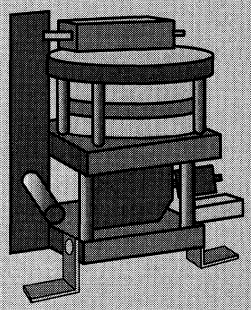
Termination Machine Selection Guide
(Continued)

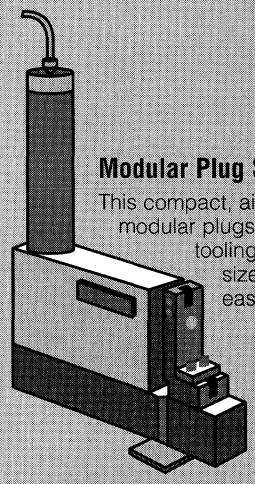
Economy

Manual Arbor Frame Assembly
A bench assembly consisting of an adjustable ram and handle, and a sliding base. Product-specific tooling is mounted on the ram and into the tracks on the base plate. Products are loaded into the base, the base is slid to position the product under the ram, and the handle is pulled to cycle the upper tooling. ①



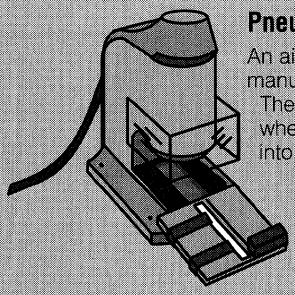


AUTO-PRO Terminating Machine
This compact, air-powered benchtop unit applies tape-mounted products. It uses the same interchangeable crimping dies as the AMP-TAPETRONIC and applicable AMP-O-LECTRIC machines. ①



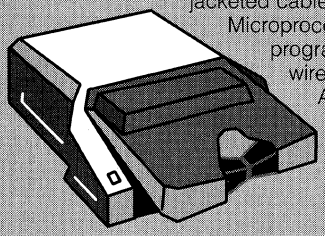
Modular Plug Single Terminator
This compact, air-powered benchtop unit applies modular plugs one at a time. Interchangeable tooling accommodates different plug sizes. Contact insertion height is easily adjusted. ①

Semiautomatic

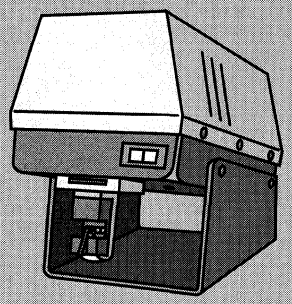


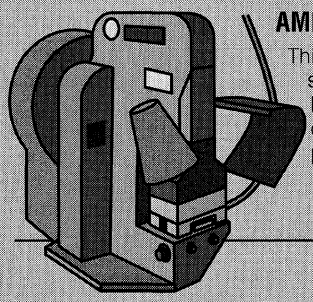
Pneumatic Auto-Cycle Unit
An air-powered version of the manual arbor frame assembly. The unit cycles automatically when the lower assembly is slid into position. ①

CHAMPOMATOR 2.5 Terminating Machine
Here's an ideal bench machine for terminating multiconductor jacketed cable in IDC connectors. Microprocessor-controlled and programmable, it can terminate wire either singly or in pairs. After each termination, it automatically indexes to the next programmed position. ①②⑧⑨⑩

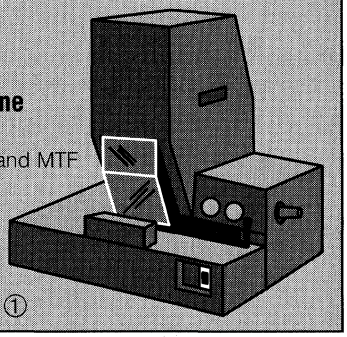


Electric Power Unit
Interchangeable modular heads allow this electrically operated bench machine to terminate one wire at a time in a variety of IDC connectors. Some modular heads are available with feed tracks for loose-piece or tape-fed products. ⑥





AMP-TAPETRONIC Machine
This is a basic bench machine, similar to the AMP-O-LECTRIC Model "K" machine, for crimping tape-mounted products. ①



Mass Termination Machine
This bench machine mass-terminates MTF connectors and MTF contact combs. For connectors, the machine terminates the contacts, removes the carrier strip, and seats the contacts in the housing. ①

13 Appendixes

SOURCE: Catalog 124198

Specifications subject to change.
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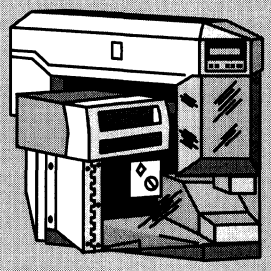
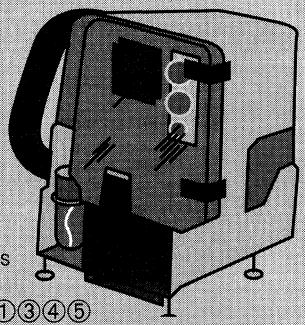
Semiautomatic (Continued)

AMP-O-LECTRIC Model "G" Terminating Machine



A versatile, workhorse bench machine for applying the widest range of products. It features a quiet, direct drive motor and electronic controls for easy setup and operation. All versions include either a manual or automatic precision adjustment for crimp height. This machine is the successor to the industry-standard Model "K" machine. ②③④⑤⑥⑩

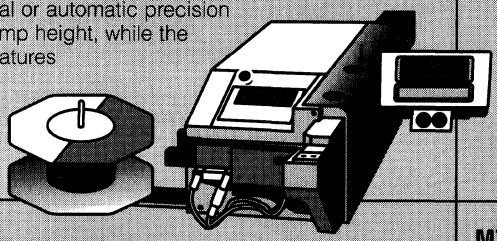
AMP-O-MATIC Model II Side-Feed Stripper-Crimper Machine



An air-driven bench machine that automatically strips and terminates wires one at a time. The Stripper-Crimper uses easily changed applicators, features precision adjustment of crimp height, and allows all adjustments to be made from the front of the machine without special tools. ①③④⑤

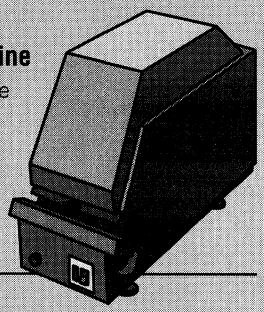
AMPLIVAR Product Terminator

This bench machine applies AMPLIVAR pigtail splices and direct-connect contacts. Basic models feature quick-change tooling and manual or automatic precision adjustment for crimp height, while the IIIA model also features programmable sequencing of different crimp-height settings. ①④⑤⑧⑩

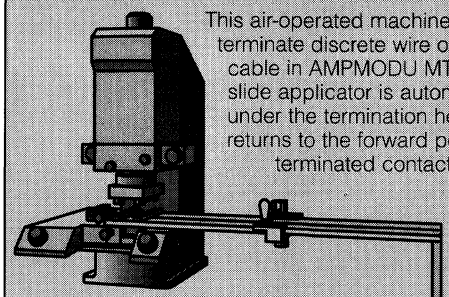


Electric Discrete Wire Machine

For terminating one wire at a time in IDC connectors, this bench machine features a feed mechanism that automatically indexes connectors to the next position. ①



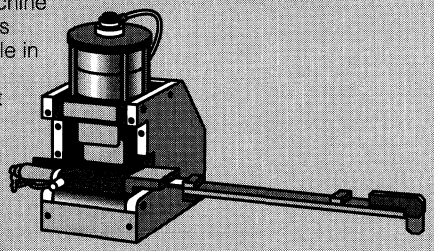
MTE Mass Termination Machine



This air-operated machine is designed to terminate discrete wire or notched ribbon cable in AMPMODU MTE connectors. A slide applicator is automatically positioned under the termination head. The applicator returns to the forward position to allow the terminated contacts to be inspected before they are inserted into the housing. ①

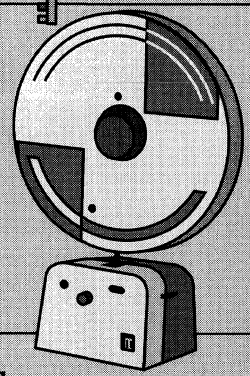
MTE Ribbon Cable Terminator

An air-operated machine that mass-terminates notched ribbon cable in AMPMODU MTE connectors, this unit uses tube-fed connectors and a manually operated seating station to insert terminated contacts into the housing. ①

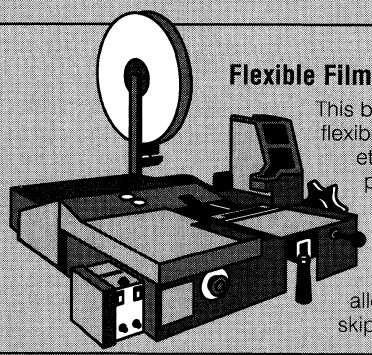


AMP-TAPETRONIC 4/8 Indent Stripper-Crimper Machine

This bench machine terminates strip-mounted pin and socket contacts with a military-style 4/8 indent crimp. It has two tooling areas: one to strip the wire and the other to crimp the terminal. Wire strip length and crimp height are easily adjustable. ①

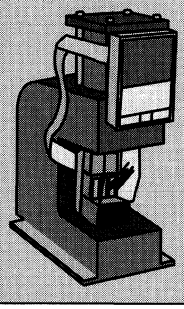


Flexible Film Termination Machine



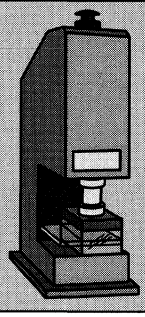
This bench machine terminates flexible flat cable, flexible etched circuitry, and flexible printed wiring. Conductors are automatically terminated sequentially one at a time, while an optional programming unit allows positions to be skipped. ③⑤⑧

Modular Plug Dual Terminator



Applying and testing two modular plugs at a time, the machine consists of a combination power unit and tester. Interchangeable modules allow different plug sizes, and the tester can be set to different plug sizes and contact arrangements. Contact insertion height is easily adjusted. ①⑦

2700-lb Pneumatic Power Unit



This bench machine provides the force necessary for notching and terminating ribbon cable. Application-specific tooling mounts to the upper ram and lower base plate. ①

SOURCE: Catalog 124198

Specifications subject to change.
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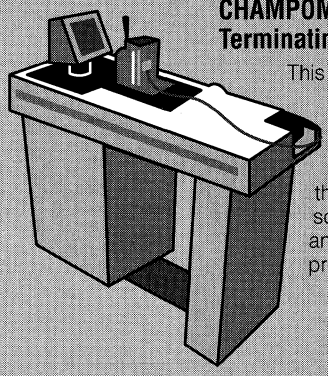
Termination Machine Selection Guide
(Continued)

Automatic

CHAMPOMATOR 3A Terminating Machine



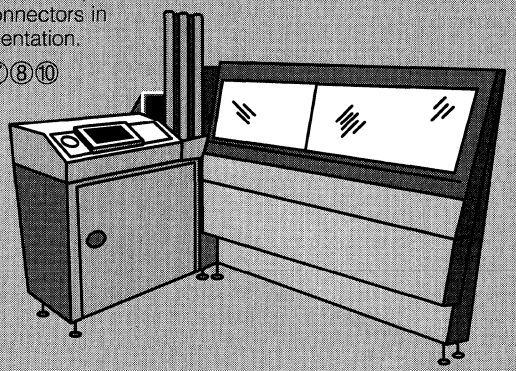
This machine automatically terminates multiconductor jacketed cable in a variety of IDC connectors. Microprocessor-controlled and programmed through an easy-to-use touch screen, the machine sorts wires and terminates them in a user-programmable sequence.

①②⑦⑧⑨⑩

R-CAM 2A Ribbon Cable Assembly Machine

This fully programmable, microprocessor-controlled machine produces and tests ribbon cable assemblies up to 48 inches long and with up to four connectors in any orientation.

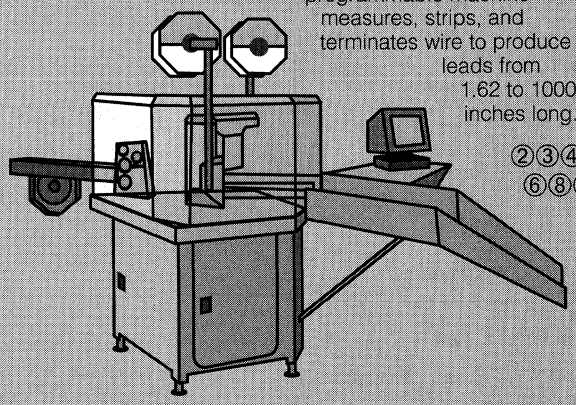
②⑥⑦⑧⑩



AMPOMATOR CLS IV Lead-Making Machine

This versatile, high-speed machine produces single-wire leads, with either or both ends terminated in the same or different terminals. The microprocessor-controlled, programmable machine measures, strips, and terminates wire to produce leads from 1.62 to 1000 inches long.

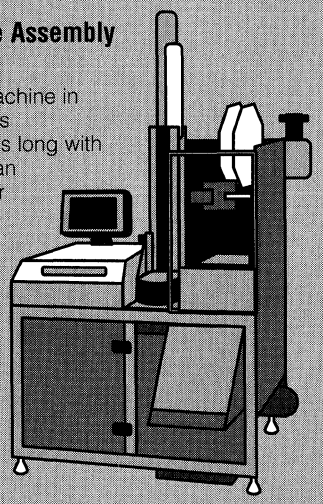
②③④⑤⑥⑧⑩



R-CAM 3A Ribbon Cable Assembly Machine

Similar to the R-CAM 2A machine in operation, this unit produces assemblies up to 105 inches long with one or two connectors. It can also produce two-connector assemblies with unterminated tails up to 50 inches.

①②⑦⑧⑨⑩



Catalog	Section	Page	Product
65004	12	12011-12012	AMP-O-MATIC Side-Feed Stripper-Crimper, Model II Machine
65039	3	3185	AMP-HDI 6- and 8-Row LRM (Line Replaceable Module) Connectors
65069	3	3397	AMP Micro-Strip Cable Assemblies
65141	8	8137-8142	High Current Pin and Socket Contacts
65194	3	3352-3362	High Speed, Controlled Impedance Two-Piece Connectors, Z-PACK Stripline 100 and Micro-Strip Interconnection Systems
65211	8	8003-8004	AMPINNERGY Wire-to-Wire Connectors
65213	5	5024	2.0 mm [.079] Ribbon Cable Connectors (AMP-LATCH)
65224	6	6091-6095	AMP Dynamic D-3000 Series Connectors
65284	8	8148	Pluggable Bus Bar Connectors
65358	3	3363-3368	Z-PACK 2 mm FB (Futurebus+) Connectors
65404	12	12021-12023	Applicators for Wire Termination
65451	10	10011-10015	TERMI-BLOK Stacking Connectors
65472	1	1044-1045	Closed End Splices
65474	12	12019-12020	AMPLIVAR Product Terminators (APT)
65481	2	2262	AMPSEAL Automotive Plug Connector and Header Assembly (Wire-to-Board)
65481	6	6100-6105	Econoseal J Series [MARK II(+)], Econoseal III Series and Superseal 1.5 Series Connectors
65505	1	1009-1037	SOLISTRAND and Budget Terminals and Splices
65593	2	2392	Serial Interface Module (SIM)
65663	10	10016-10017	High Speed Digital Transmission Cables
65696	8	8032	Quiet Line Filtered CHAMP Connectors
65697	8	8033	Quiet Line Filtered Modular Jack Connectors
65701	3	3261-3289	PC Card Connectors
65705	8	8052-8053	Paddlecard Cable Assemblies
65755	10	10020-10026	Planar Ribbon Cable
65780	12	12005-12008	CERTI-CRIMP Hand Tools
65790	3	3181	AMPMODU Metristak 1.0 mm Connector System
65816	3	3083-3118	AMPMODU .025 Square Interconnection System
65816	3	3119-3121	AMPMODU Surface-Mount Receptacle Assemblies and Unshrouded Breakaway Headers
65816	3	3122-3126	AMPMODU Two-Piece Printed Circuit Board Connectors
65816	3	3127-3129	AMP ACTION PIN Stacking Connectors
65816	3	3130-3131	AMPMODU Stacking Connectors
65816	3	3132-3133	AMPMODU Short Point, Crimp Snap-In Wire-Applied Contacts and Housings
65816	3	3134-3146	MTE Interconnection System (AMPMODU)
65816	3	3147-3151	MT and Shielded MT Interconnection System (AMPMODU)
65816	3	3152-3154	AMPMODU Level V IDC Connectors
65816	3	3155-3157	AMP Standard Tandem Spring and Mini-Tandem Spring Receptacle Contacts
65816	3	3158-3159	AMP Single-Row Linear (ASL) Connectors
65828	12	12013-12014	AMP-O-LECTRIC Model "G" Termination Machine
65839	6	6078-6090	MULTILOCK Connectors
65864	8	8005-8007	AMP Power Lock Connectors
65875	2	2362	AMPLIMITE .050 Series High Performance Cable Assemblies
65908	5	5002-5003	AMP-LATCH Uni-Beam Connectors
65911	3	3369-3372	Z-PACK 2 mm HM Interconnection System
65971	2	2363	AMPLIMITE Ultraslim .197 [5.00] Connectors
65972	3	3417	CHAMP 0.8 mm High Density Interconnection System
65973	3	3221	CHAMP .050 [1.27] Series I Connectors for VESA Applications
65974	8	8051	SDL (Shielded Data Link) Connectors for ACCESS.bus Applications
65981	3	3182-3184	AMP FH (Free Height) 0.8 mm Surface Mount Connectors (Board-to-Board)
65987	8	8151	Advanced Battery Interconnection System for Standard-Sized Rechargeable Batteries
82003	2	2011-2047	M Series Pin and Socket Connectors
82004	1	1078-1125	FASTON Terminals (Insulated and Uninsulated)
82004	6	6004-6020	FASTIN-FASTON Connectors
82005	3	3070-3073	TERMI-TWIST Printed Circuit Connectors
82006	3	3066-3069	Wrap-Type Printed Circuit Connectors
82007	5	5025-5046	Flexible Film Products
82008	8	8054-8095	Miniature Ribbon Connector System (CHAMP)
82010	2	2370-2381	ARINC 404 Rack and Panel Connectors
82011	1	1002-1008	STRATO-THERM Terminals and Splices for High Temperature Applications
82012	5	5001, 5004-5023	Ribbon Cable Connector System (AMP-LATCH)
82014	3	3396	AMP Chevron-Shaped Contact Connectors
82015	3	3373-3395	Box Contact Connectors

Specifications subject to change.

1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

Catalog	Section	Page	Product
82016	1	1126-1139	Taper Technique Products
82018	9	9020-9038	AMP Standard Patchcord Programming Systems
82020	1	1038-1041	COPALUM Terminals and Splices
82021	2	2048-2067	CPC (Circular Plastic) and Metal-Shell CPC Connectors
82024	8	8096-8117	LGH High Voltage Lead Assemblies, Connectors and Receptacles
82025	1	1147-1151	AMPOWER Uninsulated Terminals and Splices
82027	9	9022-9038	AMP Universal Patchcord Programming Systems
82036	2	2364-2369	High Density Rectangular Connectors
82037	3	3399-3404	AMP-BLADE Two-Piece Printed Circuit Edge Connectors
82038	1	1009-1037	Radiation Resistant Terminals and Splices
82039	1	1142-1144	TERMI-FOIL Terminals and Splices
82042	1	1009-1037	Standard Terminals and Splices
82045	2	2199-2209	Metrimate Pin and Socket Connectors
82046	2	2001-2010	"G" Series Modular Connectors (A Multimate Product)
82047	10	10010	Power Cord Receptacle
82050	10	10051	SPIRAP Plastic Cable Wrap
82051	10	10053	Terminal Blocks
82052	10	10052	FLEXI-BLOCK Terminal Block System
82053	2	2263	Audio/Instrument Connectors (DIN) Type
82054	8	8136	High Current Commercial Connectors
82056	3	3236-3260	MTA-100 and MTA-156 Connectors and Headers; CST-100 and SL-156 Connectors
82057	2	2264-2266	Econoseal Sealed Pin and Socket Connectors
82058	10	10009	Flexible Conduit Connectors
82060	3	3074-3082	.031 x .062 [0.79 x 1.57] Interconnection System (AMPMODU)
82061	8	8015-8028	Quiet Line High Performance Filter Products
82062	9	9039-9045	AMP Modular Interface Connector Device
82067	10	10008	Convenience Outlets (15A or 20A, 125 VAC)
82068	2	2271-2361	Subminiature D Connectors (AMPLIMITE)
82068	10	10054-10057	AMPLIMITE .050 Series Cable Assemblies, Series III
82068	12	12031-12032	High Volume Tube Feeders for Robotic Applications
82074	4	4001-4109	Guide to RF Connectors
82101	8	8043-8050	SDL (Shielded Data Link) Connectors
82103	2	2267	Shielded Circular DIN Connectors
82106	2	2382-2391	ARINC 600 Connectors, Contacts and Accessories
82117	2	2210	Wire Integration Unit (WIU) Connector
82126	1	1042-1043	COPALUM Sealed Terminals and Splices
82157	8	8034-8042	CR ZIF (Cammed Rectangular, Zero Insertion Force) Connector System
82158	4	4110-4112	Multiple Transmission Cable Assemblies, Cable and Connectors
82159	3	3406-3415	Printed Circuit Board Terminals and Disconnects
82161	8	8118-8121	AMPLIFLEX Connectors
82162	9	9001-9019	Printed Circuit Board Switches and Shunts
82170	5	5047-5049	AMP Micro-MaTch Miniature Connector System
82172	11	11001-11071	IC Sockets
82178	3	3160-3166	AMPMODU System 50 Connectors
82181	2	2212-2261	Soft Shell Pin and Socket Connectors
82183	3	3224-3230	AMP CT (Common Termination) Connector System
82186	12	12027	Comp-U-Sertor II Insertion Machine
82211	1	1141	Tel-Splice Connectors
82212	2	2268-2270	Shielded Miniature Circular DIN Connectors
82219	12	12026	CHAMPOMATOR 3A Terminating Machine
82220	12	12024	AUTO-PRO Terminating Machine
82221	1	1152-1177	Magnet Wire Terminals (AMPLIVAR and MAG-MATE)
82227	1	1048-1077	Machine Applied Terminations, Open Barrel
82242	8	8129-8135	Power Block and Power Rings Connector System
82244	3	3210-3219	CHAMP .050 Connectors
82247	12	12025	CHAMPOMATOR 2.5 Terminating Machine
82252	3	3231-3235	AMP 1.25/0.8 mm FP Board-to-Board Surface Mount Connectors
82267	10	10050	Silicone Fusion Tape
82268	1	1178	CABLE MAKER Battery Terminals
82271	8	8122-8128	AMPOWER Wave Crimp System
82273	6	6096-6099	AMP Universal Power (UP) Connectors
82275	12	12028	Crimp Quality Monitor (CQM)
82276	12	12001-12004	PRO-CRIMPER II Hand Tool
82535	10	10041	Crimp Type Alligator Clips and Insulation Boots
82544	1	1001	CERTI-SEAL Splices
82552	10	10018-10019	Cable and Primary Wire
82564	1	1140	AMP ELECTRO-TAP Connectors
82565	1	1146	AMPOWER Quick Disconnect and Bolt Type Disconnects
82571	10	10049	Fusion Tape

Specifications subject to change.

1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

Catalog	Section	Page	Product
82600	1	1145	AMPOWER II Uninsulated Terminals and Splices
82602	1	1046-1047	Pre-Insulated Sealed Terminals and Splices
82618	3	3290-3318	Two-Piece, High Density Printed Circuit Board Connectors
82619	3	3001-3065	One-Piece Printed Circuit Board Connectors
82623	2	2198	MIL-C-5015 Style Circular Plastic Connectors (CPC)
82624	10	10043-10048	AMP-TY Nylon Cable Ties
82625	8	8143-8144	Conductive Carbon Fiber Connectors
82643	3	3167-3171	AMPMODU 50/50 Grid Connector System
82647	2	2068-2150	Military Specified Circular Connectors
82659	12	12015-12018	AMPOMATOR CLS IIIG Lead Making Machine
82671	4	4113-4115	Point-to-Point Cable Assemblies
82721	3	3319-3351	Eurocard Connectors per DIN 41612 and IEC 603-2
82725	2	2211	Metrimate 43°– Mount Printed Circuit Board Plug Headers
82771	3	3172-3179	AMPMODU 2 mm Connectors (Board-to-Board)
82781	2	2151-2166	Terminal Junction System (MIL-T-81714 and Commercial)
82785	2	2167-2197	Matrix Engine/Firewall Cylindrical Connectors
82795	8	8029-8031	Ferrite Block Filtered PCB Connectors
82832	8	8001-8002	AMPINNERGY Wire-to-Board Connectors
82954	12	12009-12010	Modular Plug Dual Terminator
91119	3	3416	2-in-1 Combination Disk Drive Connectors
91119	8	8149-8150	Power Mix Connectors
124001	7	7001-7021	Passive Fiber Optic Components
124002	7	7022-7062	Opto Electronic Devices
124003	7	7063-7076	Fiber Optic Interconnections
124008	3	3220	CHAMP .050 Series, Low Profile Docking Connectors
124060	10	10036-10037	Flexible Flat Conductor Cable Jumpers
124081	10	10027-10030	High Performance Insulation Displacement Ribbon Cable with Fluropolymer Insulation
124110	3	3418	CHAMP 0.8 mm [.031] Cable Assemblies
124132	10	10001-10007	Heat Shrinkable Products
124135	3	3398	ACTIVE + DIN Connector
124206	12	12029-12030	100 Series Laminator/2000 Series Laminator/Terminator
124214	10	10038-10040	High Performance Multipair SCSI Cable
124231	3	3222-3223	CHAMP .050 [1.27] Ribbon Cable Assemblies for VESA Applications
124248	10	10034-10035	High Performance Cable Assemblies for the QuickRing System
124266	10	10031-10033	IEEE 1284 Cable Assemblies
124268	8	8147	PCMCIA Cards–Business Audio Card
124269	8	8146	PCMCIA Cards–Flash Memory Cards
124270	8	8145	PCMCIA Cards–Fax/Modem 14.4 and Fax/Modem/Voice 14.4
124403	10	10042	AMP ISO Isolating Transformer/Power Conditioner
124799	3	3197-3200	AMP MT-6/MT-7 Connector System
124799	6	6031-6037	AMP Standard-Timer and AMP Multifitting Connectors in In-Line Mating Technology
124799	6	6038-6077	AMP Timer Connectors
124799	8	8013-8014	AMP Drawer Connectors (Special Versions)
124962	3	3180	AMP ROCKER MATE Connectors
124962	3	3186-3191	AMP Economy Interconnection (EI) Series Connectors
124962	3	3192-3194	AMP Mass Termination EI Series Connectors (MTEI) Wire-to-Board 2.5 mm [.098] Centers
124962	3	3195-3196	Low Profile Mini AMP-IN Connectors (Wire-to-Board)
124962	3	3201-3209	AMP ULTREX Interconnection System (Wire-to-Board)
124962	3	3405	AMP Super Trap Connectors 1.25 mm [.049] Centerline
124962	6	6001-6003	AMP 250 Series Housing Lance Connectors
124962	6	6021-6022	AMP 040 Series Pairmate Connectors
124962	6	6023-6024	AMP Dual-Line Interlock (DLI) Connectors
124962	6	6025-6028	AMP Multiple Interlock Connectors (MIC)
124962	6	6029-6030	AMP SCCS (Steering Column Combination Switch) Connectors
124962	8	8008-8012	AMP Drawer Connectors

Specifications subject to change.

1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

Alphabetical Index

040 Series Pairmate Connectors, Wire-to-Board, Blade-Type Connectors, pages 6021, 6022

100 Series Laminator, page 12029

2000 Series Laminator/Terminator, page 12030

250 Series Housing Lance Connectors, Wire-to-Wire, Blade-Type Connectors, pages 6001 - 6003

A

ACTION PIN Headers—Unshrouded and Shrouded, pages 3116 - 3118

ACTION PIN Stacking Connectors, pages 3127 - 3129

Alligator Clip and Insulation Boots, page 10041

AMP-BARREL Terminals, pages 3408, 3409

AMP-BLADE Two-Piece Printed Circuit Edge Connectors (Wire-to-Board), pages 3399 - 3404

AMP EDGE Single Lead Printed Circuit Terminals, page 3412

AMP-HDI 6- and 8-Row LRM (Line Replaceable Module) Connectors, page 3185

AMP-LATCH Connectors, also see Ribbon Cable Connectors
- 2.0 mm Ribbon Cable Receptacle Connectors, page 5024
- Accessories, page 5017
- Card Edge, page 5006
- DIP Plugs, page 5007
- Feed-thru Pin Header Assemblies with Distributed Element Filters and Latch and Eject Levers, page 8024
- High Temperature Thru-Hole (SMT Compatible) Universal Ejection Style Pin Headers, pages 5012, 5013
- Low Profile Headers, pages 5014 - 5016
- Novo Receptacles, pages 5004, 5005
- Subminiature D, pages 5018 - 5022
- System 50, Receptacle Connectors, page 5023
- Uni-Beam Connectors, pages 5002, 5003
- Universal Ejection Style Pin Headers, pages 5010 - 5012
- Universal I/O Pin Connectors, pages 5008, 5009

AMP-O-LECTRIC Model "G" Termination Machine, pages 12013, 12014

AMP-O-MATIC Side-Feed Stripper-Crimper, Model II Machine, pages 12011, 12012

AMP PACE Connectors, pages 3022 - 3026

AMP-TY Nylon Cable Ties, pages 10043 - 10048

AMPINNERGY Connectors
- Wire-to-Board Connectors, pages 8001, 8002
- Wire-to-Wire Connectors, pages 8003, 8004

AMPLI-BOND Terminals and Splices, pages 1010, 1018

AMPLIFLEX Connectors, pages 8118 - 8121

AMPLIMITE .050 Series Cable Assemblies, Series III, page 10054

AMPLIMITE Connectors, see Subminiature D Connectors

AMPLIMITE III, HD-20 Right-Angle, Metal-Shell Connectors, pages 2312, 2313

AMPLIVAR
- Cluster Blocks, pages 1159 - 1161
- Product Terminators (APT), pages 12019, 12020
- Splices, pages 1153, 1154
- Terminals, pages 1155 - 1158

AMPMODU .025 [0.64] Square Interconnection System, pages 3083 - 3118
- ACTION PIN Headers—Unshrouded and Shrouded, pages 3116 - 3118
- ACTION PIN Stacking Connectors, pages 3127 - 3129
- Breakaway and Retention Headers—Unshrouded, pages 3098 - 3106
- Housings, pages 3092 - 3094
- IDC Connectors, Level V, pages 3152 - 3154
- Locking Clip Contacts and Housings, pages 3095 - 3097
- Mod. Level IV Connectors, pages 3087 - 3094
- MT and Shielded MT Interconnection System, pages 3147 - 3151
- MTE Interconnection System, pages 3134 - 3146
- Receptacle Assemblies, pages 3084 - 3089
- Receptacle Contacts, pages 3084 - 3091
- Short Point, Crimp Snap-In Wire-Applied Contacts and Housings, pages 3132, 3133
- Stacking Connectors, .025 x .025 [0.64 x 0.64] Posts, pages 3130, 3131
- Standard Headers—Unshrouded, pages 3107 - 3109
- Standard Profile Headers—Shrouded, pages 3110 - 3115
- Surface-Mount Receptacle Assemblies and Unshrouded Breakaway Headers .100 [2.54] Centers, pages 3119 - 3121
- Two-Piece Printed Circuit Board Connectors, pages 3122 - 3126

AMPMODU .031 x .062 Interconnection System, pages 3074 - 3082

AMPMODU 2 mm Connectors (Board-to-Board), pages 3172 - 3179

AMPMODU 50/50 Grid Connector System, pages 3167 - 3171

AMPMODU Board Mount Receptacles, pages 9036, 9037

AMPMODU Level V IDC Connectors, pages 3152 - 3154

AMPMODU Metristak 1.0 mm Surface-Mount Connector System (Board-to-Board), page 3181

AMPMODU System 50 Connectors (.050 x .100 [1.27 x 2.54] Centers), pages 3160 - 3166

AMPOMATOR CLS IIIG Lead Making Machine, pages 12015 - 12018

AMPOWER Terminals
- Quick Disconnect and Bolt Type Disconnect Terminals, page 1146
- Uninsulated Terminals and Splices, pages 1147 - 1150
- Wave Crimp System, page 8122

AMPOWER II Uninsulated Terminals and Splices, page 1145

AMPSEAL Automotive Plug Connector and Header Assembly, (Wire-to-Board), page 2262

AMPSULATION, see Heat Shrinkable Products

Appliance Connectors
- Fluorescent Tube Sockets, page 8135
- Power Block and Power Rings Connector System, pages 8129, 8130
- Surface Burner Connector System, pages 8131, 8132
- Timer and Water Valve Coil Connectors, pages 8133, 8134

Applicators, pages 12021 - 12023

ARINC 404 Rack and Panel Connectors, pages 2370 - 2381

ARINC 600 Rack and Panel Connectors, pages 2382 - 2391

Assemblies
- Front Board, pages 9042 - 9045
- Rear Bay, pages 9040, 9041

Attenuators, Fiber-Optic
- Multimode, page 7021
- Singlemode, pages 7019, 7020

Audio/Instrument Connectors (DIN Type), page 2263

AUTO-PRO Terminating Machine, page 12024

B

Battery Interconnection System for Standard-Sized Rechargeable Batteries (7.2 Volts), page 8151

Blade-Type Connectors
- 040 II and 070 II Cap and Plug Housings, page 6030
- 040 II Series Receptacle and Tab Contact, pages 6029, 6030
- 070 II Cap and Plug Housings, page 6030
- 070 II Series Receptacle and Tab Contact, page 6029
- 250 Series Housing Lance (Wire-to-Wire) Connectors, pages 6001 - 6003
- 40 Series Pairmate (Wire-to-Board) Connectors, pages 6021, 6022
- Dual-Line Interlock (DLI) (Wire-to-Board) Connectors, pages 6023, 6024
- Dynamic D-3000 Series (Wire-to-Board or Wire-to-Wire) Connectors, pages 6091 - 6095
- Econoseal J Series [Mark II(+)], pages 6100, 6101
- Econoseal III, pages 6102, 6103
- FASTIN-FASTON Connectors, pages 6004 - 6017
  - .110 Series, pages 6016, 6017
  - .187 Series, pages 6014, 6015
  - .250 Series, pages 6007 - 6013
  - .312 Series, page 6006
  - .375 Series, page 6005
- Multifitting Connectors, pages 6034 - 6037
- MULTILOCK Connectors, pages 6078 - 6090
- Multiple Interlock (MIC) (Wire-to-Board) Connectors
  - Mark I Cap Housings, page 6026
  - Mark I Plug Housings, page 6025
  - Mark I Receptacle Contacts, page 6025
  - Mark I Tab Contacts, page 6026
  - Mark II Cap Housings, page 6027
  - Mark II Plug Housings, page 6026
  - Mark II Receptacle Contacts, page 6026
  - Mark II Tab Contacts, page 6027
  - Mark I & II Cap Housings, pages 6027, 6028
- SCCS (Steering Column Combination Switch) (Wire-to-Wire) Connectors, pages 6029, 6030
- Standard-Timer Housings and Multifitting Connectors in In-Line Mating Technology, pages 6031 - 6037

Specifications subject to change.
1-800-522-6752 Product Information Center/ AMP FAX Service
1-800-722-1111 Tooling/Technical Assistance Center

Blade-Type Connectors (Continued)
SUPERSEAL 1.5 Series, pages 6104, 6105
Timer Connectors
Additional Housings for Timer Contacts, page 6077
Junior Power-Timer Housings, pages 6071 - 6076
Junior Timer/Power Contacts, pages 6040 - 6045
Male Connectors, pages 6059 - 6070
Micro-Timer Contacts, pages 6038 - 6040
Standard Timer/Power Contacts, pages 6046 - 6052
Timer Housings, pages 6053 - 6059
Universal Power (UP) Connectors, pages 6096 - 6099

Blind Mate Connectors
2.8mm for Semi-Rigid Cable, pages 4067, 4068
3.5mm for Semi-Rigid Cable, pages 4066, 4067

BNC
Connectors, 50 ohm, pages 4002 - 4019
Connectors, 75 ohm, pages 4020 - 4025
Decoupled Connectors, pages 4026 - 4028
Self-Terminating Board Connectors, pages 4029 - 4036
Twin BNC Connectors, pages 4085, 4086

Board-to-Board, All-Plastic AMPLIMITE, .050 Series Subminiature D, Series I, Connectors, pages 2353 - 2357

Board-to-Board Connectors (One Piece)
AMP PACE Connectors, pages 3022 - 3026
AMP-LEAF Connectors, pages 3043 - 3048
AMPLIFLEX Connectors, pages 8118 - 8121
CHAMP .050 , Series I Receptacles, pages 3211, 3212
Crimp Snap Twin Leaf Connectors, pages 3037 - 3042
High-Speed Standard Edge Connectors, pages 3058, 3059
Linear ZIF Connectors, pages 3031 - 3036
Low Profile Edge Connectors, pages 3017 - 3020
Rotary Cam ZIF Connectors, pages 3027 - 3030
Standard Edge .050 Series Connectors, pages 3001 - 3005
Standard Edge .050 Series PCI (Peripheral Component Interconnect) Connectors, page 3057
Standard Edge II Connectors, pages 3006 - 3012
TELEDENSITY Connectors, page 3021
Twin Leaf Mother Board Connectors, pages 3013 - 3016

Board-to-Board Connectors (Two Piece)
AMP-HDI Connectors, pages 3293 - 3305
AMPMODU .025 [0.64] Square Interconnection System, pages 3083 - 3118
AMPMODU .031 x .062 Interconnection System, pages 3074 - 3082
AMPMODU 2 mm Connectors, pages 3172 - 3179
AMPMODU 50/50 Grid Connector System, pages 3167 - 3171
AMPMODU Metristak 1.0 mm Connector System, page 3181
AMPMODU Stacking Connectors, pages 3130, 3131
AMPMODU System 50 Connectors (.050 x .100 [1.27 x 2.54] Centers), pages 3160 - 3166
AMPMODU Two-Piece Printed Circuit Board Connectors, pages 3122 - 3126
CHAMP .050 FH (Free Height) Connectors, page 3214
CHAMP .050 HD Connectors, page 3212
CHAMP .050 Series I, pages 3211 - 3214
Enhanced Eurocard Connectors, page 3320, 3328, 3329
Eurocard Connectors, pages 3319 - 3351
FH (Free Height) 0.8 mm Surface-Mount Connectors, pages 3182 - 3184
Micro-Strip Interconnection System, pages 3352 - 3354
ROCKER MATE Connectors 2.0 mm [.079] Centerline, page 3180
TBC (Twin-Beam Contact) Connectors, pages 3308 - 3310
TBC Plus (Twin-Beam Contact) Connectors, pages 3311 - 3318
Z-PACK 2 mm FB (Futurebus+) Connectors, pages 3363 - 3368
Z-PACK 2 mm HM Interconnection System, pages 3369 - 3372
Z-PACK Stripline 100 Interconnection System (2.54 x 2.54 [.100 x .100]) Centerline, pages 3355 - 3362

Boat and Truck, Trailer Cable, page 10019

Box-to-Box, .050 CHAMP, Printed Circuit Board Connectors, pages 3219, 3220

Braid-Pic Contacts and Terminals, pages 4093 - 4095

C

C Connectors, pages 4043, 4044

Cable
Boat and Truck, Trailer Cable, page 10019
Customized Cable for Mass Termination Assemblies (MTA), page 10026
Flat Ribbon Cable, pages 10020 - 10024
Prepared Cable, page 10025

Cable Assemblies, see Value-Added Cable Assemblies

CABLE MAKER Battery Terminals, page 1178

Cable-to-Cable, Standard Housings, pages 2018 - 2025

Cable-to-Panel, Standard Housings, pages 2026 - 2033

Car Radio Application Connectors (180-TC 22/WG 5), page 6075

Card Edge Connectors
AMP-LATCH Connectors, page 5006
TERMI-TWIST Printed Circuit Connectors, pages 3070 - 3072
Wrap-type Printed Circuit Connectors, pages 3066 - 3069

Cassette Connector, pages 2298 - 2301

CD-ROM Connectors, see EADS CD-ROM Connectors

CERTI-CRIMP Hand Tools, pages 12005 - 12008

CERTI-LOK Insertion Tools, page 1139

CERTI-SEAL Splices, page 1001

CHAMP .050 Connectors, pages 3210 - 3223
Box-to-Box, pages 3219, 3220
FH (Free Height) Connectors, page 3214
HD Connectors, page 3212
Series I (Board-to-Board), pages 3211 - 3214
Series II (Wire-to-Board), pages 3214 - 3216
Series III (Wire-to-Board), pages 3217, 3218
VESA Ribbon Cable Assemblies, pages 3222, 3223
VESA Series I Connectors, page 3221

CHAMP 0.8 mm Cable Assemblies, page 3418

CHAMP 0.8 mm High Density Interconnection System, page 3417

CHAMP Connectors, pages 8054 - 8095
CHAMP PC Board Connectors, pages 8071 - 8081
ACTION PIN Connectors, 8077, 8078
Shielded PC Board Connectors, pages 8079 - 8081
IDC Connectors, pages 8055 - 8070
Cable-to-Cable Hardware and Accessories, pages 8058 - 8060
Cable-to-Panel Hardware, page 8061
CHAMP Latch Low Profile Connectors, pages 8065 - 8068
Large Insulation Wire Connectors, page 8057
Shielded CHAMP Latch Connectors, pages 8069, 8070
Shielded Cable Connectors, pages 8062 - 8064
Quiet Line Filtered CHAMP Connectors, page 8032
Special Application Connectors, pages 8082 - 8095

CHAMPOMATOR 2.5 Terminating Machine, page 12025

CHAMPOMATOR 3A Terminating Machine, page 12026

Circular Multi-Pin (CMPC) Connectors, pages 2258 - 2261

Coax Mix Connectors, pages 2328, 2329

Coaxial and Flat Cable Connectors
Blind Mate Connectors for Semi-Rigid Cable, pages 4066 - 4068
BNC Connectors, 50 ohm, pages 4002 - 4019
BNC Connectors, 75 ohm, pages 4020 - 4025
Braid-Pic Contacts and Terminals, pages 4093 - 4095
C Connectors, pages 4043, 4044
COAXICON Latching Connector, pages 4096 - 4109
Decoupled Connectors, BNC and TNC, pages 4026 - 4028
Discrete COAXICON RF Connectors and Contacts for use with Custom Cable Assemblies, page 4112
Hex Crimp and Printed Circuit Board SMA Connectors, pages 4051 - 4054
Hybrid Cable Assemblies, page 4115
Micro-Miniature Connectors, page 4082
Miniature and Standard UHF Connectors, pages 4047 - 4050
Miniature Threaded Connectors, pages 4083, 4084
Multiple Transmission Cable Assemblies, pages 4110, 4111
N Connectors, pages 4037 - 4042
Point-to-Point Cable Assemblies, pages 4113, 4114
Self-Terminating Board Connectors, pages 4029 - 4036
Shielded Wire Ferrules (TERMASHIELD), pages 4091, 4092
SHV Connectors, pages 4045, 4066
SMA Adapters and PC Board Connectors, pages 4063 - 4065
SMA Connectors for Semi-Rigid and Flexible Cable, pages 4055 - 4062
SMB Connectors, pages 4069 - 4075
SMC Connectors, pages 4079 - 4081
SSMB Cable and Printed Circuit Board Connectors, page 4076
Twin BNC Connectors, pages 4085, 4086
Twin Threaded Connectors, pages 4089, 4090
Twin-Ax Connectors, pages 4087, 4088

COAXICON Discrete RF Connectors and Contacts for use with Custom Cable Assemblies, page 4112

COAXICON Latching Connector, pages 4096 - 4109

Cold-Formed PGA Sockets for Screw Machine Applications, pages 11062, 11063

Comp-U-Sertor II Insertion Machine, page 12027

Conductive Carbon Fiber Connectors, pages 8143, 8144

Convenience Outlets (15A or 20A, 125 VAC), page 10008

COPALUM Sealed Terminals and Splices, pages 1042, 1043

COPALUM Terminals and Splices, pages 1038 - 1041, 13005

CORELINK Splices, page 7076

Couplers/Splitters, Fiber-Optic
- Multimode, pages 7016, 7017
- Ruggedized Multimode, page 7018
- Singlemode, pages 7013 - 7015

CR ZIF (Cammed Rectangular, Zero Insertion Force) Connector System, pages 8034 - 8042

Crimp Quality Monitor (CQM), page 12028

CT (Common Termination) Connector System, 2.0 mm [.079] Centerlines, pages 3224 - 3230

Custom Sheets of Sockets, pages 11054, 11055

D

Data Links, Fiber-Optic
- 9 Pin AMP SC Duplex Molded-Optronic, pages 7022 - 7024
- 13 Pin MIC Molded-Optronic Transceivers, pages 7028 - 7030
- 16 Pin ST-Style Molded-Optronic Data Links, pages 7025 - 7027
- Dual Bypass Switch Module Assemblies, pages 7006 - 7008
- FSC Multimode Transceiver, pages 7031, 7032
- Singlemode FDDI Laser Transceiver, pages 7033, 7034
- Wavelength Division Multiplexers, pages 7009 - 7012

DIAMOND GRIP Terminals, pages 1011, 1019, 1027, 1029

DIN Connectors
- Shielded Circular, page 2267
- Shielded Miniature Circular, page 2268
- Shielded Miniature Circular DIN Ferrite Block Filters, page 8031

DIP Sockets, pages 11057, 11058

DIP Sockets — DL Surface Mount and Surface Mount Compatible, page 11003

DIP Sockets — Solder Tail Dual Leaf (DL), Economy and Standard, pages 11001 - 11003

DIP Test/Burn-In Sockets, pages 11064, 11065

DIPLOMATE
- SIMM Sockets, page 11006
- SIP Sockets, Solder Tail Dual Leaf (DL), page 11004
- ZIP Sockets, ZP Solder Tail Dual Leaf (DL), page 11005

Drawer Connectors
- High Current Drawer Connectors, page 8012
- Mini-Drawer Connectors, pages 8008 - 8010
- Special Versions, pages 8013, 8014
- Standard Drawer Connectors, page 8011

Dual In-Line Package (DIP) Switches, pages 9001 - 9005

Dual-Line Interlock (DLI) Connectors, Wire-to-Board, Blade-Type Connectors, pages 6023, 6024

Dynamic D-3000 Series Connectors, Wire-to-Board or Wire-to-Wire, Blade-Type Connectors, pages 6091 - 6095

E

EADS CD-ROMs
- .050 [1.27] Centerline Connectors, pages 3392 - 3395
- AMP-HDI Connectors, pages 3293 - 3305
- AMPLIMITE, .050 Series Subminiature D, Series I, All-Plastic Board-to-Board Connectors, pages 2353 - 2357
- CHAMP .050 FH (Free Height) Connectors, page 3214
- MAG-MATE Terminals, pages 1162 - 1174
- PGA Sockets, page 11029 - 11038
- PLCC Sockets, page 11018
- SBus Connectors, Series III, pages 2338 - 2346
- Shielded Series II Connectors, pages 2349 - 2352
- Shielded Slimline Connectors, pages 2347, 2348
- SIMM Sockets (MICRO-EDGE), pages 11007 - 11011
- TBC (Twin-Beam Contact) Connectors, pages 3308 - 3310
- TBC Plus (Twin-Beam Contact) Connectors, pages 3311 - 3318
- Vertical Receptacle Headers, Series III, with ACTION PIN Contacts, pages 2336, 2237
- Z-PACK 2 mm HM Interconnection System, pages 3369 - 3372

Economy Interconnection (EI) Series Connectors, pages 3186 - 3191

Econoseal
- J Series [Mark II(+)], Blade-Type Connectors, pages 6100, 6101
- Sealed Pin and Socket Connectors, pages 2264 - 2266

Econoseal III, Blade-Type Connectors, pages 6102, 6103

ELECTRO-TAP Connectors, page 1140

EUROLATCH Receptacles, page 5007

F

FASTIN-FASTON Connectors, pages 6004 - 6017
- .110 Series, pages 6016, 6017
- .187 Series, pages 6014, 6015
- .250 Series, pages 6007 - 6013
- .312 Series, page 6006
- .375 Series, page 6005

FASTON Terminals (Uninsulated and Insulated), pages 1078 - 1125

Housings (Insulated and Uninsulated)—250, 187, & 110 Series, pages 1114 - 1116
- PIDG Receptacles (Insulated), pages 1124, 1125
- Receptacles (Uninsulated)—110 Series, pages 1100 - 1102
- Receptacles (Uninsulated)—187 Series, pages 1095 - 1099
- Receptacles (Uninsulated)—205 Series, pages 1093, 1094
- Receptacles (Uninsulated)—250 Series, pages 1084 - 1092
- Selection Guide, pages 1078 - 1083
- Tab Adapters (Uninsulated)—250 Series, page 1111
- Tab Caps (Insulated and Uninsulated)—250 &187 Series, page 1113
- Tab Receptacles (Uninsulated), page 1112
- Tabs (Uninsulated)—110 Series, page 1108
- Tabs (Uninsulated)—187 Series, pages 1106, 1107
- Tabs (Uninsulated)—250 Series, pages 1103 - 1105
- Test Tabs (Uninsulated)—250, 205, 187, 125, & 110 Series, pages 1109 - 1110
- Ultra-Fast Fully Insulated Receptacles and Tabs, pages 1117 - 1121
- Ultra-Pod Fully Insulated Receptacles, pages 1122, 1123

FB (Futurebus+) Connectors, see Z-PACK 2mm Connectors

FDDI Products
- 1.3µm FDDI LED, pages 7035, 7036
- Dual Bypass Switch Module Assemblies, pages 7006 - 7008
- Singlemode FDDI Laser Transceiver, pages 7033, 7034

FH (Free Height) 0.8 mm Surface-Mount Connectors (Board-to-Board), pages 3182 - 3184

Fiber Optic Products
- Attenuators
  - Multimode, page 7021
  - Singlemode, pages 7019, 7020
- Connectors, pages 7063 - 7076
  - AMP SC, pages 7066, 7067
  - CORELINK Splice, page 7076
  - D4, pages 7069
  - FC Type, pages 7068
  - FSD (Fixed Shroud Duplex) Plug and FSD-MC Plug, pages 7071 - 7073
  - Hybrid Adapters, page 7070
  - LightCrimp XTC Epoxyless ST-Style, page 7063
  - LightPlane Connector System (Fiber Optic Backplane Connector), page 7075
  - RSD (Retractable Shroud Duplex), page 7074
  - ST-Style, pages 7064, 7065
- Couplers/Splitters
  - Multimode, pages 7016, 7017
  - Ruggedized Multimode, page 7018
  - Singlemode, pages 7013 - 7015
- Data Links, pages 7022 - 7034
  - 9 Pin AMP SC Duplex Molded-Optronic, pages 7022 - 7024
  - 13 Pin MIC Molded-Optronic Transceivers, pages 7028 - 7030
  - 16 Pin ST-Style Molded-Optronic Data Links, pages 7025 - 7027
  - FSC Multimode Transceiver, pages 7031, 7032
  - Singlemode FDDI Laser Transceiver, pages 7033, 7034
- Dual Bypass Switch Module Assemblies, pages 7006 - 7008
- InGaAs Photodetectors
  - Multimode, pages 7049, 7050
  - Pigtailed, pages 7051, 7052
  - Singlemode, pages 7047, 7048
  - Telecommunications Singlemode, pages 7045, 7046
  - Wide Area, pages 7053, 7054
- LEDs
  - 1.3µm ELED, pages 7039, 7040
  - 1.3µm FDDI LED, pages 7037, 7038
  - 1.3µm Laser Module, pages 7041, 7042
  - 1.3µm LED, pages 7035, 7036
  - Submounted 1.3µm LED, pages 7043, 7044

Specifications subject to change.
1-800-522-6752 Product Information Center/ AMP FAX Service
1-800-722-1111 Tooling/Technical Assistance Center

Fiber Optic Products (Continued)
- Preamp Modules
  - OC-1 PIN, pages 7055, 7056
  - OC-3 PIN, pages 7057, 7058
  - OC-12 PIN, pages 7059, 7060
  - Submounted InGaAs PIN, pages 7061, 7062
- Selection Guide, page 7001
- Switches, pages 7002 - 7005
- Transceivers
  - 9 Pin AMP SC Duplex Molded-Optronic, pages 7022 - 7024
  - 13 Pin MIC Molded-Optronic Transceivers, pages 7028 - 7030
  - 16 Pin ST-Style Molded-Optronic Data Links, pages 7025 - 7027
  - FSC Multimode Transceiver, pages 7031, 7032
  - Singlemode FDDI Laser Transceiver, pages 7033, 7034
- Wavelength Division Multiplexers, pages 7009 - 7012

Film Carrier IC Sockets for Surface Mounting, page 11056

Film Carriers Sockets and Pins, pages 11048 - 11053

Filtered AMPLIMITE Subminiature D Connectors, pages 8018 - 8023

Filtered CHAMP Connectors, Quiet Line, page 8032

Filtered Modular Jack Connectors, Quiet Line, page 8033

Filtered PCB Connectors, Quiet Line, pages 8029 - 8031
- Shielded Miniature Circular DIN Ferrite Block Filters, page 8031
- Subminature D Ferrite Block Filtered Connectors (AMPLIMITE), page 8031
- Subminature D HD-22 Ferrite Block Filtered Receptacles, pages 8029, 8030

Filtered Quiet Line High Performance Products, pages 8015 - 8028
- AMP-LATCH Feed-thru Pin Header Assemblies with Distributed Element Filters and Latch and Eject Levers, page 8024
- Filtered AMPLIMITE Subminiature D Connectors, pages 8018 - 8023
- High Frequency PCB Filters, page 8028
- Quiet Line Premium Loose-Piece Filters, pages 8026 - 8027
- Quiet Line Standard Loose-Piece Filters, page 8025

Flat Ribbon Cable, pages 10020 - 10024

FLEXI-BLOCK Terminal Block System, page 10052

Flexible Conduit Connectors, page 10009

Flexible Film Products, Ribbon and Flat Cable Connectors, pages 5025 - 5043

Flexible Flat Conductor Cable Jumpers, pages 10036, 10037

FP Board-to-Board 1.25/0.8 mm Surface Mount Connectors, pages 3231 - 3235

FSD (Fixed Shroud Duplex) Connectors, pages 7071 - 7073

Fuse Holders, page 6077

Fuses, page 6077

Fusion Tape, page 10049

Futurebus+ Connectors
- Z-PACK 2mm FB (Futurebus+) Connectors, pages 3363 - 3367
- Z-PACK 2mm FB (Futurebus+) Shunted Pin Header, page 3368

G

Gold-Gold System, JEDEC Type A Leaded Ceramic Chip Carrier Sockets, page 11025

H

HD-20 Products
- Connectors for Discrete Wire and Jacketed Cable, pages 2271, 2272
- Crimp Snap-in Contact Connectors, pages 2276 - 2280
- Right-Angle, Metal-Shell Connectors (AMPLIMITE III), pages 2312, 2313
- Solder Cup Accessories, pages 2282 - 2289
- Solder Cup Connectors, pages 2281, 2282
- Solder Cup Hardware, pages 2290 - 2297
- Stacked PCB Connectors, Series I, Series II and Hybrid Styles, pages 2314 - 2320
- Surface-Mount Connectors, pages 2330 - 2332

HDF-20 IDC Mass Termination Connectors, pages 5018 - 5022

HDP-22 Crimp Snap-in Contact Connectors, pages 2271, 2272

Heat Shrinkable Products (AMPSULATION), pages 10001 - 10008

Hex Crimp and Printed Circuit Board SMA Connectors, pages 4051 - 4054

High Current Commercial Connectors, page 8136

High Current Pin and Socket Contacts, pages 8137, 8138

High Density Rectangular Connectors, pages 2364 - 2369

High Speed Digital Transmission Cables, pages 10016, 10017

High-Speed Standard Edge Connectors, pages 3058, 3059

High Volume Gang of Tubes (GOT) Feeder for Robotic Applications, page 12032

High Volume Tube Feeder for Robotic Applications, page 12031

Hybrid Cable Assemblies, page 4115

Hybrid Connectors, pages 3291, 3292

I

IC Sockets
- Cold-Formed PGA Sockets for Screw Machine Applications, pages 11062, 11063
- Custom Sheets of Sockets, pages 11054, 11055
- DIP Sockets — DL Surface Mount and Surface Mount Compatible, page 11003
- DIP Test/Burn-In Sockets, pages 11064, 11065
- DIP Sockets — Solder Tail Dual Leaf (DL), Economy and Standard, pages 11001 - 11003
- Film Carrier IC Sockets for Surface Mounting, page 11056
- Film Carriers Sockets and Pins, pages 11048 - 11053
- JEDEC Type A Leaded Ceramic Chip Carrier Sockets (Gold-Gold System), page 11025
- LCCC Sockets, pages 11026 - 11028
- Miniature Spring Sockets (For Ultra-Low Socketing Requirements), pages 11045
- PGA Sockets Low Insertion Force (LIF) and Single Level (SL) ZIF, pages 11029 - 11038
- PGA Sockets — Tool Actuated ZIF (TAZ), pages 11039 - 11044
- PGA Burn-In (HAZ) Sockets, pages 11065 - 11069
- PGA Sockets page 11029
- PLCC Sockets — Low Profile SOJ-Style Surface Mount Sockets, page 11020
- PLCC Sockets — Low Profile, Surface Mount, page 11019
- PLCC Sockets — High Pressure Tin (HPT) with Solder Tails, pages 11017, 11018
- PQFP Sockets (MICRO-PITCH) — Standard, pages 11021 - 11023
- PQFP Sockets (MICRO-PITCH) — CQFP Converter, page 11021
- PQFP Sockets (MICRO-PITCH) — JEDEC (EIAJ) Metric Quad, page 11022
- PQFP Sockets — PQFP to PGA Socket Adapters, page 11025
- PQFP Sockets (MICRO-PITCH) — 80-Position/.65mm Surface Mount, page 11024
- PQFP Sockets (MICRO-PITCH) — 196-Position Surface Mount, page 11024
- PQFP Sockets (MICRO-PITCH) — 208-Position Surface Mount, page 11025
- SIMM Sockets — Dual Read-Out (DIMM), pages 11015 - 11017
- SIMM Sockets — (DIPLOMATE), page 11006
- SIMM Sockets — (MICRO-EDGE) with Metal Latches, pages 11009 - 11011
- SIMM Sockets — (MICRO-EDGE) with Plastic Latches, pages 11007, 11008
- SIMM Sockets — SIMM II Right-Angle, page 11014
- SIMM Sockets — SIMM II, Full Force, .050 [1.27] Centerline, page 11013
- SIMM Sockets — SIMM II, Vertical Cam-In, page 11012
- SIP Sockets — (DIPLOMATE) Solder Tail Dual Leaf (DL), page 11004
- Test Sockets, page 11070
- Test Probe Receptacles, page 11071
- ZIP Sockets — (DIPLOMATE) ZP Solder Tail Dual Leaf (DL), page 11005

IC Sockets, Screw Machine
- Crystal Oscillator Sockets, page 11058
- DIP Sockets, pages 11057, 11058
- PGA Sockets, pages 11059 - 11061
- SIP Sockets, page 11059
- ZIP Sockets, page 11059

IDC Connectors, see CHAMP Connectors

IEEE 1284 Cable Assemblies, pages 10031 - 10033

Insulation Displacement Ribbon Cable with Fluropolymer Insulation, pages 10027 - 10030

ISO Isolating Transformer/Power Conditioner, page 10042

J

JEDEC Type A Leaded Ceramic Chip Carrier Sockets (Gold-Gold System), page 11025

Specifications subject to change.
1-800-522-6752 Product Information Center/ AMP FAX Service
1-800-722-1111 Tooling/Technical Assistance Center

L

LANCELOK Terminals, page 9033

LCCC Sockets, pages 11026 - 11028

LEDs, Fiber-Optic
- 1.3µm ELED, pages 7039, 7040
- 1.3µm FDDI LED, pages 7037, 7038
- 1.3µm Laser Module, pages 7041, 7042
- 1.3µm LED, pages 7035, 7036
- Submounted 1.3µm LED, pages 7043, 7044

LGH High Voltage Lead Assemblies and Receptacles, pages 8096 - 8117
- 1/2I Lead Assemblies, page 8097
- 1/2LI Lead Assemblies, page 8097
- 13-Pin Circular Connectors 5KVDC, page 8106
- 1I Lead Assemblies, page 8098
- 1LI Lead Assemblies, page 8100
- 2I Lead Assemblies, page 8101
- 3I Lead Assemblies, page 8101
- 4I Lead Assemblies, page 8102
- 6-Pin, Subminiature Rectangular Connectors, page 8109
- Commerical Single Line Connectors, page 8103
- Connectors for Special Applications, page 8112 - 8113
- CRT Lead Assemblies, page 8114
- CRT-Base Connectors, page 8115
- Custom-Designed Multi-Pin Connectors, page 8111
- Heavy Duty (VRL) RFI-Shielded Lead Assemblies and Receptacles, page 8117
- Metal-Shell Circular Connectors, Military Type, page 8107 - 8108
- Micro-Miniature Connectors, page 8110
- Multi-Pin Circular Commercial Connectors 24 KVDC, page 8105
- Rack and Panel Connectors, page 8116
- Two-Position Connectors, 10 KVDC, page 8104

LightCrimp XTC Epoxyless ST-Style, page 7063

LightPlane Connector System (Fiber Optic Backplane Connector), page 7075

Locking Connectors, AMPMODU Locking Clip Contacts and Housings, pages 3095 - 3097

Louvertac Strip Bands, Female and Male, pages 8140 - 8142

Low Profile Edge Connectors, pages 3017 - 3020

Low Profile Mini AMP-IN Connectors (Wire-to-Board), pages 3195, 3196

M

Machines
- 100 Series Laminator, page 12029
- 2000 Series Laminator/Terminator, page 12030
- Applicators, pages 12021 - 12023
- Crimp Quality Monitor (CQM), page 12028
- Insertion, Comp-U-Sertor II, page 12027
- Laminating, 100 Series Laminator, page 12029
- Laminating, 2000 Series Laminator/Terminator, page 12030
- Lead Making, AMPOMATOR CLS IIIG Lead Making Machine, pages 12015 - 12018
- Terminating, AMP-O-LECTRIC Model "G" Termination Machine, pages 12013, 12014
- Terminating, AMP-O-MATIC Side-Feed Stripper-Crimper, Model II Machine, pages 12011, 12012
- Terminating, AMPLIVAR Product Terminators (APT), pages 12019, 12020
- Terminating, AUTO-PRO, page 12024
- Terminating, CHAMPOMATOR 2.5, page 12025
- Terminating, CHAMPOMATOR 3A, page 12026
- Terminating, Modular Plug Dual Terminators, page 12009, 12010
- Terminating, Modular Plug Dual, pages 12009, 12010
- Tube Feeding, High Volume Gang of Tubes (GOT) Feeder for Robotic Applications, page 12032
- Tube Feeding, High Volume Tube Feeder for Robotic Applications, page 12031

MAG-MATE Terminals, pages 1162 - 1174
- Crimp Wire Barrel, page 1166
- FASTON Tabs, page 1169 - 1174
- Pin, page 1168
- Poke-In, pages 1163, 1164
- Posted, page 1167
- Splice Terminals, page 1165

Magnet Wire Splices and Terminals, pages 1152 - 1177
- AMPLIVAR Cluster Blocks, page 1159 - 1161
- AMPLIVAR Splices, pages 1153, 1154

Magnet Wire Splices and Terminals, pages 1152 - 1177 (Continued)
- AMPLIVAR Terminals, pages 1155 - 1158
- MAG-MATE Terminals, pages 1162 - 1174
- Mini MAG-MATE Terminals, pages 1175 - 1177

Mass Termination
- Customized Cable for Mass Termination Assemblies (MTA), page 10026
- Mass Termination Connectors (MTEI) (Wire-to-Board) 2.5 [0.98] Centers, pages 3192 - 3194

MATE-N-LOK Connectors
- .140 Connectors, Large Insulation, .240 Centerline, pages 2234 - 2236
- Commecial Connectors, pages 2226 - 2233
- Mini-Universal Connectors, pages 2242 - 2247
- Universal Connectors, pages 2217 - 2225

MATE-N-LOK II Universal Connectors, pages 2213 - 2216

Metric Spec Connectors
- 040 Series Pairmate Connectors, Wire-to-Board, Blade-Type Connectors, pages 6021, 6022
- 1.25 mm [.049]/0.8 mm [.031] FP Board-to-Board Surface Mount Connectors, pages 3231 - 3235
- 2.0 mm [.079] Ribbon Cable Receptacle Connectors (AMP-LATCH), page 5024
- 250 Series Housing Lance Connectors, Wire-to-Wire, Blade-Type Connectors, pages 6001 - 6003
- ACTION PIN Stacking Connectors, pages 3127 - 3129
- AMP ROCKER MATE Connectors (Board-to-Board), page 3180
- AMPMODU 2 mm Connectors (Board-to-Board), pages 3172 - 3179
- AMPMODU Metristak 1.0 mm Connector System, page 3181
- AMPSEAL Automotive Plug Connector and Header Assembly (Wire-to-Board), page 2262
- CHAMP 0.8 mm High Density Interconnection System, pages 3417, 3418
- CT (Common Termination) Connector System, pages 3224 - 3230
- Dual-Line Interlock (DLI) Connectors, Wire-to Board Connectors, pages 6023, 6024
- Dynamic D-3000 Series Connectors, Wire-to-Board or Wire-to-Wire, Blade-Type Connectors, pages 6091 - 6095
- Economy Interconnection (EI) Series Connectors, pages 3186 - 3191
- Econoseal J Series [Mark II(+)], Blade-Type Connectors, pages 6100, 6101
- Econoseal III, Blade-Type Connectors, pages 6102, 6103
- Eurocard Connectors, pages 3319 - 3351
- EUROLATCH Receptacles, page 5007
- FH (Free Height) 0.8 mm Surface-Mount Connectors (Board-to-Board), pages 3182 - 3184
- I/O Connector Series Multiple-Tap Connectors, pages 3062 - 3065
- LightPlane Connector System, page 7075
- Low Profile Mini AMP-IN Connectors (Wire-to-Board), pages 3195, 3196
- Mass Termination EI Series Connectors (MTEI) (Wire-to-Board), pages 3192 - 3194
- Metrimate Pin and Socket Connectors, pages 2199 - 2211
- Micro-MaTch Miniature Connector System, pages 5047 - 5049
- Micro-Strip Cable Assemblies, page 3397
- Micro-Strip Interconnection System, pages 3352 - 3354
- MIL-C-38999, Series III Connectors, pages 2147 - 2150
- MULTILOCK Blade-Type Connectors, 040 Series (Mark II), pages 6081, 6082
- MULTILOCK Blade-Type Connectors, 040 Series (Standard), pages 6078 - 6080
- MULTILOCK Blade-Type Connectors, 040/070 Series Hybrid I/O, pages 6088 - 6090
- MULTILOCK Blade-Type Connectors, 070 Series, pages 6083 - 6087
- Multiple Interlock (MIC) Connectors, Wire-to-Board, Blade-Type Connectors, pages 6025 - 6028
- PC Card Connectors, pages 3261 - 3289
- PQFP Sockets (MICRO-PITCH), page 11022
- SCCS (Steering Column Combination Switch), Wire-to- Wire, Blade-Type Connectors, pages 6029, 6030
- Single-Row Linear (ASL) Connectors (Wire-to-Board, Wire-to-Wire), pages 3158, 3159
- Standard-Timer and Multifitting Connectors in In-Line Mating Technology, pages 6031 - 6037
- SUPERSEAL 1.5 Series, Blade-Type Connectors, pages 6104, 6105
- Timer Connectors, pages 6038 - 6078
- ULTREX Interconnection System (Wire-to-Board), pages 3201 - 3209
- Z-PACK 2 mm FB (Futurebus+) Connectors, pages 3363 - 3368
- Z-PACK 2 mm HM Interconnection System, pages 3369 - 3372
- Z-PACK Stripline 100 Interconnection System, pages 3355 - 3362

Metrimate 43°—Mount Printed Circuit Board Plug Header, page 2211

MICRO-EDGE SIMM Sockets with Metal Latches, pages 11009 - 11011

MICRO-EDGE SIMM Sockets with Plastic Latches, pages 11007, 11008

Micro-MaTch Miniature Connector System, pages 5047 - 5049

Micro-Miniature Connectors, page 4082

Specifications subject to change.
1-800-522-6752 Product Information Center/ AMP FAX Service
1-800-722-1111 Tooling/Technical Assistance Center

MICRO-PITCH PQFP Sockets
80-Position/.65mm Surface Mount, page 11024
196-Position Surface Mount, page 11024
208-Position Surface Mount, page 11025
CQFP Converter, page 11021
JEDEC (EIAJ) Metric Quad, page 11022
Standard, pages 11021 - 11023

MIL Specs
MIL-C-5015, pages 2069 - 2083
MIL-C-5015, pages 2187 - 2197
MIL-C-5015, Style Circular Plastic Connectors (CPC), page 2198
MIL-C-26482, Series II, pages 2090 - 2098
MIL-C-26482, Series I, pages 2084 - 2089
MIL-C-38999, Series I, II & III Guide, pages 2133 - 2136
MIL-C-38999, Series III MATRIX Engine/Firewall Cylindrical Connectors, pages 2180 - 2186
MIL-C-38999, Series II, pages 2142 - 2146
MIL-C-38999, Series III, pages 2147 - 2150
MIL-C-38999, Series I, pages 2137 - 2141
MIL-T-81714 (Terminal Junction System), pages 2151 - 2166
MIL-C-83723, MATRIX Engine/Firewall Cylindrical Connectors, pages 2173 - 2179
MIL-C-83723, MTE Series Connectors, pages 2167 - 2172
MIL-C-83723, Series III, pages 2122 - 2132
MIL-C-83723, Series II, pages 2107 - 2121
MIL-C-83723, Series 1, pages 2099 - 2106

Military
Metal-Shell Circular Connectors, Military Type, page 8107

Mini MAG-MATE Terminals, pages 1175 - 1177

Mini-Matrix Slide Switch, page 9014

Miniature and Standard UHF Connectors, pages 4047 - 4050

Miniature Ribbon Connector System, see CHAMP Connectors

Miniature Spring Sockets (For Ultra-Low Socketing Requirements), pages 11045

Miniature Threaded Connectors, page 4083 - 4084

Modular Connectors, see Pin and Socket Connectors, G Series

Modular Interface Connector Devices, pages 9039 - 9045
Front Board Assemblies, pages 9042 - 9045
Rear Bay Assemblies, pages 9040, 9041

Modular Plug Dual Terminators, pages 12009, 12010

MT-6/MT-7 Connectors System, pages 3197 - 3200

MTA-100 IDC Connectors and Headers, .100 [2.54] Centerline, pages 3236 - 3243

MTA-156 IDC Connectors and Headers, .156 [3.96] Centerline, pages 3244 - 3260

Multifitting Blade-Type Connectors, pages 6034 - 6037

MULTILOCK Blade-Type Connectors
040/070 Series Hybrid I/O, pages 6088 - 6090
040 Series (Mark II), pages 6081, 6082
040 Series (Standard), pages 6078 - 6080
070 Series, pages 6083 - 6087

Multimate, G Series Pin and Socket Connectors—pages 2001 - 2010
Cable Clamps, page 2003
Contact Modules, page 2002
Multimate Contacts, pages 2004 - 2010
Shells, page 2002

Multiple Interlock (MIC) Connectors, Wire-to-Board, Blade-Type Connectors, pages 6025 - 6028

Multiple Transmission Cable Assemblies, pages 4110, 4111

Multiplexers, Fiber Optic, pages 7009 - 7012

N

N Connectors, pages 4037 - 4042

O

Open Barrel, Terminals and Splices, Machine Applied, pages 1048 - 1077
Contacts, pages 1074 - 1076
Pins, page 1066
Receptacles, pages 1067 - 1069
Ring Tongue, pages 1049 - 1059
SHUR-PLUG Terminals and Receptacles, pages 1070, 1071

Open Barrel, Terminals and Splices, Machine Applied, pages 1048 - 1077 (Continued)
Spades Tongue, pages 1060 - 1063
Splices, pages 1064, 1065
Strain Relief, page 1077
Tabs, pages 1072 - 1074

P

Paddlecard Cable Assemblies, pages 8052, 8053

Patchcords, AMP Standard Patchcord Programming System, pages 9020, 9021
for Front Board Assemblies, page 9021
for Rear Bay Assemblies, page 9021

Patchcords, Universal Patchcord Programming System, pages 9022 - 9036
for AMPMODU Board Mount Receptacles, pages 9036, 9037
for LANCELOK Terminals, page 9033
for Nylon Sleeve Patchcords, pages 9028 - 9032
for Panel Mount, page 9023
for Rear Bay Wiring, pages 9033 - 9038
for Taper Pins, pages 9034, 9035
for TERMI-POINT Tools and Clips, page 9038
for Twin Detent Patchcords, pages 9024 - 9027

PC Card Connectors — Metric, pages 3261 - 3289
68-Position Pin Headers
Board-to-Board Assembly, 140 Positions, page 3279
Raised Profile, pages 3273 - 3276
Stacked, Raised Profile, pages 3278, 3279
Stacked, Standard Profile, page 3277
Standard Profile, pages 3269 - 3272
Vertical, page 3276
68-Position Receptacle Assemblies, pages 3267 - 3268
Ejectors
Raised Profile, pages 3275, 3276
Stacked, Raised Profile, page 3279
Stacked, Standard Profile, page 3278
Standard Profile, pages 3271, 3272
Frame Kits, pages 3280 - 3289
Memory Card, pages 3288, 3289
Selection Guide, pages 3280, 3281
Series I, page 3282
Series II, pages 3283 - 3285
Series III, pages 3286 - 3288
Selection Guide, pages 3261- 3266

PCMCIA Cards
Business Audio Card, page 8147
Fax/Modem 14.4 and Fax/Modem/Voice 14.4, page 8145
Flash Memory Cards, page 8146

PGA Burn-In (HAZ) Sockets, pages 11065 - 11069

PGA Sockets, Low Insertion Force (LIF) and Single Level (SL) ZIF, pages 11029 - 11038

PGA Sockets, pages 11059 - 11061

PGA Sockets, Tool Actuated ZIF (TAZ), pages 11039 - 11044

Photodetectors, InGaAs
Multimode, pages 7049, 7050
Pigtailed, pages 7051, 7052
Singlemode, pages 7047, 7048
Telecommunications Singlemode, pages 7045, 7046
Wide Area, pages 7053, 7054

PIDG (Pre-Insulated Diamond Grip) Terminals, pages 1010, 1012, 1013, 1026, 1027, 1029, 1030, 1032 - 1035, 1037

Pin and Socket Connectors
Metrimate 43°—Mount Printed Circuit Board Plug Header, page 2211
Metrimate Pin and Socket Connectors, pages 2199 - 2209
Wire Integration Unit (WIU) Connectors, page 2210

Pin and Socket Connectors, Soft Shell, pages 2212
(CMPC) Circular Multi-Pin Connectors, pages 2258 - 2261
(MR) Miniature Rectangular Connectors, pages 2248 - 2254
.062 [1.57] Soft-Shell Commercial Pin and Socket Connectors, pages 2255 - 2257
.093 [2.36] Soft-Shell Commercial Pin and Socket Connectors, pages 2237 - 2241
.140 MATE-N-LOK Connectors, Large Insulation, .240 Centerline, pages 2234 - 2236
AMPSEAL Automotive Plug Connector and Header Assembly, (Wire-to-Board), page 2262
Audio/Instrument Connectors (DIN Type), page 2263
Commercial MATE-N-LOK Connectors, pages 2226 - 2233
Econoseal Sealed Pin and Socket Connectors, pages 2264 - 2266

Pin and Socket Connectors, Soft Shell, pages 2212 (Continued)
Mini-Universal MATE-N-LOK Connectors, pages 2242 - 2247
Shielded Circular DIN Connectors, page 2267
Shielded Miniature Circular DIN Connectors, page 2268
Universal MATE-N-LOK Connectors, pages 2217 - 2225
Universal MATE-N-LOK II Connectors, pages 2213 - 2216

Pin and Socket Connectors—CPC (Circular Plastic) and Metal-Shell Connectors, pages 2048 - 2067
Accessories, pages 2059 - 2062
Metal-Shell, Series 1, page 2064
Metal-Shell, Series 2, page 2065
Metal-Shell, Series 3, page 2066
Metal-Shell, Series 4, page 2067
Series 1, pages 2049 - 2052
Series 2, pages 2053 - 2056
Series 3, page 2057
Series 4, page 2058
Special CPC Connectors, page 2063

Pin and Socket Connectors—G Series (Multimate) Connectors, pages 2001 - 2010
Cable Clamps, page 2003
Contact Modules, page 2002
Multimate Contacts, pages 2004 - 2010
Shells, page 2002

Pin and Socket Connectors—M Series, pages 2011 - 2047
Posted Connectors, pages 2034, 2035
Power Contacts, page 2015
RF Contacts, pages 2016, 2017
Signal Contacts, pages 2012 - 2014
Special Application Connectors, pages 2036 - 2045
Fastening Hardware, pages 2046 - 2047
Grounding Blocks, page 2045
High Current Connectors, page 2043
High Voltage Connectors, page 2044
Mixed Connectors, page 2043
RFI/EMI Shielding Kits, page 2045
Shallow Block Connectors, page 2042
V.35 Connector, pages 2037 - 2041
Standard Housings, Cable-to-Cable, pages 2018 - 2025
Standard Housings, Cable-to-Panel, pages 2026 - 2033
Twin Standard, page 2017

Planar Ribbon Cable
Customized Cable for Mass Termination Assemblies (MTA), page 10026
Flat Ribbon Cable, pages 10020 - 10024
Prepared Cable, page 10025

PLASTI-GRIP Terminals and Splices, pages 1010, 1016, 1017, 1027, 1029, 1030, 1032, 1033, 1035, 1037

PLCC Sockets
High Pressure Tin (HPT) with Solder Tails, pages 11017, 11018
Low Profile SOJ-Style Surface Mount Sockets, page 11020
Low Profile, Surface Mount, page 11019

Pluggable Bus Bar Connector, page 8148

Point-to-Point Cable Assemblies, pages 4113, 4114

Positive Lock Receptacles, pages 6018 - 6020

Post Shunts, pages 9008 - 9011

Posted Connectors, pages 2034, 2035

Power Connectors, AMP Power Lock Connectors, pages 8005 - 8007

Power Contacts, page 2015

Power Cord Receptacle, page 10010

Power Mix Connectors, pages 8149, 8150

PQFP Sockets (MICRO-PITCH)
JEDEC (EIAJ) Metric Quad, page 11022
CQFP Converter, page 11021
Standard, pages 11021 - 11023
PQFP to PGA Socket Adapters, page 11025
80-Position/.65mm Surface Mount, page 11024
196-Position Surface Mount, page 11024
208-Position Surface Mount, page 11025

Preamp Modules, Fiber Optics
OC-1 PIN, pages 7055, 7056
OC-3 PIN, pages 7057, 7058
OC-12 PIN, pages 7059, 7060
Submounted InGaAs PIN, pages 7061, 7062

Primary Wire and Cable
18-10 AWG, page 10018
Boat and Truck, Trailer Cable, page 10019

Printed Circuit Board Connectors, Box Contact Connectors, page 3373 - 3395

Printed Circuit Board Connectors
.031 x .062 [0.79 x 1.57] Interconnection System (AMPMODU), pages 3074 - 3082
ACTIVE + DIN Connector, page 3398
AMP Micro-Strip Cable Assemblies, page 3397
AMP-BARREL Terminals, pages 3408, 3409
AMP-BLADE Two-Piece Printed Circuit Edge Connectors (Wire-to-Board), pages 3399 - 3404
AMPMODU .025 [0.64] Square Interconnection System, pages 3083 - 3118
CHAMP 0.8 mm Cable Assemblies, page 3418
CHAMP 0.8 mm High Density Interconnection System, page 3417
CT (Common Termination) Connector System, 2.0 mm [.079] Centerlines, pages 3224 - 3230
Disconnects, pages 3410 - 3412
Disk Drive Connectors, 2-in-1 Combination, page 3416
FP Board-to-Board 1.25/0.8 mm Surface Mount Connectors, pages 3231 - 3235
High-Speed Standard Edge Connectors, pages 3058, 3059
I/O Connector Series Multiple-Tap Connectors, pages 3062 - 3065
MTA-100 IDC Connectors and Headers, .100 [2.54] Centerline, pages 3236 - 3243
MTA-156 IDC Connectors and Headers, .156 [3.96] Centerline, pages 3244 - 3260
Multiple Tap Printed Circuit Edge Connectors, pages 3060, 3061
Power Tap, page 3415
Printed Circuit Board (PCB) Pin Receptacles, pages 3406, 3407
Standard Edge .050 [1.27] Series PCI (Peripheral Component Interconnect) Connectors, page 3057
Super Trap Connectors 1.25 mm [.049] Centerline, page 3405
TERMI-TWIST Printed Circuit Connectors, pages 3070 - 3073
Terminals, AMP EDGE Single Lead Printed Circuit Terminals, page 3412
Terminals, Miniature AMP-IN Terminals, page 3413
Test Probe Receptacles, page 3414
Wrap-Type Printed Circuit Connectors, pages 3066 - 3069

Printed Circuit Board Connectors, CHAMP .050 Connectors, pages 3210 - 3223
Box-to-Box, pages 3219, 3220
Series I (Board-to-Board), pages 3211 - 3214
Series II (Wire-to-Board), pages 3214 - 3216
Series III (Wire-to-Board), pages 3217, 3218
VESA Ribbon Cable Assemblies, pages 3222, 3223
VESA Series I Connectors, page 3221

Printed Circuit Board Connectors, Chevron-Shaped Contact Connectors, page 3396

Printed Circuit Board Connectors, Eurocard Connectors per DIN 4612 and IEC 603-2, pages 3319 - 3351
Cable Clamps, page 3346
Dust Covers, page 3345
Guide Brackets, pages 3347, 3348
Keying Systems, pages 3349, 3350
MFBL (Make First/Break Last) Connector System, page 3321
Tooling, page 3351
Type B, page 3322
Type C, pages 3323 - 3332, page 3344
Type D, pages 3332, 3333
Type F, pages 3333 - 3336
Type G, page 3336
Type M, pages 3336 - 3340
Type Q, pages 3340, 3341
Type R, pages 3341 - 3344

Printed Circuit Board Connectors, High Speed, Controlled Impedance Two-Piece Connectors, pages 3352 - 3362
Micro-Strip Interconnection System, pages 3352, 3353
Z-PACK Stripline 100 High Performance Cable Assemblies, pages 3361, 3362
Z-PACK Stripline 100 Interconnection System (2.54 x 2.54 [.100 x .100]) Centerline, pages 3355 - 3360

Printed Circuit Board Connectors, One-Piece, Board-to-Board
AMP PACE Connectors, pages 3022 - 3026
Linear ZIF Connectors, pages 3031 - 3036
Low Profile Edge Connectors, pages 3017 - 3020
Rotary Cam ZIF Connectors, pages 3027 - 3030
Standard Edge .050 Series Connectors, pages 3001 - 3005
Standard Edge II Connectors, pages 3006 - 3012
TELEDENSITY Connectors, page 3021
Twin Leaf Mother Board Connectors, pages 3013 - 3016

Printed Circuit Board Connectors, Two-Piece, High-Density, pages 3290 - 3318
AMP-HDI Connectors, pages 3293 - 3305
AMP-HDI Hybrid Connectors, pages 3291, 3292
TBC (Twin-Beam Contact) Connectors, pages 3308 - 3310
TBC Plus (Twin-Beam Contact) Connectors, pages 3311 - 3318
Vertical Receptacles with ACTION PIN and Solder Post Contacts, pages 3306, 3307

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

Printed Circuit Board Connectors, Wire-to-Board
AMP-LEAF Connectors, pages 3043 - 3048
Crimp Snap Twin Leaf Connectors, pages 3037 - 3042
DUO-TYNE Flag Connectors, pages 3049 - 3051
High Current Connectors, pages 3052 - 3054
Hood Assemblies, pages 3055, 3056

Printed Circuit Board Connectors, Z-PACK Futurebus+ Connectors
AMP Z-PACK 2 mm HM Interconnection System, pages 3369 - 3372
Z-PACK 2 mm FB (Futurebus+) Shunted Pin Header, page 3368
Z-PACK 2 mm FB (Futurebus+) Connectors, pages 3363 - 3367

PRO-CRIMPER II Hand Tools, pages 12001 - 12005

Programming Devices
Dual In-Line Package (DIP) Switches, pages 9001 - 9005
Mini-Matrix Slide Switch, page 9014
Modular Interface, Front Board Assemblies, pages 9042 - 9045
Modular Interface, Rear Bay Assemblies, pages 9040, 9041
Patchcords, AMP Standard Patchcord Programming System, pages 9020, 9021
Patchcords, Universal Patchcord Programming Products, pages 9022 - 9038
Post Shunts, pages 9008 - 9011
Rotary Switches for Printed Circuit Boards, page 9015 - 9019
Shunts, pages 9006, 9007
Slide Switches for Printed Circuit Boards, pages 9012, 9013
Standard Patchcord, Front Board Assemblies, pages 9021, 9042 - 9045
Standard Patchcord, Rear Bay Assemblies, pages 9020, 9021
Universal Patchcord, Nylon Sleeve Patchcords, pages 9028 - 9032
Universal Patchcord, Panel Mount, page 9023
Universal Patchcord, Rear Bay Wiring, pages 9033 - 9038
Universal Patchcord, Twin Detent Patchcords, pages 9024 - 9027

Q

QuickRing System Cable Assemblies, pages 10034, 10035

Quiet Line Filtered Connectors
CHAMP Connectors, page 8032
High Performance Filter Products, pages 8015 - 8028
Modular Jack Connectors, page 8033
PCB Connectors, pages 8029 - 8031

R

Rack and Panel Connectors
ARINC 404 Rack and Panel Connectors, pages 2370 - 2381
ARINC 600 Rack and Panel Connectors, pages 2382 - 2391

Radiation Resistant Terminals, pages 1011, 1015, 1017, 1019

Retrofit Contacts for Cable-to-Cable and Cable-to-Board Connectors, page 8139

RF Connectors, see Coaxial Cable Connectors

RF Contacts, pages 2016, 2017

Ribbon and Flat Cable Connectors
AMP Micro-MaTch Miniature Connector System, pages 5047 - 5049
AMP-LATCH 2.0mm Ribbon Cable Receptacle Connectors, page 5024
AMP-LATCH Accessories, page 5017
AMP-LATCH Card Edge, page 5006
AMP-LATCH DIP Plugs, page 5007
AMP-LATCH Feed-thru Pin Header Assemblies with Distributed Element Filters and Latch and Eject Levers, page 8024
AMP-LATCH High Temperature Thru-Hole (SMT Compatible) Universal Ejection Style Pin Headers, pages 5012, 5013
AMP-LATCH Low Profile Headers, pages 5014 - 5016
AMP-LATCH Novo Receptacles, pages 5004, 5005
AMP-LATCH System 50, Receptacle Connectors, page 5023
AMP-LATCH Uni-Beam Connectors, pages 5002, 5003
AMP-LATCH Universal Ejection Style Pin Headers, pages 5010 - 5012
AMP-LATCH Universal I/O Pin Connectors, pages 5008, 5009
AMPLIMITE Subminiature D, pages 5018 - 5022
EUROLATCH Receptacles, page 5007
Flexible Film Products
.050 Centerline Products, pages 5025 - 5030
.100 Centerline Products, pages 5031 - 5043
Flexible Printed Circuit (FPC) Connectors, pages 5044 - 5046

Right-Angle Posted Connectors, pages 2302 - 2311

ROCKER MATE Connectors 2.0 mm [.079] Centerline (Board-to-Board), page 3180

Rotary Switches for Printed Circuit Boards, page 9015 - 9019

RSD (Retractable Shroud Duplex) Connectors, page 7074

S

SBus Connectors Series III, pages 2338 - 2346

SCCS (Steering Column Combination Switch) Connectors, Wire-to-Wire, Blade-Type Connectors, pages 6029, 6030

Screw Clamp System, page 10015

Screw Machine IC Sockets
Crystal Oscillator Sockets, page 11058
DIP Sockets, pages 11057, 11058
PGA Sockets, pages 11059 - 11061
SIP Sockets, page 11059
ZIP Sockets, page 11059

SCSI Cable, Multipair, pages 10038 - 10040

SDL (Shielded Data Link) Connectors, pages 8043 - 8051

Sealed Connectors
Econoseal Sealed Pin and Socket Connectors, pages 2264 - 2266

Sealed Terminals and Splice
CERTI-SEAL Sealed Splices (CERTI-SEAL), page 1001
COPALUM Sealed Terminals and Splices, pages 1042, 1043
Pre-Insulated Sealed Terminals and Splices, pages 1046, 1047

Selection Guides
Blindmate Connector—Product Line Selection Guide, page 13024
Board-to-Board (One Piece)—Product Line Selection Guide, page 13021
Board-to-Board (Two Piece)—Product Line Selection Guide, page 13022
Coaxial Cable-to-Connector Selection Guide, pages 13025 - 13028
Computer Standards Reference Guide, pages 13010 - 13015
I/O Connector—Product Line Selection Guide, page 13023
IC Socket Selection Guide, pages 13032, 13033
PCB Parallel Stacking Guide, pages 13025 - 13028
Power Connector Selection Guide, pages 13007 - 13009
Termination Machine Selection Guide, pages 13034 - 13038
Terminator Selection Guide, pages 13016, 13017
Wire-to-Board—Product Line Selection Guide, pages 13018, 13019
Wire-to-Wire—Product Line Selection Guide, pages 13020, 13021

Self-Terminating Board BNC Connectors, pages 4029 - 4036

Serial Interface Module (SIM), page 2392

Series I, All-Plastic Board-to-Board Connectors (.050 x .100 [1.27 x 2.54] Centerlines), pages 2353 - 2361

Series III Connectors (.050 x .100 [1.27 x 2.54] Centerline), pages 2333 - 2335

Shielded Connectors
Shielded CHAMP IDC Connectors (Cable Connectors), pages 8062, 8063
Shielded CHAMP IDC Connectors (Panel Mount), page 8064
Shielded CHAMP Latch Connectors (Panel Mount), pages 8069, 8070

Shielded Series II Connectors (.050 x .100 [1.27 x 2.54] Centerlines), pages 2349 - 2352

Shielded Slimline Connectors, pages 2347, 2348

Shielded Wire Ferrules (TERMASHIELD), pages 4091, 4092

Shunts, pages 9006, 9007

SHUR-PLUG Terminals and Receptacles, pages 1070, 1071

SHV Connectors, pages 4045 - 4066

Signal Contacts, pages 2012 - 2014

Silicone Fusion Tape, page 1050

SIMM II SIMM Sockets
Full Force, .050 [1.27] Centerline, page 11013
Right-Angle Sockets, page 11014
Vertical Cam-In, page 11012

SIMM Sockets
DIPLOMATE, page 11006
Dual Read-Out (DIMM), pages 11015 - 11017
MICRO-EDGE with Metal Latches, pages 11009 - 11011
MICRO-EDGE with Plastic Latches, pages 11007, 11008
SIMM II, Full Force, .050 [1.27] Centerline, page 11013
SIMM II Right-Angle, page 11014
SIMM II, Vertical Cam-In, page 11012

Single-Row Linear (ASL) Connectors (Wire-to-Board, Wire-to-Wire), pages 3158, 3159

SIP Sockets, page 11059

SIP Sockets — (DIPLOMATE) Solder Tail Dual Leaf (DL), page 11004

Slide Switches for Printed Circuit Boards, pages 9012, 9013

SMA Connectors
for Hex Crimp and Printed Circuit Board, pages 4051 - 4054
for Semi-Rigid and Flexible Cable, pages 4055 - 4062
SMA Adapters and PC Board Connectors, pages 4063 - 4065

SMB Connectors
50 ohm, pages 4069 - 4073
75 ohm, pages 4074, 4075

SMC Connectors, pages 4079 - 4081

Soft-Shell Connectors, pages 2212 -2261

SOLISTRAND Terminals and Splices, pages 1011, 1020 - 1037

Special Application Connectors, pages 2036 - 2045
Fastening Hardware, pages 2046, 2047
Grounding Blocks, page 2045
High Current Connectors, page 2043
High Voltage Connectors, page 2044
Mixed Connectors, page 2043
RFI/EMI Shielding Kits, page 2045
Shallow Block Connectors, page 2042
V.35 Connector, pages 2037 - 2041

Special Application Connectors, see CHAMP Connectors

SPIRAP Plastic Cable Wrap, page 10051

SSMB Cable and Printed Circuit Board Connectors, pages 4076

Standard Edge .050 Series Connectors, pages 3001 - 3005

Standard Edge II Connectors, pages 3006 - 3012

Standard Housings, Cable-to-Cable, pages 2018 - 2025

Standard Housings, Cable-to-Panel, pages 2026 - 2033

Standard Tandem Spring and Mini-Tandem Spring Receptacle Contacts, pages 3155 - 3157

Standard-Timer Housings, Blade-Type Connectors, pages 6031 - 6033

Steering Column Combination Switch (SCCS) Connectors, Wire-to-Wire Connectors, pages 6029, 6030

Straight Posted Connectors, pages 2321 - 2327

STRATO-THERM High Temperature Terminals and Splices, pages 1002 - 1008

Subminiature D Connectors, (AMPLIMITE), pages 2271 - 2332
Cassette Connector, pages 2298 - 2301
Coax Mix Connectors, pages 2328, 2329
Ferrite Block Filtered Connectors, page 8031
Filtered, pages 8018 - 8023
HD-20 Right-Angle, Metal-Shell Connectors (AMPLIMITE III), pages 2312, 2313
HD-20 Solder Cup Accessories, pages 2282 - 2290
HD-20 Solder Cup Connectors, pages 2281, 2282
HD-20 Solder Cup Hardware, pages 2290 - 2297
HD-20 Stacked PCB Connectors, Series I, Series II and Hybrid Styles, pages 2314 - 2320
HD-20 Surface-Mount Connectors, pages 2330 - 2332
HD-22 Ferrite Block Filtered Receptacles, pages 8029, 8030
HDE-20 Connectors for Discrete Wire and Jacketed Cable, pages 2271, 2272
HDP-20 Crimp Snap-in Contact Connectors, pages 2276 - 2280
HDP-22 Crimp Snap-in Contact Connectors, pages 2271, 2272
Right-Angle Posted Connectors, pages 2302 - 2311
Straight Posted Connectors, pages 2321 - 2327

Subminiature D Connectors, .050 Series (AMPLIMITE), pages 2333 - 2362
High Performance Cable Assemblies, page 2362
SBus Connectors Series III, pages 2338 - 2346
Series I, All-Plastic Board-to-Board Connectors (.050 x .100 [1.27 x 2.54] Centerlines), pages 2353 - 2361
Series III Connectors (.050 x .100 [1.27 x 2.54] Centerline), pages 2333 - 2335
Shielded Series II Connectors (.050 x .100 [1.27 x 2.54] Centerlines), pages 2349 - 2352
Shielded Slimline Connectors, pages 2347, 2348
Vertical Receptacle Headers, Series III, with ACTION PIN Contacts, pages 2336, 2337

Subminiature D Connectors, for Ribbon Cable Connectors (HDF), pages 5018 - 5022

Super Trap Connectors 1.25 mm [.049] Centerline, page 3405

SUPERSEAL 1.5 Series, Blade-Type Connectors, pages 6104, 6105

Switches
Fiber Optic, pages 7002 - 7005
Ruggedized Fiber Optic, pages 7004, 7005

Switches and Shunts
Dual In-Line Package (DIP) Switches, pages 9001 - 9005
Mini-Matrix Slide Switch, page 9014
Post Shunts, pages 9008 - 9011
Rotary Switches for Printed Circuit Boards, page 9015 - 9019
Shunts, pages 9006, 9007
Slide Switches for Printed Circuit Boards, pages 9012, 9013

T

Tandem Spring and Mini-Tandem Spring Receptacle Contacts, pages 3155 - 3157

Taper Pins, Receptacles, Blocks, and Assemblies, pages 1126 - 1139
Formed Taper Pins, pages 1127 - 1130
Solid Taper Pins, 1131 - 1134
Taper Blocks, 1135 - 1138

Tapes and Wrap
Fusion Tape, page 10049
Silicone Fusion Tape, page 1050
SPIRAP Plastic Cable Wrap, page 10051

Tel-Splice Connectors, page 1141

TELEDENSITY Connectors, page 3021

TERMASHIELD Shielded Wire Ferrules, pages 4091, 4092

TERMI-BLOK Stacking Connectors, page 10011

TERMI-FOIL Terminals and Splices for Aluminum and Copper Foil or Strip, pages 1142 - 1144, 13006

TERMI-POINT Tools and Clips, page 9038

TERMI-TWIST Printed Circuit Connectors, pages 3070 - 3073

Terminal Blocks, page 10053

Terminal Junction System (MIL-T-8174), pages 2151 - 2166

Terminals and Splices
AMP ELECTRO-TAP Connectors, page 1140
AMPLI-BOND Terminals and Splices, pages 1010, 1018
AMPLIVAR Cluster Blocks, page 1159 - 1161
AMPLIVAR Splices, pages 1153, 1154
AMPLIVAR Terminals, pages 1155 - 1158
AMPOWER II Uninsulated Terminals and Splices, page 1145
AMPOWER Quick Disconnect and Bolt Type Disconnect Terminals, page 1146
AMPOWER Uninsulated Terminals and Splices, pages 1147 - 1150
Budget Terminals and Splices, pages 1011, 1020 - 1037
CABLE MAKER Battery Terminals, page 1178
CERTI-SEAL Splices, page 1001
Closed End Splices, pages 1044, 1045
COPALUM Sealed Terminals and Splices, pages 1042, 1043
COPALUM Terminals and Splices, pages 1038 - 1041
DIAMOND GRIP Terminals, pages 1011, 1019, 1027, 1029
High Temperature Terminals and Splices (STRATO-THERM), pages 1002 - 1008
Machine Applied Terminations, Open Barrel, pages 1048 - 1077
MAG-MATE Terminals, pages 1162 - 1174
Magnet Wire Splices and Terminals, pages 1152 - 1177
Mini MAG-MATE Terminals, pages 1175 - 1177
PIDG (Pre-Insulated Diamond Grip) Terminals, pages 1010, 1012, 1013, 1026, 1027, 1029, 1030, 1032 - 1035, 1037
PIDG Insualation Restriction Terminals, pages 1010, 1013 - 1015
PLASTI-GRIP Terminals and Splices, pages 1010, 1016, 1017, 1027, 1029, 1030, 1032, 1033, 1035, 1037
Pre-Insulated Sealed Terminals and Splices, pages 1046, 1047
Radiation Resistant Terminals, pages 1011, 1015, 1017, 1019
Sealed Splices (CERTI-SEAL), page 1001
SHUR-PLUG Terminals and Receptacles, pages 1070, 1071
SOLISTRAND Terminals and Splices, pages 1011, 1020 - 1037
Standard Terminal and Splice Shapes
Butt Splices, pages 1034 - 1036
Flag Ring, page 1025
Flanged Spade, page 1029, 1030
High Temperature, pages 1002 - 1008
Hook, pages 1033, 1034
Long Spring Spade, page 1032
Parallel Splices, page 1037
Rectangular, page 1026
Ring, pages 1012 - 1024
Sealed, page 1001
Short Spring Spade, page 1031
Slotted Ring, page 1033
Spade, page 1027, 1028
STRATO-THERM High Temperature, pages 1002 - 1008
Taper Pins, Receptacles, Blocks, and Assemblies, pages 1126 - 1139
Tel-Splice Connectors, page 1141

Specifications subject to change.
1-800-522-6752
Product Information Center/ AMP FAX Service
1-800-722-1111
Tooling/Technical Assistance Center

Terminals and Splices (Continued)
TERMI-FOIL Terminals and Splices for Aluminum and Copper Foil or Strip, pages 1142 - 1144, 13006
TERMINYL Terminals, pages 1011, 1019

TERMINYL Terminals, pages 1011, 1019

Test Probe Receptacles, page 11071

Test Sockets, page 11070

Timer Connectors
Additional Housings for Timer Contacts, Blade-Type Connectors, page 6077
Junior Power-Timer Housings, Blade-Type Connectors, pages 6071 - 6076
Junior Timer/Power Contacts, Blade-Type Connectors, pages 6040 - 6045
Male Blade-Type Connectors, pages 6059 - 6070
Micro-Timer Contacts, Blade-Type Connectors, pages 6038 - 6040
Standard Timer/Power Contacts, Blade-Type Connectors, pages 6046 - 6052
Timer Housings, Blade-Type Connector, pages 6053 - 6059

TNC
Decoupled Connectors, pages 4026 - 4028

Tools, also see Machines
CERTI-CRIMP Hand Tools, pages 12005 - 12008
Crimping Tools, pages 12001-12008
PRO-CRIMPER II Hand Tools, pages 12001 - 12005

Transceivers, Fiber-Optic
9 Pin AMP SC Duplex Molded-Optronic, pages 7022 - 7024
13 Pin MIC Molded-Optronic Transceivers, pages 7028 - 7030
16 Pin ST-Style Molded-Optronic Data Links, pages 7025 - 7027
FSC Multimode Transceiver, pages 7031, 7032
Singlemode FDDI Laser Transceiver, pages 7033, 7034

Twin BNC Connectors, pages 4085, 4086

Twin Leaf Mother Board Connectors, pages 3013 - 3016

Twin Standard, page 2017

Twin Threaded Connectors, pages 4089, 4090

Twin-Ax Connectors, pages 4087, 4088

Twin-Beam Contact Connectors, pages 3308 - 3318

U

UHF Connectors, see Coaxial Cable Connectors

ULTREX Interconnection System (Wire-to-Board) pages 3201 - 3209
2 mm [.079] Centerline Low Profile, pages 3201, 3202
2 mm [.079] Centerline Standard Profile, pages 3203 - 3204
2.5 mm [.098] and 2.54 [.100] Centerlines, pages 3205, 3206
2.54 x 2.54 mm [.100 x .100] Centerlines, pages 3207, 3208
5 [.197]/7.5 mm [2.95] Centerlines, page 3209

Universal Power (UP) Blade-Type Connectors, pages 6096 - 6099

V

Value-Added Cable Assemblies
CHAMP 24 Position Interface Bus Cable Assemblies (IEEE Std. 488), page 8087
Shielded Cable Assemblies (IEEE Std. 488), pages 8088, 8089

Vertical Receptacle Headers, Series III, with ACTION PIN Contacts, pages 2336, 2337

VESA Ribbon Cable Assemblies, .050 CHAMP, Printed Circuit Board Connectors, pages 3222, 3223

VESA Series I, .050 CHAMP, Printed Circuit Board Connectors, page 3221

W

Wire, 18-10 AWG, page 10018

Wire Comparison Data (CMA/AWG/mm²), pages 13002 - 13004

Wire-to-Board Connectors
0.5 mm and 1.0 mm FPC (Flexible Printed Circuit) Connectors, pages 5044 - 5046
040 Series Pairmate Connectors, see Blade-Type Connectors
250 Series Housing Lance Connectors, see Blade-Type Connectors
AMP-BLADE Two-Piece Printed Circuit Edge Connectors, pages 3399 - 3404
AMP-LATCH 2.0 mm Ribbon Cable Receptacle Connectors, page 5024
AMP-LATCH Card Edge, page 5006
AMP-LATCH DIP Plugs, page 5007
AMP-LATCH Novo Receptacles, pages 5004 , 5005

Wire-to-Board Connectors (Continued)
AMP-LATCH System 50, Receptacle Connectors, page 5023
AMP-LATCH Uni-Beam Connectors, pages 5002, 5003
AMP-LATCH Universal I/O Pin Connectors, pages 5008, 5009
AMP-LEAF Connectors, pages 3043 - 3048
AMPINNERGY, pages 8001, 8002
AMPLIMITE .050 Series Subminiature D Connectors, pages 2333 - 2362
AMPMODU Level V IDC Connectors, pages 3152 - 3154
AMPMODU Mass Termination Connectors (MTEI) 2.5 [0.98] Centers, pages 3192 - 3194
AMPMODU Mod. Level IV Connectors, pages 3087 - 3094
AMPMODU MT and Shielded MT Interconnection System, pages 3147 - 3151
AMPMODU Short Point, Crimp Snap-In Wire-Applied Contacts and Housings, pages 3132, 3133
AMPMODU System 50 Connectors (.050 x .100 [1.27 x 2.54] Centers), pages 3160 - 3166
Card Edge Connectors (Wrap-Type Printed Circuit Connectors and TERMI-TWIST Printed Circuit Connectors), pages 3066 - 3072
Crimp Snap Twin Leaf Connectors, pages 3037 - 3042
Dual-Line Interlock (DLI) Connectors, see Blade-Type Connectors
DUO-TYNE Flag Connectors, pages 3049 - 3051
Dynamic D-3000 Series Connectors, see Blade-Type Connectors
Eurocard Connectors, pages 3319 - 3351
EUROLATCH Receptacles, page 5007
FFC (Flexible Flat Cable) PCB Edge Connectors, pages 3066 - 3072
FFC (Flexible Flat Cable) Receptacle Contacts, page 5027, 5033
FFC (Flexible Flat Cable) Receptacle Housings, pages 5028, 5029, 5033 - 5038
FFC (Flexible Flat Cable) Solder Tabs, page 5032
HDF-20 IDC Mass Termination Connectors, pages 5018 - 5022
High Current Connectors, pages 3052 - 3054
Hood Assemblies, pages 3055, 3056
I/O Connectors Series Multiple-Tap Connectors, pages 3062 - 3065
Locking Clip Contacts and Housings, pages 3095 - 3097
Low Profile Mini AMP-IN Connectors, pages 3195, 3196
Multiple Interlock (MIC) Connectors, see Blade-Type Connectors
Multiple Tap Printed Circuit Edge Connectors, pages 3060, 3061
SCCS (Steering Column Combination Switch) Connectors, see Blade-Type Connectors
Series I, CHAMP .050 Connectors, pages 3211 - 3214
Series II, .050 CHAMP Connectors, pages 3214 - 3216
Series III, .050 CHAMP Connectors, pages 3217, 3218
Single-Row Linear (ASL) Connectors, pages 3158, 3159
Tandem Spring and Mini-Tandem Spring Receptacle Contacts, pages 3155 - 3157
TERMI-BLOK Stacking Connectors, page 10011
Trio-Mate Connectors, page 5039
ULTREX Interconnection System, pages 3201 - 3209
ZIF-Line .050 Connectors, page 5029
ZIF-Line .100 Connector, page 5040

Wire-to-Wire Connectors
AMP-LATCH 2.0 mm Ribbon Cable Receptacle Connectors, page 5024
AMP-LATCH Universal I/O Pin Connectors, pages 5008, 5009
AMPINNERGY Connectors, pages 8003, 8004
AMPLIMITE HD-20 Surface-Mount Connectors, pages 2330 - 2332
AMPLIMITE HD-22 Ferrite Block Filtered Receptacles, pages 8029, 8030
AMPLIMITE HDE-20 Connectors for Discrete Wire and Jacketed Cable, pages 2271, 2272
AMPMODU Mod. Level IV Connectors, pages 3087 - 3094
AMPMODU MTE Interconnection System, pages 3134 - 3146
CPC Connectors, Series 1, 2, 3 & 4, pages 2049 - 2058
FFC (Flexible Flat Cable) Pin and Receptacle Contacts, pages 5027 - 5029, 5032 - 5038
Metal-Shell CPC Connectors, Series 1, 2, 3 & 4, pages 2064 - 2067
Metrimate Pin and Socket Connectors, pages 2199 - 2211
MULTILOCK Connectors, pages 6078 - 6090
Single-Row Linear (ASL) Connectors, pages 3158, 3159

Z

Z-PACK 2 mm Connectors
FB (Futurebus+) Connectors, pages 3363 - 3367
FB (Futurebus+) Shunted Pin Header, page 3368
HM Interconnection System, pages 3369 - 3372

Z-PACK Stripline 100 High Performance Cable Assemblies, pages 3361, 3362

Z-PACK Stripline 100 Interconnection System (2.54 x 2.54 [.100 x .100]) Centerline, pages 3355 - 3360

ZIF
Linear ZIF Connectors, pages 3031 - 3036
Rotary Cam Connectors, pages 3027 - 3030
ZIF-Line Connector, Flexible Film Product, pages 5030, 5040

ZIP Sockets, page 11059

ZIP Sockets — (DIPLOMATE) ZP Solder Tail Dual Leaf (DL), page 11005

Specifications subject to change.

1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

11409 to 42581

Part No.	Page No.	Part No.	Page No.	Part No.	Page No.	Part No.	Page No.	Part No.	Page No.	Part No.	Page No.	Part No.	Page No.
11409	3265	31808	1022	33765	1028	34821	1016	36909	1037	41449	1084	42004	1128
11409	3279	31811	1022	33799	1027	34822	1016	36915	1022	41450	1084	41004	1139
11500	8144	31812	1022	34067	1035	34823	1016	36916	1022	41456	1051	42021	1084
11501	8143	31813	1026	34068	1035	34829	1024	36917	1022	41459	1064	42025	1086
11501	8144	31818	1036	34069	1035	34830	1024	36918	1023	41461	1062	42036	1049
11502	8144	31819	1036	34070	1035	34833	1021	36919	1023	41468	1062	42037	1049
11600	8144	31821	1026	34071	1035	34834	1021	36921	1023	41471	1051	42041	1088
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29057	10018	32151	1036	34118	1028	34964	1021	36958	1036	41558	1051	42111	1057
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31087	1020	32950	1016	34164	1016	35494	1028	40816	1056	41656	1139	42373	1097
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Specifications subject to change.

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42604 to 58330

Part No.	Page No.	Part No.	Page No.	Part No.	Page No.	Part No.	Page No.	Part No.	Page No.	Part No.	Page No.	Part No.	Page No.
42604	1101	45639	2009	51826	1040	52941	1030	53550	1034	55225	11027	57512	10040
42604	1116	45639	4100	51863	1012	52942	1030	53555	1028	55227	11027	57513	10040
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42647	1132	46766	8138	52019	1040	53010	1031	53701	10005	55833	1043	58078	1119
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42781	1093	50080	2016	52561	1040	53234	1044	53944	1017	55868	1047	58174	4022
42799	1097	50084	4101	52562	1040	53235	1031	53946	1017	55869	1047	58174	4023
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45638	8041	51753	4081	52937	1030	53548	1034	55208	11065	57510	10040	58330	4034
45639	2008	51754	4081	52940	1030	53549	1034	55219	11027	57511	10040	58330	12002

58336 to 63155

Part No.	Page No.	Part No.	Page No.	Part No.	Page No.	Part No.	Page No.	Part No.	Page No.	Part No.	Page No.	Part No.	Page No.
58336	3136	58527	12003	60384	1085	60904	1093	61499	1102	62137	1116	62609	1166
58336	3137	58528	6084	60384	1158	60904	1115	61505	1059	62138	1095	62610	1166
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58336	3141	58530	2214	60394	1051	60922	1109	61520	1077	62157	1153	62627	1109
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58522	6080	60372	1064	60894	1125	61489	1112	62131	1160	62600	1173	63145	1170
58522	6082	60373	1067	60900	1072	61492	1064	62137	1095	62606	1176	63147	1156
58522	12003	60376	1069	60900	1112	61498	1063	62137	1115	62608	1166	63155	1174

Specifications subject to change.

1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

63159 to 69365

Part No.	Page No.	Part No.	Page No.	Part No.	Page No.	Part No.	Page No.	Part No.	Page No.	Part No.	Page No.	Part No.	Page No.
63159	1173	63494	1171	63678	1052	66103	2050	66268	1139	66579	2265	69099	1146
63160	1167	63495	1174	63686	1111	66103	2200	66280	1127	66580	2006	69099	8138
63161	1177	63497	1108	63687	1089	66104	2005	66285	1139	66580	2265	69133	8138
63165	1104	63498	6020	63688	1084	66104	2013	66318	1139	66581	2006	69134	8138
63165	1157	63499	1173	63690	1166	66104	2050	66331	2005	66582	2006	69140	4004
63177	1169	63500	1085	63693	1085	66104	2200	66331	2013	66583	2006	69140	4008
63178	1169	63505	1172	63697	1096	66105	2005	66331	2200	66584	2006	69140	4009
63195	6020	63506	1158	63698	1054	66105	2013	66332	2005	66585	2006	69140	4012
63196	6020	63508	1092	63699	1111	66105	2050	66332	2013	66586	2006	69140	12007
63199	1177	63510	1171	63703	1100	66105	2200	66332	2050	66587	2006	69141	4005
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63202	1101	63512	1099	63708	1172	66106	2013	66335	3050	66588	2006	69141	4008
63208	1168	63514	1051	63721	1049	66106	2050	66346	1139	66588	2265	69141	4009
63209	1168	63517	1087	63725	1163	66106	2200	66353	1128	66589	2006	69141	4012
63214	1103	63518	1054	63746	1170	66107	2005	66353	1139	66589	2265	69141	4031
63216	1170	63522	1108	63747	1110	66107	2013	66354	1128	66590	2006	69141	12007
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63236	1166	63530	1169	63752	1095	66108	2050	66359	2005	66594	2006	69149	4092
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63239	6020	63532	1165	63754	1163	66109	2005	66359	2050	66596	2006	69186	2008
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63326	1168	63571	1173	66026	3401	66171	1139	66400	2005	66740	8103	69227	4100
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63331	1169	63575	1076	66050	1131	66180	2051	66400	8103	66741	2261	69229	4084
63336	1174	63576	1088	66050	1139	66180	2200	66400	8104	66740	8103	69230	2009
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63471	1101	63663	1171	66101	2013	66261	2015	66565	2050	68251	1021	69365	4021
63475	1096	63664	1171	66101	2050	66261	2057	66565	2198	68253	1146	69365	4022
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63486	1170	63677	1083	66103	2013	66267	1139	66579	2006	69082	8138	69365	4041

Specifications subject to change.

1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

69365 to 99242

Part No.	Page No.	Part No.	Page No.	Part No.	Page No.	Part No.	Page No.	Part No.	Page No.	Part No.	Page No.	Part No.	Page No.
69365	4042	69708	12007	85863	9037	87772	3076	90166	12006	90430	2272	91168	2326
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69408	4008	69710	4036	86477	3076	88586	5032	90289	3096	90704	8150	91417	3146
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69423	4004	69710	4100	86657	5041	90015	1133	90298	2259	90871	12003	93552	8032
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69477	4003	69710	12008	87107	3090	90028	8013	90301	3157	91016	2046	93655	8033
69477	4004	69727	4004	87116	3080	90031	3044	90301	3330	91019	2007	93754	8033
69477	4005	69727	4005	87124	3096	90035	10041	90301	3383	91019	2015	93768	8021
69477	4006	69727	4008	87131	3096	90037	1134	90302	2279	91019	2057	93769	8021
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69477	4012	69728	11047	87165	3096	90066	2005	90310	2006	91038	8103	93774	8022
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69478	4008	69815	4031	87185	5042	90067	2005	90313	5041	91047	5036	93801	8033
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69478	4010	69875	1021	87191	3096	90067	8103	90315	10010	91066	2377	95010	7017
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69708	4086	85862	9037	87756	3091	90166	1084	90418	12006	91167	2327	99242	7020

Specifications subject to change.

1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

99243 to 146083

Part No.	Page No.	Part No.	Page No.	Part No.	Page No.	Part No.	Page No.	Part No.	Page No.	Part No.	Page No.	Part No.	Page No.
99243	7020	102101	3078	103309	5014	104319	3115	107765	7014	107883	7017	111513	5009
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99245	7020	102107	3090	103311	5014	104339	5015	107767	7014	107885	7017	111556	5005
99246	7020	102114	3118	103321	3098	104340	5015	107768	7014	107886	7017	111557	5004
99247	7020	102128	3091	103321	3099	104341	5015	107769	7014	107887	7017	111559	5006
99248	7020	102142	5011	103322	3101	104344	3103	107770	7014	107888	7017	111564	5003
99249	7020	102153	5010	103323	3100	104345	3103	107771	7014	107889	7017	111614	5024
99250	7020	102154	5010	103324	3102	104346	3103	107772	7014	107890	7017	111621	5024
99251	7020	102155	5010	103325	3100	104347	3104	107773	7014	107891	7017	111622	5024
99252	7020	102156	5010	103326	3102	104348	3104	107774	7014	107892	7017	111623	5024
99253	7020	102159	5011	103327	3098	104349	3104	107775	7014	107893	7017	111624	5024
99254	7020	102160	5011	103327	3099	104350	3105	107776	7014	107894	7017	111625	5024
99255	7020	102161	5011	103328	3101	104351	3105	107777	7014	107895	7017	111626	5024
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Specifications subject to change.

1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

146128 to 174401

Part No.	Page No.	Part No.	Page No.	Part No.	Page No.	Part No.	Page No.	Part No.	Page No.	Part No.	Page No.	Part No.	Page No.
146128	3121	158416	10033	167344	3198	171366	6028	172161	2243	172429	3203	173278	2356
146129	3121	158417	10033	167388	3198	171367	6028	172161	2245	172430	3204	173279	2355
146130	3121	158418	10033	167389	3198	171432	6009	172162	2243	172450	3063	173280	2357
146131	3121	158419	10033	167588	3198	171433	6009	172162	2245	172450	3064	173292	3201
146132	3121	158420	10033	167589	3198	171447	6005	172163	2243	172455	3064	173292	3202
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Specifications subject to change.

1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

174460 to 201092

Part No.	Page No.	Part No.	Page No.	Part No.	Page No.	Part No.	Page No.	Part No.	Page No.	Part No.	Page No.	Part No.	Page No.
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Specifications subject to change.

1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

201092 to 206740

Part No.	Page No.	Part No.	Page No.	Part No.	Page No.	Part No.	Page No.	Part No.	Page No.	Part No.	Page No.	Part No.	Page No.
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Specifications subject to change.

1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

206742 to 225088

Part No.	Page No.	Part No.	Page No.	Part No.	Page No.	Part No.	Page No.	Part No.	Page No.	Part No.	Page No.	Part No.	Page No.
206742	8038	207476	2284	208262	2376	211431	2387	213748	2208	220045	4038	221162	4106
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Specifications subject to change.

1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

225088 to 322339

Part No.	Page No.	Part No.	Page No.	Part No.	Page No.	Part No.	Page No.	Part No.	Page No.	Part No.	Page No.	Part No.	Page No.
225088	2266	226655	4111	228604	4106	269058	7058	282197	6060	320561	1012	321684	1020
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Specifications subject to change.

1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

322340 to 350218

Part No.	Page No.	Part No.	Page No.	Part No.	Page No.	Part No.	Page No.	Part No.	Page No.	Part No.	Page No.	Part No.	Page No.
322340	1005	323197	1018	324469	1150	326107	1149	328664	2017	329942	4090	332434	1003
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350219 to 425442

Part No.	Page No.	Part No.	Page No.	Part No.	Page No.	Part No.	Page No.	Part No.	Page No.	Part No.	Page No.	Part No.	Page No.
350219	2227	350642	2227	350792	2223	350990	2218	382450	11051	382778	11056	413933	4035
350219	2231	350642	2232	350793	2214	350990	2224	382451	11050	382781	11015	413959	4008
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Specifications subject to change.

1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

425566 to 501795

Part No.	Page No.	Part No.	Page No.	Part No.	Page No.	Part No.	Page No.	Part No.	Page No.	Part No.	Page No.	Part No.	Page No.
425566	9021	447392	4077	466129	1112	466575	1063	480004	6009	480424	2227	485364	8121
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436159	9040	466003	1063	466399	1066	466904	2365	480296	1115	480707	2218	499206	5010
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445015	8109	466020	1100	466431	1104	466911	3044	480305	2229	480710	2221	499786	5011
445147	2377	466026	1096	466432	1104	466912	3038	480305	2230	480710	2223	499795	5025
445147	2388	466047	8040	466433	1070	466914	2006	480306	1115	480710	2224	499795	5026
445185	3392	466048	1112	466436	1071	466918	3091	480307	1115	480711	2218	499910	5010
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447095	2389	466122	1066	466562	3091	471273	1071	480401	2227	485352	8119	501509	7069
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Specifications subject to change.

1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

501795 to 536501

Part No.	Page No.	Part No.	Page No.	Part No.	Page No.	Part No.	Page No.	Part No.	Page No.	Part No.	Page No.	Part No.	Page No.
501795	7073	520102	1119	520854	8044	530674	3018	531810	3389	533425	3301	535839	3316
501798	7072	520103	1119	520856	1119	530677	3019	531811	3389	533426	3300	535840	3316
501805	7072	520106	1119	520904	2267	530678	3019	531812	3389	533427	3307	535841	3312
501861	7068	520107	1119	520932	1121	530689	3020	531813	3389	533443	3297	535843	3312
501867	7069	520116	1118	520935	1113	530691	3020	531814	3389	533444	3295	535845	3312
501916	7007	520117	1118	520935	8134	530692	3020	531815	3389	533445	3296	535865	3316
501926	7072	520124	1118	520936	8130	530693	3020	531816	3389	533447	3296	535875	3316
501931	7072	520125	1118	520937	8130	530719	3393	531817	3389	533448	3297	535919	3315
501933	7072	520128	1119	520942	8129	530720	3392	531819	3394	533449	3298	535923	3120
502015	7071	520129	1119	520943	8130	530721	3395	531820	3394	533513	3299	535959	3120
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502023	7071	520133	1119	520961	6019	530743	3393	531833	3377	533515	3302	536011	3323
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520081	1118	520851	8044	530669	3019	531802	3382	533420	3299	535677	3084	536493	3325
520083	1118	520852	8044	530671	3018	531803	3393	533423	3305	535677	3085	536494	3325
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Specifications subject to change.

1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

536504 to 591876

Part No.	Page No.	Part No.	Page No.	Part No.	Page No.	Part No.	Page No.	Part No.	Page No.	Part No.	Page No.	Part No.	Page No.
536504	3364	552064	8056	553576	8089	556039	8057	565435	1089	567435	1052	582832	3403
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Specifications subject to change.

1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

591877 to 643057

Part No.	Page No.	Part No.	Page No.	Part No.	Page No.	Part No.	Page No.	Part No.	Page No.	Part No.	Page No.	Part No.	Page No.
591877	2163	603363	10001	608506	10006	640249	1055	640515	2251	640719	2222	641604	11001
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Specifications subject to change.

1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

643058 to 745253

Part No.	Page No.	Part No.	Page No.	Part No.	Page No.	Part No.	Page No.	Part No.	Page No.	Part No.	Page No.	Part No.	Page No.
643058	11026	643819	3246	645951	11046	650896	3343	682317	1119	687933	1097	726548	6044
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643816	3238	645948	11046	650889	3342	680080	1076	687928	1096	726519	6049	745245	2296
643817	3246	645949	11046	650893	3343	680109	1084	687931	1084	726534	6039	745245	8023
643818	3246	645950	11046	650895	3343	682127	4095	687932	1084	726538	6044	745253	2054

Specifications subject to change.

1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

745253 to 770054

Part No.	Page No.	Part No.	Page No.	Part No.	Page No.	Part No.	Page No.	Part No.	Page No.	Part No.	Page No.	Part No.	Page No.
745253	2279	745909	2277	747579	2282	748474	2272	749231	8031	750597	2316	765278	8126
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745255	2295	745919	2287	747705	2323	748477	2272	749233	2303	750600	2316	765311	8126
745266	2275	745922	2326	747706	2324	748481	2303	749234	2303	750601	2318	765344	8128
745267	2275	745925	2326	747707	2324	748482	2303	749235	2303	750603	2318	765449	8125
745269	2275	745928	2326	747708	2324	748483	2303	749245	2279	750605	2318	765450	8125
745270	2275	745964	2305	747709	2324	748484	2326	749246	2279	750607	2318	765451	8125
745271	2309	745967	2324	747713	2326	748485	2326	749247	2320	750609	2317	765478	8125
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745287	2280	745986	2308	747717	2296	748558	2292	749265	2269	750613	2317	765529	8127
745288	2053	745988	2308	747740	2274	748565	2271	749265	8031	750614	2317	765530	8127
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Specifications subject to change.

1-800-522-6752
Product Information Center/ AMP FAX Service

1-800-722-1111
Tooling/Technical Assistance Center

770055 to 842389

Part No.	Page No.	Part No.	Page No.	Part No.	Page No.	Part No.	Page No.	Part No.	Page No.	Part No.	Page No.	Part No.	Page No.
770055	2215	770281	2260	770609	2243	786262	2331	810992	3050	822150	11018	827788	3330
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842390 to 927863

Part No.	Page No.	Part No.	Page No.	Part No.	Page No.	Part No.	Page No.	Part No.	Page No.	Part No.	Page No.	Part No.	Page No.
842390	8024	842930	8018	856195	12010	862322	8104	867479	8109	878609	6049	925470	6064
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Specifications subject to change.

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927864 to 986794

Part No.	Page No.	Part No.	Page No.	Part No.	Page No.	Part No.	Page No.	Part No.	Page No.	Part No.	Page No.	Part No.	Page No.
927864	6041	962846	6050	963808	6049								
927865	6046	962875	6039	963809	6049								
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962843	6045	963774	6052										
962845	6050	963775	6052										

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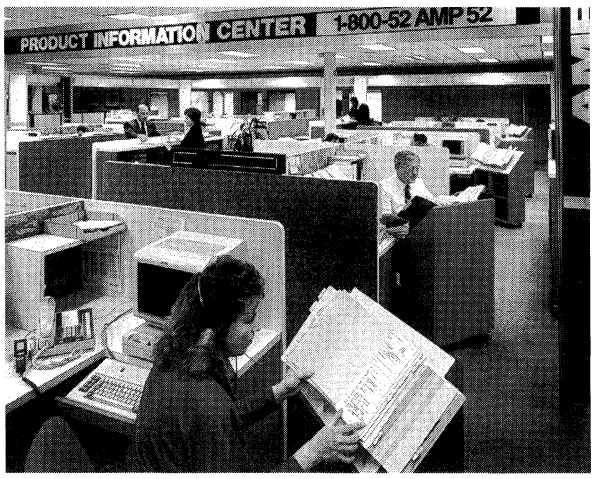

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